

# **Clerkship Guidelines**

**Academic Year 2024-2025**





# Clerkship Guidelines

## Table of Contents

- Medical Education Program Objectives .....5
  - Third Year Learning Objectives.....7
  - Pre-requisite knowledge and skills .....8
- Site Maps .....9
- Schedules.....9
  - Holidays.....9
- Assessment and Grading.....9
  - AME/Kaiser Core Faculty Direct Observation .....11
  - Formative Assessments .....11
  - Final Summative Assessments.....12
- Roles and Responsibilities.....13
  - School’s Clerkship Director & Assistant Clerkship Director .....14
  - Overall Clerkship Coordinator .....14
  - Clerkship Site Director.....15
  - Clerkship Site Coordinator.....15
  - Primary Clinical Educators.....16
    - Supervision .....16
    - Supervision and Delegating Increasing Levels of Responsibility .....17
    - Intimate Exam Policy .....17
    - Physical Exam Demonstrations.....17
- Third Year Student .....18
  - Professional Comportment.....18
  - Ethical Behavior for Examinations and Mandatory Sessions .....18
  - Student Evaluation of the Clerkship .....19

Blackboard.....	19
Patient Encounters/Case Logs .....	19
Learning Environment Expectations .....	19
Appropriate Treatment in Medicine.....	20
Learning Environment Oversight (LEO) .....	20
Student Support Services.....	20
Tutoring.....	20
Disability & Access Services.....	20
General Student Policies.....	21
Policies and Procedures for Evaluation, Grading and Promotion of Students.....	21
Early Identification and Feed Forward Policy .....	21
Medical Student Disciplinary Code of Academic and Professional Conduct.....	21
Attendance Policies.....	21
Clerkship Specific Restricted Dates.....	22
Scrubs Policy .....	22
Needle Sticks and Exposure Procedure .....	22
Boston University Sexual Misconduct/Title IX Policy.....	22
Boston University Social Media Guidelines .....	22
Using Generative AI in Coursework Guidelines .....	22
School of Medicine Policies.....	22
Instructional Tools .....	22
MedHub .....	22
Echo360/Technology.....	23
Clerkship Learning Objectives.....	25
Contact Information .....	26
Clerkship Description .....	27
Focus of clerkship.....	27
Clerkship Changes Made Based on Feedback.....	27
Diversity, Equity, and Inclusion Initiatives .....	28
Other Recent Changes to the Clerkship.....	28
Clerkship Sites.....	28

Boston University Medical Center .....	28
Clerkship Schedules .....	28
Didactic Schedule .....	30
Call Schedule .....	30
Clerkship Grading .....	30
Recommended Texts .....	33
Session Learning Objectives and Notes.....	33

*Copyright © Trustees of Boston University. Do not copy for distribution.  
Any unauthorized copies of these materials is a violation of the Student Disciplinary Code of Academic and Professional Conduct and may be a violation of federal copyright.*

## Medical Education Program Objectives

A Boston University Chobanian & Avedisian School of Medicine graduate will be able to:

