Neurology Clerkship

Academic Year 2025-2026

Neurology Department
MEDMD 303
March 2025

Clerkship Director: Katelyn Bird, MD, MS
Associate Director: Ariel Marks, MD
Clerkship Coordinator: Joey Russo

BOSTON UNIVERSITY

Table of Contents

Clerkship Learning Objectives

By the end of the Clerkship the student will be able to:

a. Gather an organized neurological history effectively using clinical reasoning and differential diagnosis driven questioning.

b. Demonstrate competency in performing and interpreting the neurological history and examination.

c. Recognize abnormal findings on the examination and put these together with the history to localize the lesion in the nervous system.

d. Assess, formulate a prioritized differential diagnosis, and propose initial evaluation and management for patients with common neurological disorders based on localization.

e. Apply neurology specific knowledge to propose routine treatment plans for common neurological diseases and be able to discuss the risks of these treatments.

f. Tailor oral presentations and documentation to the neurology subspecialty in a way that is organized, accurate, and timely.

g. Recognize the indications for, possible complications of, and basic interpretations of results from routine neurological tests such as electroencephalography, electromyography, computerized tomography, and magnetic resonance imaging.

h. Understand the indications and contraindications for performing LPs and know the general approach for performing LPs. Be able to interpret the results of the CSF studies.

i. Describe how end of life and cultural competency issues are addressed in neurologic patients.

j. Discuss how health care disparities can affect underserved populations and impact neurological care.

k. Reliably demonstrate professional behavior consistent with the values of the medical profession.

Contact Information

Clerkship Director

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Office: 85 East Concord St. G012

Assistant/Associate Clerkship Director

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Office: 85 East Concord St. 1120

Clerkship Coordinator

Joey Russo
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Email: jnrusso@bu.edu
Office: 85 East Concord St. G100

Clerkship Description

Focus of clerkship

The purpose of the third-year clerkship in Neurology is to provide the basics of neurological disease seen in inpatient and outpatient neurology settings. This Clerkship focuses on immersing the student to Neurology and prepare them for any encounter of Neurological disease in the student's future career in any chosen specialty. The clerkship will teach the basics of taking a neurological history and performing an examination with the goal of localizing the lesion in the nervous system. It will also teach how to synthesize information from history and physical in order to produce a differential diagnosis and treatment plan. You will be exposed to the outpatient clinic where you will encounter chronic disorders and to the inpatient setting where you will be involved in treatment of acute neurological disorders. Students will also learn the indications and contraindications for performing LPs and know the general approach for performing LPs through simulation. In addition, the clerkship offers support to those considering Neurology as a future career.

What to Expect During the Neurology Clerkship

You will work in high volume ambulatory and inpatient practices of Neurologists and residency programs. During the clerkship, you will:

- Learn how to complete a neurological examination in a timely manner, interpret the findings of the neurological examination, and localize the lesion.
- Learn how to work in a large team and focus on patient care.
- You will be taking care of patients, working with your team, preparing for rounds, and keeping-up with supplementary self- directed reading.
- You will understand the concepts of evidence-based neurology.
- You will get exposure to a lumbar puncture simulation.

How to Succeed

To successfully complete the clerkship, the student is required to do the following:

- Always remain professional.
- Participate fully in ALL didactics, inpatient, and outpatient settings. Show interest and motivation. Ask questions.
- Conquer Neurophobia.
- Be pro-active about seeing patients. Read about the conditions you see in real time. Integrating clinical work with Shelf preparation will help you to retain everything you learn.
- Consider giving 5-minute topic presentations on the floors.
- Review your neuroanatomy and radiology.
- Practice your neurological exam whenever possible.

- For the differential mention the most common, the most treatable, most dangerous, and a couple of zebras.
- Do practice questions throughout the clerkship. It is a short clerkship, so start studying for the Shelf EARLY.

Clerkship Changes Made Based on Feedback

- Improve timely CSEF completion rate.
- Make sessions more interactive by flipping content.
- Re-introduce Shelf Exam prep sessions with MS4s going into Neurology.
- Enhancing neuro exam teaching in pre-clinical curriculum.
- Introducing a simulation—likely with stroke.
- Improving faculty and site development.

Other Recent Changes to the Clerkship

- -Change our final grade calculations to:
    - 60%- CSEF
    - 25%- Shelf
    - 10%- OSCE
    - 4%- Presentation
    - 1%- Pre-Work
- Change final grade cutoff:
    - 90%-100%= Honors
    - 85%-89%= High Pass
    - 70%-84%= Pass
- Introduction of Pre-Work. Required reading and short quizzes before each core curriculum session.
- Introduction of stroke simulation.

Clerkship Sites

Boston Medical Center

One Boston Medical Center Pl. Boston, MA 02118
Site Director: **Katelyn Bird, MD**, **MS** kbird@bu.edu, (317) 529-5636
Site Administrator: **Joey Russo**, jnrusso@bu.edu, (781) 799-5660

Outpatient Clinic at Boston Medical Center

All BMC students are required to complete 1-2 weeks in the outpatient neurology clinic.

This will be primarily in-person. Please email the attending 2-3 days before to coordinate, when emailing include the following:

- Your cell phone number.
- Ask for the attending's cell phone number.
- Any particular workflow expectations or preparatory work needed.

Workflow
Please make sure you can see the schedule for the attending that you are working with.

Show up to your outpatient clinic most commonly in **Shapiro Building on the 7th floor, Suite 7B** by 8:00 AM (or depending on your attending's schedule for the day). Introduce yourself to the attending and verify workflow expectations.

Expectations for outpatient:

- Be well prepared to present your patient with a thorough history, relevant past medical history, ROS, medications, prioritized differential, and plan.
- If the clinic is slow, research your patient(s) and their disorders, volunteer to take on more patients, or study independently.
- Reading up on your patients ahead of time will help you to stand out.

General and Stroke Neurology Service at Boston Medical Center

Some students will spend a portion of their neurology rotation on the general neurology service. The service pagers are 6381 (Gen Primary team), 6380 (Gen Consult team), 3278 (Stroke).

Please go to sign-out at 7:00am in the Menino 7 work room to coordinate with your team. Please go to Morning Report from 7:30-8:00am in the Menino 7 work room.

Pre-rounding includes: checking with your resident regarding any overnight issues, seeing your patient with a focused history and exam, checking Epic for new labs or imaging, reviewing vital signs and notes from consults, seeing if there are any overnight event notes or consult recommendations in the chart, and checking telemetry at the nursing station, if applicable.

After pre-rounding, you will report back to the workroom for rounds, where you will present the patient that you have pre-rounded on. The time that rounds begin depends on the attending for that day. Pre-rounding generally runs from 8-9.

Throughout the course of the day, the neurology team will be paged about patients presenting with neurologic complaints in the emergency room and throughout the hospital. You may be asked to independently evaluate a patient. Neurology is consulted for a wide variety of reasons, but some of the most common include possible seizure, altered mental status, headache, dizziness, or focal weakness.

Expectations

- Pick-up at least one patient (approved by a resident) to present at rounds.
- Pre-round on your patient(s). Specific responsibilities are listed above. In general, be aware of the results in Epic for all vitals, labs, imaging, tests, notes left by consulted teams, overnight events, etc. for your patient.
- Be well-prepared to present your patient(s) succinctly during sit down rounds, with a prioritized differential, plan, and any updates.
- Take a thorough history (including relevant past medical history and medications) and perform a comprehensive neurologic exam for a consult. Present to a resident, fellow, or attending, and include a prioritized differential, and plan.

- Complete at least one H&P or progress note daily and ask your resident or attending to evaluate and review it with you.
- Sometimes you may be able to witness procedures being done, such as lumbar punctures. Try to participate in such procedures, or assist your resident/attending, as needed.
- Research your patients or other interesting patients on the team if the service is slow, volunteer to take on more patients, teach on topics, or study. If there is work to do, you should volunteer to help.
- **Weekends**: students are responsible for one weekend shift for the entire clerkship (one day, not both) while they are on an inpatient service.

Neurology ICU at Boston Medical Center

Some students will spend a portion of their neurology rotation in the neurology intensive care unit. The ICU service tends to be the busiest service and covers very complex patients. The service pager is 8000.

Report to the NeuroICU work room at 6:30am for sign-out and then pre-round in the ICU on your patient(s). Please go to Morning Report from 7:30-8:00am in the Menino 7 work room.

Rounds are at 8am or 8:30am depending on the attending for the week. *See General Neurology Service Expectations above for more information on pre-rounding.*

Rounds typically start after sign-out and morning report, where you will present the patient you have pre-rounded on. This is the service where you will learn the most about medical management of your patients. You are expected to research management and treatment options for your patient. You serve as a liaison for your patient to other services and with the family. You may or may not write notes on your patient's every day. You should be prepared to present short (2-10 min) presentations on topics related to your patients. These may be presented during rounds, after rounds, or during downtime.