INSTITUTIONAL LEARNING OBJECTIVES	MEDICAL EDUCATION PROGRAM OBJECTIVES	
Establish and maintain medical knowledge necessary for the care of patients (MK)	MK.1	Describe the normal development, structure, and function of the human body.
	MK.2	Recognize that a health condition may exist by differentiating normal physiology from pathophysiologic processes.
	MK.3	Describe the risk factors, structural and functional changes, and consequences of biopsychosocial pathology.
	MK.4	Select, justify, and interpret diagnostic tests and imaging.
	MK.5	Develop a management plan, incorporating risks and benefits, based on the mechanistic understanding of disease pathogenesis.
	MK.6	Articulate the pathophysiologic and pharmacologic rationales for the chosen therapy and expected outcomes.
	MK.7	Apply established and emerging principles of science to care for patients and promote health across populations.
	MK.8	Demonstrate knowledge of the biological, psychological, sociological, and behavioral changes in patients that are caused by or secondary to health inequities.
Demonstrate clinical skills and diagnostic reasoning needed for patient care (CSDR)	CSDR.1	Gather complete and hypothesis driven histories from patients, families, and electronic health records in an organized manner.
	CSDR.2	Conduct complete and hypothesis-driven physical exams interpreting abnormalities while maintaining patient comfort.
	CSDR.3	Develop and justify the differential diagnosis for clinical presentations by using disease and/or condition prevalence, pathophysiology, and pertinent positive and negative clinical findings.
	CSDR.4	Develop a management plan and provide an appropriate rationale.
	CSDR.5	Deliver an organized, clear and focused oral presentation.
	CSDR.6	Document patient encounters accurately, efficiently, and promptly including independent authorship for reporting of information, assessment, and plan.
	CSDR.7	Perform common procedures safely and correctly, including participating in informed consent, following universal precautions and sterile technique while attending to patient comfort.
	CSDR.8	Utilize electronic decision support tools and point-of-care resources to use the best available evidence to support and justify clinical reasoning.
	CSDR.9	Recognize explicit and implicit biases that can lead to diagnostic error and use mitigation strategies to reduce the impact of cognitive biases on decision making.
Effectively communicate with patients, families, colleagues and interprofessional team members (C)	C.1	Demonstrate the use of effective communication skills, patient-centered frameworks, and behavioral change techniques to achieve preventative, diagnostic, and therapeutic goals with patients.
	C.2	Clearly articulate the assessment, diagnostic rationale, and plan to patients and their caregivers.
	C.3	Effectively counsel and educate patients and their families.
	C.4	Communicate effectively with colleagues within one's profession and team, consultants, and other health professionals.
	C.5	Communicate one's role and responsibilities clearly to other health professionals.
	C.6	Demonstrate appropriate use of digital technology, including the EMR and telehealth, to effectively communicate and optimize decision making and treatment with patients, families and health care systems.

A Boston University Chobanian & Avedisian School of Medicine graduate will be able to:		
INSTITUTIONAL LEARNING OBJECTIVES	MEDICAL EDUCATION PROGRAM OBJECTIVES	
	C.7	Practice inclusive and culturally responsive spoken and written communication that helps patients, families, and health care teams ensure equitable patient care.
	C.8	Communicate information with patients, families, community members, and health team members with attention to health literacy, avoiding medical jargon and discipline-specific terminology.
	C.9	Communicate effectively with peers and in small groups demonstrating effective teaching and listening skills.
Practice relationship centered care to build therapeutic alliances with patients and caregivers (PCC)	PCC.1	Demonstrate sensitivity, honesty, compassion, and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.
	PCC.2	Demonstrate humanism, compassion, empathy, integrity, and respect for patients and caregivers.
	PCC.3	Demonstrate a commitment to ethical principles pertaining to autonomy, confidentiality, justice, equity, and informed consent.
	PCC.4	Show responsiveness and accountability to patient needs that supersedes self-interest.
	PCC.5	Explore patient and family understanding of well-being, illness, concerns, values, and goals in order to develop goal-concordant treatment plans across settings of care.
Exhibit skills necessary for personal and professional development needed for the practice of medicine (PPD)	PPD.1	Recognize the need for additional help or supervision and seek it accordingly.
	PPD.2	Demonstrate trustworthiness that makes colleagues feel secure when responsible for the care of patients.
	PPD.3	Demonstrate awareness of one's own emotions, attitudes, and resilience/wellness strategies for managing stressors and uncertainty inherent to the practice of medicine.
Exhibit commitment and aptitude for life-long learning and continuing improvement (LL)	LL.1	Identify strengths, deficiencies, and limits in one's knowledge and expertise.
	LL.2	Develop goals and strategies to improve performance.
	LL.3	Develop and answer questions based on personal learning needs.
	LL.4	Actively seek feedback and opportunities to improve one's knowledge and skills.
	LL.5	Locate, appraise, and assimilate evidence from scientific studies related to patients' health.
	LL.6	Actively identify, analyze, and implement new knowledge, guidelines, standards, technologies, or services that have been demonstrated to improve patient outcomes.
Demonstrate knowledge of health care delivery and systems needed to provide optimal care to patients and populations (HS)	HS.1	Identify the many factors that influence health including structural and social determinants, disease prevention, and disability in the population.
	HS.2	Apply principles of epidemiological sciences to the identification of health problems, risk factors, treatment strategies, resources, and disease prevention/health promotion efforts for patients and populations.
	HS.3	Demonstrate respect for the unique cultures, values, roles/responsibilities, and expertise of the interprofessional team and the impact these factors can have on health outcomes.
	HS.4	Work with the interprofessional team to coordinate patient care across healthcare systems and address the needs of patients.
	HS.5	Participate in continuous improvement in a clinical setting, utilizing a systematic and team-oriented approach to improve the quality and value of care for patients and populations.
	HS.6	Initiate safety interventions aimed at reducing patient harm.

A Boston University Chobanian & Avedisian School of Medicine graduate will be able to:		
INSTITUTIONAL LEARNING OBJECTIVES	MEDICAL EDUCATION PROGRAM OBJECTIVES	
	HS.7	Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care.
	HS.8	Integrate preventive interventions into the comprehensive health care of individuals.
	HS.9	Explain how different health care systems, programs and community organizations affect the health of neighborhoods and communities.
Exhibit commitment to promoting and advancing health equity for all patients (HE)	HE.1	Define health equity and describe the individual and population level differences in health outcomes and disease burden due to inequities in health care.
	HE.2	Comprehend the historical and current drivers of structural vulnerability, racism, sexism, oppression, and historical marginalization and how they create health inequity.
	HE.3	Explain how one's own identity, lived experiences, privileges, and biases influences their perspectives of colleagues, patients and clinical decision making.
	HE.4	Comprehend and identify the impact of health care inequities through medical decision making tools, interpreting medical literature and reviewing scientific research.
	HE.5	Identify factors needed to advocate for a more diverse and equitable healthcare environment at a local, community, and systems based level.

### Third Year Learning Objectives

A third-year clerkship student will:

- Apply discipline specific knowledge within the context of clinical care (MK1-3)
- Gather an organized and hypothesis driven clinical history while being attentive to the patient's needs (CSDR-1)
- Perform a pertinent and accurate physical examination, accurately identifying any common abnormalities while demonstrating sensitivity to the patient. (CSDR-2)
- Analyze clinical data to formulate an assessment including a prioritized differential diagnosis supported by disease prevalence, pathophysiology, and relevant positive and negative clinical findings. (MK4-6, CSDR-3,4)
- Formulate an evidence based management plan that shows comprehension of the underlying disease process(CSDR 4)
- Deliver an accurate, well-structured, and synthesized oral presentations appropriate for the clinical setting.(CSDR-5)
- Document in the medical record in an accurate, organized and timely manner (CSDR-6)
- Communicate effectively with the interprofessional healthcare team (C4,5)
- Demonstrate an ability to perform common procedures safely and correctly, including participating in informed consent, following universal precautions and sterile technique while attending to patient comfort. (CSDR-7)
- Counsel and educate patients and families using patient-centered language that addresses patient concerns and clearly communicates plans of care. (C1-3, C7-8)
- Elicit feedback, communicate learning needs, demonstrate self-directed learning, and take opportunities to improve knowledge and skill gaps. (LL1-4, PPD-1)
- Treat all patients and team members with compassion, respect and empathy (PCC-1, 2)
- Display trustworthiness and an understanding of the responsibilities of a clinical student (PPD-2)

- Apply an understanding of the social and structural determinants of health to clinical care and initiate steps towards addressing the individual needs of patients (HE-1,2,4, MK-8)
- Use electronic decision support tools and point-of-care resources to apply the best available evidence in supporting and justifying clinical reasoning (CSDR-8, LL5-6).
- Practice inclusive and culturally responsive spoken and written communication that ensure equitable patient care (C7)

### **Pre-requisite knowledge and skills**

Students must have completed the preclerkship curriculum and the Transitional Clerkship and have taken the Step-I exam prior to entering the core clerkship phase of the curriculum.



## Site Maps

Site maps indicating the availability of student resources at our affiliate hospitals can be found under the Clinical Sites section of the Medical Education Office’s Student Resources page at:

<https://www.bumc.bu.edu/camed/education/medical-education/student-resources/#siteinfo>.

## Schedules

Block schedule dates for all clerkships can be located on the Medical Education website:

<https://www.bumc.bu.edu/camed/education/medical-education/academic-calendars/>

## Holidays

Juneteenth: Wednesday, June 19, 2024

Thanksgiving: Wednesday, November 27, 2024 at 12PM – Sunday, December 1, 2024

Intersession: Monday, December 23, 2024 – Sunday, January 5, 2025

Other holidays that occur during specific blocks will be communicated by the clerkship director.