Expectations:

- Pre-round on your patients and be prepared for rounds with ALL information from tests, images, consults, vitals, vent settings, ins and outs, and any other ICP or line information that is available.
- Know the pulmonary, cardiac, GI, GU, hepatic, and renal function of each patient assigned to you. On this service you will be managing not only the neurological aspects of your patients but ALL systems.
- Learn how to do coma and brain death examinations. Many of the patients will be intubated so you will have a chance to learn these.
- Research your patients or other interesting patients on the team if the service is slow, volunteer to take on more patients, teach on topics, or study. If there is work to do, you should volunteer to help.
- **Weekends**: students are responsible for one weekend shift for the entire clerkship (one day, not both) while they are on an inpatient service.

Pediatric Neurology at Boston Medical Center

Some students will elect or be assigned to spend a portion of their neurology rotation on the pediatric neurology service. These students will receive an email from the pediatric neurology coordinator with specific instructions and a schedule. This email will tell you where to report.

The pediatric neurology clinic is located on the **8th floor of the Shapiro building, Suite 8C.** Patients report to the pediatric neurology clinic for a variety of conditions and disorders, including, but not limited to: seizure management, migraine management, concussions, cerebral palsy, or autism. These patients may present for an initial work-up or evaluation, treatment, or for follow-up.

The chief resident will orient to the current in-patients. The chief resident will also assign you a presentation topic for Thursday or Friday. This can be a 10–15-minute brief talk.

The time for attending rounds will be decided at the start of each day. During the day, the pediatric neurology team may be paged about patients presenting with neurologic issues in the emergency room or on the floor. After rounds, you will see these consults with your resident. Work after rounds will include reviewing these patients' records in Epic, speaking with patients and families about updates, and communicating the issues to the team. You may be expected to go and evaluate a patient alone. Pediatric neurology is consulted for a wide variety of reasons, but some of the most common include possible seizures, altered mental status, or headache.

Expect to attend neuroradiology rounds on Friday afternoons, and EEG rounds, pediatric neurology grand rounds, and other educational lectures as scheduled throughout the week. The times will be listed on your schedule.

Expectations

- Prepare a 10–15-minute presentation on both a topic and date approved by your chief resident.
- Prepare for outpatient clinic days by reading up on scheduled patients in Epic. The patients will be scheduled under the attending's name.
- Take a thorough history (including relevant past medical history and medications) and perform a comprehensive neurologic exam, if asked to see a patient in the clinic or emergency room. Present to the attending, fellow, or resident, and include a prioritized differential and plan.
- Complete at least one H&P or progress note and ask your resident or attending to evaluate and review it with you.
- Attend all scheduled teaching conferences including Grand Rounds, EEG rounds, and neuroradiology rounds on Thursdays and Fridays.
- Sometimes you may be able to witness procedures being done, such as lumbar punctures. Try to participate in such procedures, or assist your resident/attending, as needed.
- Research your patients or other interesting patients on the team if the service is slow, volunteer to take on more patients, or study. If there is work to do, you should volunteer to help.

Boston VA: West Roxbury & Jamaica Plain

Jamaica Plain: 150 S Huntington Ave, Boston, MA 02130
West Roxbury: 1400 VFW Parkway, West Roxbury, MA 02132
Site Director: **Orly Moshe-Lilie, MD**, orly.moshe-lilie@va.gov, (951) 623-9491
Site Administrator: **Isabelle Beckley**, isabelle.beckley@va.gov, (857) 364-5824

Students will spend time on the combined ward/consult service at the West Roxbury VA, (WR) and in the outpatient clinics at the Jamaica Plain VA, (JP). ***Students return to BUMC for Tuesday didactic sessions***.

Students who have a special interest in neurosurgery may inquire for opportunities with the site director.

Orientation: In the afternoon after orientation at BMC, the students assigned to the VAMC will go to the JPVA, 6D, and meet with Dr. Moshe-Lilie. She will orient you to the schedule and procedures at the VA. Any questions regarding the VA may be brought to the site director.

Weekends: students will be scheduled for no more than 1 weekend of the clerkship if their scheduled days fall on a weekend.

Parking: Free parking is available at both the JP and WR sites. Shuttle buses run between BUMC and JPVA and WRVA. The ride is 10-15 minutes (depending on the traffic). The BUMC shuttle does not begin until mid-morning.

Mt. Auburn Hospital

330 Mt. Auburn St, Cambridge, MA 02138
Site Director: **Linda Wendell, MD**, linda.wendell@mah.org, (617) 868-0880
Site Administrator: **Kelley Hyatt (Kelley.Hyatt@mah.org)**

Students will participate in outpatient patient interactions with a focus on general neurology and multiple sclerosis. Students will also have the opportunity to participate in the inpatient neurology consult service. ***Students are expected to return to BUMC for Tuesday didactic sessions.***

Weekends: in place of a weekend shift students will take a "latestay" to perform new consults that may be called in.