Holidays by Clerkship can be viewed on the Medical Education website at:

<https://www.bumc.bu.edu/camed/education/medical-education/academic-calendars/#clerkhols>

## Assessment and Grading

All core clerkships and selectives use the below grading structure. **See the clerkship specific materials for each clerkship’s graded components.**

HOW MUCH EACH PART OF YOUR GRADE IS WORTH:	
Clinical Grade Percentage	
Shelf/Exam Percentage	25%
“Other” Components Percentage	
HOW YOUR FINAL WORD GRADE IS CALCULATED:	
Honors	
High Pass	
Pass	Numeric Score or between 1.50-2.49 in any domain on the final CSEF
Fail	Numeric Score or <1.50 on any domain on the final CSEF or < 2.00 averaged on the final CSEF (Clinical Fail)
HOW YOUR CLINICAL GRADE IS CALCULATED WITH THE CSEF:	
Clinical Honors	>4.45
Clinical High Pass	3.45-4.44
Clinical Pass	2.00-3.44
Clinical Fail	<2.00
SHELF/EXAM GRADING	
Exam minimum passing (percentile/2 digit score)	
What is “Other” and what percentage is it worth?	
Item	
Percentage	

<b>Other components that need to be completed in order to pass the clerkship</b>
Patient log
2 FOCuS Forms – 1 Interview Technique, 1 Physical Exam* <i>*Medicine Clerkship has a SOCS form and a Directly Observed H&amp;P that replaces the FOCUS forms</i>
<b>Standard Clerkship Clinical Grade Procedures/Policies</b>
<ul style="list-style-type: none"> <li>Preceptors will provide clinical evaluations that contain the “raw data” on the student’s clinical performance. Preceptors DO NOT determine the final “word” grade. 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.</li> <li>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.</li> </ul> <p>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.</p> <p>Any average of &lt;1.50 in any domain = an automatic fail for the clerkship  Any average of &lt; 2.50 in any domain = an automatic pass for the clerkship and a meeting with the MEO for clinical coaching  &gt;2.50 in all domains, standard rounding will be used      &lt;2.00 = Clinical fail which will = a fail for the clerkship      2.00-3.44 = Clinical pass      3.45-4.44= Clinical high pass      &gt;4.45=Clinical honors</p> <p>The clinical grade will be reported in the CSEF final narrative</p> <ul style="list-style-type: none"> <li>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).</li> <li>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.</li> </ul>
<b>Clerkship Specific Clinical Grade Procedures/Policies</b>
<ul style="list-style-type: none"> <li>The clinical grade will be worth x% of the final grade of the clerkship and will be calculated out of a 5-point scale from the CSEF</li> <li>The shelf is worth 25% of the final grade of the clerkship. The 2-digit score will be used to calculate the numeric score out of 100.</li> </ul>
<b>Professional Conduct and Expectations</b>
<p>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 below in <a href="#">professional compartment sections</a>. If there are multiple professionalism concerns through a clerkship or a student fails to meet the administrative expectations of a clerkship, the student will not be eligible to receive honors on the clerkship. A student will be given feedback prior to receiving their final grade for the clerkship if their professional conduct is of concern. Prior to receiving a final grade, if a</p>

clerkship director determines that a student does not meet the professional conduct and expectations of the clerkship, a student will fail the clerkship. Any professionalism lapses resulting in either a clerkship fail or ineligibility to receive honors will require narrative comments by the clerkship director in the summative comments section of the final evaluation and the student will be given feedback in advance of the final grade form submission.

#### **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. 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. Students would still be eligible to receive a clinical honors.
- If a student 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/>

### **AME/Kaiser Core Faculty Direct Observation**

During the third year, students will be directly observed by their core AME (or Kaiser) faculty three times throughout the year. They will also submit one write up in their core AME/Kaiser faculty's discipline, and one video of a session with an SP for review and feedback. At the end of the year, the core AME/Kaiser faculty will write a narrative summary describing the student's growth trajectory and competency development in the observed domains. This narrative will be included as part of the End of Third Year Assessment (in addition to the EOTYA 6 station OSCE).

### **Formative Assessments**

The purpose of formative assessment is to improve student learning by providing feedback on how well they are learning skills and content during the clerkship. Formative assessments are not included in the calculations of students' final grades. Each clerkship has required **FOCuS (Feedback based on Observation of Clinical UME Student)** forms which must be completed by the mid/end of the clerkship. These forms will provide formative assessment through direct observation of CSEF behaviors. Each student is required to complete one interviewing technique and one physical exam FOCuS form on each clerkship.

*In the Medicine Clerkship the FOCuS forms will be replaced by SOC's and a Directly Observed H&P.*

### ***Formative Assessment and Feedback Policy***

Boston University Chobanian & Avedisian School of Medicine ensures that each medical student is provided with formative assessment early enough during each required course or clerkship to allow sufficient time for remediation. Formative assessment occurs at least at the midpoint of each required course or clerkship four or more weeks in length.

Full Policy: <https://www.bumc.bu.edu/camed/education/medical-education/policies/formative-assessment-and-feedback/>

### ***Mid-Clerkship Review***

You and your clerkship director, site director or primary faculty/preceptor will complete the Mid-clerkship Evaluation form at the mid clerkship point.

The purpose of this evaluation is to give the student a chance to understand both their strengths as well as opportunities to improve. The feedback received at the mid-clerkship review is intended to allow the student to improve their clinical skills in real time.

### ***Final Summative Assessments***

The final summative assessment will be based on the clerkship grading policy and include a final narrative describing your overall grade, clinical grade, based on the CSEF (Clinical Student Evaluation Form), and other assessments, depending on the clerkship. The summative narrative must include a final summative statement regarding your professionalism on the clerkship (meet expectations or did not meet expectations) per the AAMC MSPE requirements. The final grade form summative narrative appears in your MSPE and is based on aggregate comments from your individual CSEFs and is written by a site director/clerkship director and is reviewed by the clerkship director before submission.

### ***NBME Subject Examination***

Students will take the NBME Subject Examination on the last Friday of the clerkship (unless otherwise communicated by the Medical Education Office). Students are given a reading day the day before the exam. Students do not report to their clerkship site on the reading day or the day of the exam. Students will be given 2 hours and 45 minutes to complete this exam. Shelf exam dates can be found in the [3rd year google calendar](#).

### *Remotely administered assessments*

Students are responsible for ensuring that they meet any technical needs required for remotely administered assessments (e.g., NBME Shelf Exams, OCRAs). This includes, but is not limited to, ensuring:

- computer specifications meet requirements outlined on the Alumni Medical Library website: <https://www.bumc.bu.edu/medlib/computing/busmrequirements/>
- for NBME shelf exams, the student runs the laptop certification process noted below
- a consistent and stable internet connection
- a quiet testing space where the student will not be disturbed during assessment administration

Clerkships will reserve BUMC space as an onsite testing space for any remotely administered assessments. Students who do not have an appropriate testing space or prefer to test on campus should reach out to their clerkship coordinator at least two weeks prior to the assessment to make arrangements to test on campus.

Students with technical difficulties during a remotely administered assessment who do not take their assessment at a designated campus location will not be able to submit a grade reconsideration request solely for this reason.

### Shelf Exam Laptop Certification Process

Students must certify their laptops one week before the NBME Subject Exam and again on the day before the exam. Instructions are provided on the Alumni Medical Library website at:

<http://www.bumc.bu.edu/medlib/services/computing/nbme/>

If a student has technical difficulties during a shelf exam, they must report this to the clerkship coordinator. The clerkship coordinator must inform the Medical Education Office, and the student is required to have their laptop evaluated by BUMC IT before their next shelf exam.

<https://www.bumc.bu.edu/it/support/bumc-it/request/>

### Exam Policies

<https://www.bumc.bu.edu/camed/education/medical-education/policies/exam-policies-for-medical-students/>

### Testing Center Policies

<https://www.bumc.bu.edu/camed/education/medical-education/policies/l-11-testing-center/>

### Make-Up Exams

Students needing to make up the exam or remediate only the exam portion of the clerkship must contact the Clerkship Coordinator to arrange for a make-up/remediation date. **Students may not take a make-up or remediation exam during any block they currently have a scheduled rotation.** Make-up and remediation exams will typically be scheduled at the end of the third-year blocks between mid-May and early June.

## Roles and Responsibilities

Each clerkship is directed by the School's Clerkship Director who oversees all clerkship sites. Each clinical site is directed by a clerkship site director who ensures that students are appropriately supervised and faculty and residents are prepared to teach at their site. Clerkships also have multiple clinical educators that have varying degrees of exposure to students. The responsibilities of the directors and coordinators are described below

more specifically. Clerkship directors are assisted by assistant clerkship directors, clerkship site directors, and clerkship coordinators.