Parking: Please check in with the Mt. Auburn director and coordinator for more details.

Rehabilitation Hospital of Braintree

250 Pond Street, Braintree, MA 02184
Site Director: **Brigid Dwyer, MD**, Brigid.Dwyer@bmc.org, (617) 638-8456
Site Administrator: **Mackenzie Kelshaw**, Mackenzie.kelshaw@encompasshealth.com, (781) 348-2150

Students will participate in a predominantly inpatient service with a focus on traumatic brain injury, stroke, and movement disorder inpatient rehabilitation. Students may also be exposed to the outpatient clinics if possible. ***Students are expected to return to BUMC for Tuesday didactic sessions.***

Weekends: there is no weekend coverage expectations, to maximize clinical exposure students will take 1 late stay shift at Braintree where they will stay late and evaluate new admission patients up until 10:30pm

Parking: A car is needed but free parking is available at the hospital.

St. Elizabeth's Medical Center

736 Cambridge St, Boston, MA 02135
Site Director: **Margarita Ebril-Lel, MD**, margarita.ebril-lel@bmc.org, (617) 784-0951
Site Administrator: TBD. In interim: Kavel Harrison, Kavel.Harrison@bmc.org

Students will participate in a mix of inpatient and outpatient training. The student will have the opportunity to work in the movement disorders, and general neurology clinics. Additional participation in the epilepsy, stroke, and neuromuscular clinics may also be coordinated. On the inpatient service, the student will have the

opportunity to evaluate patients in the ED, on the ward, and in the ICU. The student will see a wide range of patient types including stroke, epilepsy, neuroinfectious, neurotrauma, neurooncology, and patients with neurological issues related to systemic diseases to name a few.

Weekends: students will be scheduled for no more than 1 weekend of the clerkship if their scheduled days fall on a weekend.

Parking: Students can park on the first day in Lot B and then will receive information on parking during orientation. Students will be expected to drive to off-site satellite locations for outpatient clinics- access to a car is strongly recommended.

Manchester VA

718 Smyth Rd. Manchester, NH 03104
Site Director: **Tatiana Nabioullina, MD**, Tatiana.nabioullina@va.gov
Site Administrator: **Sherri Henry**, Sherri.Henry2@va.gov, (603)-624-4366 x6663

Manchester VA Medical Center is an all-outpatient facility where clinically trained neurologists see a variety of neurological diseases daily.

The student will join orientation and didactics in person during the first week of the clerkship. They will then drive up to Manchester and begin on Wednesday of week 1. The Manchester portion of the rotation is purely outpatient. They will remain in Manchester, where housing is provided, until Tuesday of week 3, where they will return to in person attendance in Boston. They will complete their inpatient portion of the rotation at BMC (please see further details above in the BMC section).

Kaiser Permanente Regional Campus, Silicon Valley (Santa Clara and San Jose)

Santa Clara: 700 Lawrence Expy, Santa Clara, CA 95051
San Jose: 250 Hospital Pkwy, San Jose, CA 95119
Site Director: Khamidulla Bakhadirov (Khamidulla.Bakhadirov@kp.org)
Site Administrator: **Sandeep Tumber,** Sandeep.X.Tumber@kp.org, (408)-972-3807

Students will participate in a mix of outpatient and inpatient Neurology patient interactions. Students have the option of Pediatric Neurology or other Neurology electives like MS, epilepsy, or neurosurgery at Kaiser Santa Clara or Redwood City. Please send Dr. Tasch your choice a few weeks in advance. Students should plan to attend Tuesday didactics via ZOOM.

Weekends: depending on the schedule students will be scheduled for an afterhours experience which may consist of a late stay or weekend shift, students will be scheduled for no more than 1 weekend of the clerkship if they are scheduled for a weekend

Parking: Please discuss the parking situation once on site in CA.

Clerkship Schedules

Didactic Schedule

Didactics happen every Tuesday. The exact schedule varies week to week but expect to be in didactics from 8:15-4:30, with a break for lunch. A didactic schedule will be sent out in the beginning of the block. Reminder emails will be sent out the Friday and Monday before the scheduled didactic day. Kaiser students will join via zoom. Manchester students will join via zoom in week 2 of the clerkship.

- Pain
- Cases 1-5
- Cases 6-10
- Student Presentations
- Stroke
- LP Sim
- Neurological Exam Workshop
- Neuromuscular
- Neuro ICU
- Multiple Sclerosis
- Movement Disorders

Clerkship Grading

ASSESSMENT OF LEARNING	
Clinical Grade Percentage	60%
Shelf/Exam Percentage	25%
"Other" Components Percentage	15%
CLINICAL GRADE	
Clinical Honors	>4.45
Clinical High Pass	3.45-4.44
Clinical Pass	2.00-3.44
Clinical Fail	<2.00
SHELF EXAM	
Minimum score to pass	67
OTHER	
Written OSCE Exam	10%
Student Presentation	4%
Pre-Work	1%
FINAL GRADE	
Honors	>=90% total weighted avg (this includes CSEF, Shelf, additional assignments), AND >=67% on shelf, AND average of >=2.5 in all CSEF domains
High Pass	>=85% total weighted avg (this includes CSEF, Shelf, additional assignments), AND >=67% on shelf, AND average of >=2.5 in all CSEF domains
Pass	>=70% total weighted avg (this includes CSEF, Shelf, additional assignments), AND >=67% on shelf OR between 1.5-2.49 in any domain on the final CSEF

Fail	<70% total weighted avg (this includes CSEF, Shelf, additional assignments) OR <67% on Shelf OR <1.5 on any domain on the final CSEF or < 2 averaged on the final CSEF (Clinical Fail)
ASSESSMENT FOR LEARNING	These items must be done by the deadlines provided at orientation to be eligible to receive final grade of honors. Students will receive one standard all-clerkship email reminder. Email sample shown below.
Completing patient encounter logs by the last Sunday of the clerkship block.	
Completing all FOCuS forms by the last Sunday of the clerkship block.	
Completing all clerkship assignments by last Sunday of the clerkship block.	
Completing mid-clerkship form in advance of the meeting at mid-clerkship, and submitting the form by the final Sunday of the clerkship block	
Requesting supervisor (faculty, resident etc.) evaluations from all evaluators must be completed by the last Sunday of the clerkship block.	
ASSESSMENT OF PROFESSIONALISM	To meet professionalism expectations students must meet the following expectations listed below:
Arriving at clerkship didactic sessions on time.	
Evaluations are requested by the last Sunday of the clerkship block.	
Reviewing and responding to e-mail requests from clerkship administration within 2 business days	
Returning borrowed clerkship materials (e.g. pager) by the last business day of the clerkship block.	
Informing clerkship leadership and supervising faculty/residents of absences in advance of the absence (barring extenuating circumstances).	
The following are also expectations of the clerkship and repeated patterns of behavior (after feedback with faculty) will be factored into the professionalism conduct component of the clerkship performance:	
Treating and communicating in a respectful manner with all members of the clerkship team, including clinical and administrative faculty and staff.	
Engaging in the core curriculum and participating respectfully with peers and colleagues at all times.	
Professional Conduct and Expectations	

Evaluation of a medical student's performance while on a clinical clerkship includes all expectations outlined in the syllabus and clerkship orientation as well as the student's professional conduct, ethical behavior, academic integrity, and interpersonal relationships with medical colleagues, department administrators, patients, and patients' families. Student expectations include those listed above in professional comportment sections.

If there are no professionalism concerns, students will receive the following statement in their summative statement: "**This student MET the administrative and clinical professionalism expectations of the clerkship."**

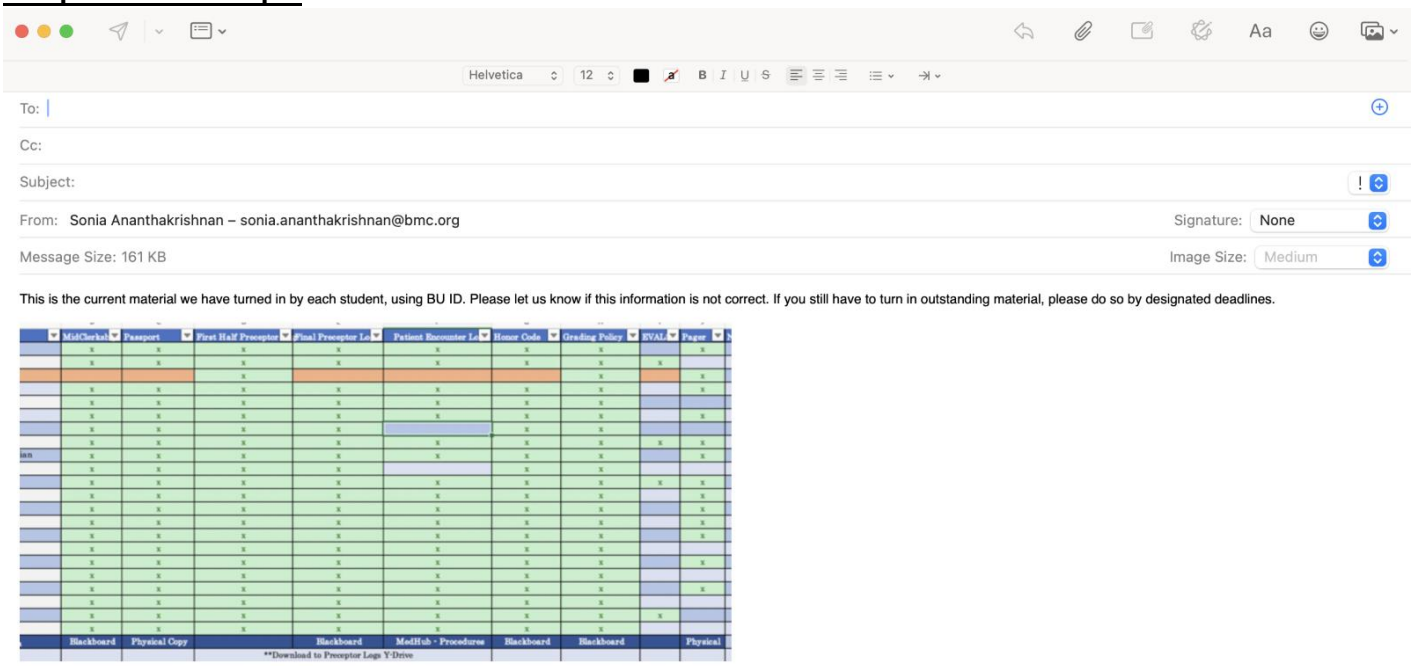
A pattern of behavior as reflected (e.g. in more than one narrative comment) in faculty/resident CSEF (clinical professionalism) and/or events noted by clerkship faculty/administration (administrative professionalism) in one or multiple areas, after providing feedback to student, will result in one of the following statements in the final clerkship evaluation:

1. This student did not meet the **administrative professionalism** expectations (SPECIFICS PROVIDED FROM LIST OF ADMINISTRATIVE PROFESSIONALISM BEHAVIORS) and was/was not responsive to feedback.
2. This student did not meet the **clinical professionalism expectations**, (SPECIFICS PROVIDE FROM CSEF DOMAIN BEHAVIORS) and was/was not responsive to feedback.
3. This student did not meet the **clinical and administrative professionalism expectations**, (SPECIFICS PROVIDE FROM CSEF DOMAIN BEHAVIORS) and was/was not responsive to feedback.

If there are professionalism concerns as detailed in the assessment of learning, assessment of professionalism, or in the CSEF, **the student's final grade will be adjusted down to next grade level (e.g. a student who earns a High Pass**

will receive the final grade of Pass, or if a student earns a Pass, they will receive the final grade of Fail). In addition, a student with administrative and/or clinical professionalism concerns will not be eligible to receive final grade honors. An email exchange will be provided to document the professionalism concern and feedback exchanged before a summative statement is placed in the final grade. SAO dean will be cc'd to provide ongoing support.

Sample Email Example



Helvetica 12

To:

Cc:

Subject:

From: Sonia Ananthakrishnan – sonia.ananthakrishnan@bmc.org

Signature: None

Message Size: 161 KB

Image Size: Medium

This is the current material we have turned in by each student, using BU ID. Please let us know if this information is not correct. If you still have to turn in outstanding material, please do so by designated deadlines.

MidClerkship	Passport	First Half Preceptor	Final Preceptor Log	Patient Encounter Log	Honor Code	Grading Policy	EVAL	Pager	
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x	x		
		x				x		x	
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x			
x	x	x	x	x	x	x		x	
x	x	x	x		x	x			
x	x	x	x	x	x	x	x	x	
x	x	x	x	x	x	x		x	
x	x	x	x		x	x			
x	x	x	x	x	x	x	x	x	
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x			
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x		x	
x	x	x	x	x	x	x			
x	x	x	x	x	x	x	x		
Blackboard	Physical Copy		Blackboard	MedHub - Procedures	Blackboard	Blackboard		Physical	

**Download to Preceptor Logs Y-Drive

Standard Clerkship Clinical Grade Procedures/Policies
Clinical Evaluation Procedures

Preceptors will provide clinical evaluations that contain the "raw data" on the student's clinical performance. You are encouraged to regularly ask for specific behaviorally-based feedback on your clinical skills from your preceptors. However, do not ask them what word grade you will get, as that is a multifactorial process of which the clinical evaluation is one component. Preceptors DO NOT determine the final "word" grade.

1. The CSEF form will be used to numerically calculate your clinical grade: 1 to 5 points (depending on which box is checked) for each domain which will be averaged to give you a final score out of 5. Categories: Needs intensive remediation (1); Needs directed coaching (2); Approaching competency (3); Competent (4) or Achieving behaviors beyond the 3rd year competency criteria (5) to get a final number in each domain. This can be rounded to the nearest number using standard rounding for the CSEF domain and this is the box that should be checked (e.g., if an average of 2.4 then the student should have needs directed coaching (2) checked off). Each CSEF will be weighted based on how long the student worked with each evaluator.

CSEF Clinical Grade Calculations should be made using the 0.01 decimal point in each domain (though the rounded number will be checked off on the final CSEF form) to give a final number.

Any average of <1.50 in any domain = an automatic fail for the clerkship

Any average of < 2.50 in any domain = an automatic pass for the clerkship and a meeting with the MEO for clinical coaching

>2.50 in all domains, standard rounding will be used

<2.00 = Clinical fail which will = a fail for the clerkship

2.00-3.44 = Clinical pass

3.45-4.44= Clinical high pass

>4.45=Clinical honors

The clinical grade will be reported in the CSEF final narrative

2. The CSEF clinical score is converted to a final 2-digit percentage that is counted towards the final grade. For example, the final CSEF clinical score average of 4.45 would get converted to 90%. The Final CSEF percentage is used towards the final grade calculation, weighted as indicated in the table above as "Clinical grade percentage" (varies by clerkship).

3. Primary preceptors at sites with multiple preceptors will collect evaluation data from the other clinicians with whom the student works. The primary preceptor will collate this data and submit the final clinical evaluation.

Shelf Exam Failure & Remediation

If a student fails their shelf exam, they will receive an **Incomplete** for the clerkship and retake the exam at the end of the year during the remediation dates.
Students:

- Will not receive a Fail on their transcript if they pass the reexamination.
- Will not be eligible for a final grade of honors - if the final grade calculation would earn the student honors, they will receive high pass as a final grade.
- Will still be eligible to receive a clinical honors.
- Fails the reexamination, they will have Fail on their transcript and have to remediate the clerkship.

Clerkship Failure & Remediation

If a student fails a third- or fourth-year clerkship, the student will receive a Fail grade and will be required to repeat the clerkship. The grade for the repeated clerkship will be calculated based on the grading criteria outlined in the syllabus for Pass, High Pass, or Honors independent of the prior Fail. The original Fail grade will remain on the transcript. The original summative evaluation narrative will be included in the MSPE, in addition to the summative evaluation from the repeated clerkship.
If a student fails the remediated clerkship again and the SEPC allows for another remediation, the grade for the repeat clerkship will still be calculated based on the grading criteria outlined in the course syllabus for (Pass, High Pass, or Honors). The original two failures will remain on the transcript. The repeated course will be listed again, and the word (Repeat) will appear next to both course names.

Grade Review Policy

The School's Grade Reconsideration Policy is located in the Policies and Procedures for Evaluation, Grading and Promotion of Chobanian & Avedisian School of Medicine MD Students:
https://www.bumc.bu.edu/camed/faculty/evaluation-grading-and-promotion-of-students/

Assignments

Student Presentations

Each student will provide a 10-minute talk on a pre-approved topic of their choosing during one of the didactic days. You will choose your topic and receive your assigned time slot during the first week.

- The informational portion of the talk should be no more than 8 minutes (8-10 slides) long and should include a framework for evaluating your topic.
- Two minutes are allotted for the question & answer portion of the talk.
    - You will present **3** USMLE style questions based on your topic.
    - **The questions should be original and in a USMLE multiple-choice format.**
- Please practice so that you are not rushed. It is better to present less info effectively than to try to cover everything at lightning-speed.

- Your presentation will be evaluated on content, presentation skills, inclusion of a framework, USMLE type question preparation, AND ADHERENCE TO THE 10 MIN TIME LIMIT.
- When evaluating the literature for your oral presentation focus on evidence-based medicine (EBM).
    - There is an excellent breakdown of levels of evidence for each article in our journal *Neurology.*
    - Remember that in general, the highest quality information comes from double-blinded placebo-controlled trials.

Bedside Skills Session (BS)

This is the direct one to one observation of students on history and neuro examination.

Attendings/Residents/Fellows are expected to observe the student perform a history and physical examination. They should then complete the FOCuS forms on evaluating the interview and physical examination.

The goal of BS is to provide students with formative feedback on interview and examination. The diagnosis and clinical reasoning will not be tested for this exercise.

Recommended Texts

- Greenberg, Simon and Aminoff, Eds, *Clinical Neurology, 7th Ed.*, Lange Series.
  It is available in the bookstore. There is a copy of the 6th Edition available through etexts, which will be fine to use. http://www.bumc.bu.edu/medlib/resources/e-books/

- **History and Neurologic Exam**
    - Bates, B. *A Guide to Physical Examination,* JB Lippencott Co., Philadelphia
    - Drislane, F., et. al., *Blueprints in Neurology*, Blackwell Publishing.
    - Denny-Brown D, Tyler HR and Dawson, DM. *Handbook of Neurological Examination and Case Recording.* Harvard University Press, Cambridge, MA.
    - DeJong, RN. *The Neurologic Examination*, Harper and Row, New York
    - Medical Research Council. *Aid to the Examination of the Peripheral Nervous System*

- **Differential Diagnosis, Management of Neurological Illness**
    - Bradley WG, Daroff RB, Fenichel GM and Marsden CD. *Neurology in Clinical Practice*, Vols I and II, Butterworth- Heinemann, Boston
    - Patten J. *Neurological Differential Diagnosis*, Springer-Verlag, New York

- **Mental Status Examination**
    - Strub, RL and Black WF. *Mental Status Exam in Neurology*, FA Davis, Philadelphia

- **Neurologic Localization**
    - Duus P. *Topical Diagnosis in Neurology* Brazis PW, Masdeu JC and Biller J. *Localization in Clinical Neurology*, Little-Brown and Co., Boston

- **Some Useful Journals**
    - *Neurology*
    - *Stroke*

- *Annals of Neurology*
- *Archives of Neurology,*
- *Clinical Neurophysiology*
- *Journal of Neurology, Neurosurgery and Psychiatry*

- **Websites:** Many useful and fun websites are listed on **Blackboard**

- **Study Apps**
  - Neuro Localizer HD https://itunes.apple.com/us/app/neuro-localizer/id569914999?mt=8
  - Nerve Whiz https://itunes.apple.com/us/app/nerve-whiz/id380714187?mt=8
  - Neurology Prognosis https://itunes.apple.com/us/app/prognosis-neurology/id742087896?mt=8
- Case Files: Neurology https://itunes.apple.com/us/app/case-files-neurology-2nd-ed./id766132171?mt=8

Session Learning Objectives and Notes

Management of Ischemic Stroke

Stroke Fellows (rotating)

By the end of the lecture students will be able to:

1. Acute Stroke Management – identify the acute treatment options for ischemic stroke and determine which patients are appropriate for each type of therapy.
2. Inpatient Stroke evaluation – identify common causes of ischemic stroke and understand the reasoning for each element of the inpatient workup.
3. Secondary Stroke Prevention – understand appropriate prevention options based on different stroke etiologies.

LP Simulation

Dr. Katelyn Bird

By the end of this lecture students will be able to:

1. To become familiar with the contents of the LP kit.
2. To understand the reasons, risks and benefits for performing an LP and how to properly consent a patient.
3. To learn the LP technique and to become familiar with performing an LP on a mannequin.
4. To understand which tests to order and how to interpret the results.

Pain Medicine

Dr. Michael Perloff

By the end of this lecture, students will be able to:

1. Understand basic approach and principles to Pain medicine from a Neurology point of view.
2. Understand Neuropathic pain distributions, and the approach to treating these.
3. Approach to medical school, with self, wellness, and success in mind.
4. Career thoughts, expectations, reassurance yet preparation.

Cases 1-10

Dr. Katelyn Bird, Dr. Ariel Marks

1. Identify a clinical framework for approach to common neurological symptoms.
2. Understand relevant questions to help assess common neurological symptoms.
3. Use features of history and examination to localize the lesion.
4. Generate differentials based on the localization(s).
5. Understand the basics of treatment and common neurological conditions.

Neuro Exam Workshop

Dr. Katelyn Bird, Dr. Ariel Marks

1. Identify key components of the neurological examination.
2. Use appropriate technique to conduct the examination in a patient-sensitive and accurate manner.
3. Be able to understand normal and major abnormal findings on neurological examination.

Multiple Sclerosis

Dr. Konstantin Balashov

1. Review the key factors implicated in MS pathogenesis.
2. Describe and recognize symptoms, clinical forms, and natural history of MS.
3. Review the basics of MRI and current diagnostic criteria for MS.
4. Discuss other common diseases that can mimic MS.
5. Describe, generally, the drugs used to treat acute MS relapses.
6. Delay disease progression (AKA: disease-modifying treatment or DMT) and improve MS symptoms.

Neuromuscular

Dr. Ariel Marks

1. Understand the clinical applications of NCS/EMG as it pertains to neurological disorders.
2. Identify basic patterns of abnormalities on NCS/EMG in different disease states.
3. Use features of the NCS/EMG to appropriately localize within the peripheral nervous system.