### **School's Clerkship Director & Assistant Clerkship Director**

- Oversees the clerkship curriculum's design, implementation, and administration
- Defines clerkship specific learning objectives and requirements
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Ensures student and faculty access to appropriate resources for medical student education
- Orients students to the overall clerkship, including defining the levels of student responsibility requirements (i.e., required diagnoses and procedures, direct observations, forms, feedback), grading structure and student schedule
- Oversees teaching methods (e.g., lectures, small groups, workshops, clinical skills sessions, and distance learning) to meet clerkship objectives
- Develops faculty involved in the clerkship and provides faculty development across sites specific to clerkship needs
- Evaluates and grades students
  - Develops and monitors assessment materials
  - Uses required methods for evaluation and grading
  - Assures timely mid-clerkship meetings at all sites with students
  - Ensures students receive timely and specific feedback on their performance
  - Submits final grade form for students via School of Medicine's evaluation system
- Evaluates clerkship, faculty, and programs via peer review and annual data from the Medical Education Office (MEO) and national organizations (AAMC, NBME, etc.)
- Supports each student's academic success and professional growth and development, including identifying students experiencing difficulties and providing timely feedback and resources
- Addresses any mistreatment and professionalism concerns in real time and communicate with MEO
- Participates in the school's clerkship Educational Quality Improvement and peer review processes with completion of action items
- Ensures LCME accreditation preparation and adherence
- Adheres to the AAMC-developed guidelines regarding Teacher-Learner Expectations

### **Overall Clerkship Coordinator**

- Supports the clerkship director in their responsibilities above
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Responds within one business day to student emails and questions
- Maintains student rosters and clinical schedules
- Coordinates orientations and didactic sessions
- Liaises with site directors and administrators to coordinate student experiences across all sites and timely collection of evaluations
- Verifies completion of clerkship requirements, including midpoint and final evaluations for each student, required diagnoses, and FOCuS forms
- Monitors students' reported work hours and report any work hours violations to the clerkship director
- Coordinates and proctors clerkship exams

## Clerkship Site Director

- Oversees the clerkship curriculum and administration at the site
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Is available and responsive to students' questions and concerns
- Ensures all faculty and residents teaching students are oriented to students' expectations, responsibilities, learning objectives, requirements, and assessments used in the clerkship
- Ensures student and faculty access to appropriate resources for medical student education
- Orients students to the clinical site when new students arrive at the site
- Reviews clerkship requirements and student expectations at site
  - Provides site specific information including, but not limited to, lockers, library, call rooms as applicable and required by LCME
  - Reviews site-specific schedule, discusses student role and responsibilities at site, supervision at site, and who to contact with questions and concerns
- Supervises students and ensures clerkship specific required observations are completed
- Meets with the student for the Mid-clerkship review
- Meets with the student for the final exit meeting
- Ensures timely and specific formative feedback based on direct observations
- Works with faculty and residents to delegate increasing levels of responsibility to students based on clerkship requirements
- Provides site didactics when applicable
- Recognizes students with academic or professionalism difficulties and communicates to Clerkship Director in a timely fashion
- Completes and ensures the accuracy of student evaluation forms, including formative and summative narratives for students at the site
  - Ensures collection of feedback and evaluation data from all physicians who work with each student by the end of the clerkship block to meet school's grading deadlines
  - Ensures that narrative data are consistent with and support numerical data
  - Evaluates students fairly, objectively, and consistently following medical school and clerkship rubrics and guidelines
- Addresses any student mistreatment concerns immediately and notifies the Clerkship Director
- Adheres to the AAMC Teacher-Learner Expectations guidelines
- Reviews site specific evaluations at mid-year and end of year and facilitates improvements based on data
- Works with School to provide faculty development for faculty and residents
- Answers Clerkship Director's questions or concerns regarding site evaluation or student concerns
- Participates in educational programming and meetings as requested by Clerkship Director or Assistant Dean for Affiliated Sites
- Adheres to LCME guidelines

## Clerkship Site Coordinator

- Supports the clerkship site director in their responsibilities above

- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Responds within one business day to student emails and questions
- Sends out welcome email informing students where and when to arrive at least 72 hours before student start date
- Provides students with their contact information and remains available for questions and concerns during working days and hours
- Ensures students are oriented to clinics and hospital
- Obtains, tracks, and manages student rosters
- Obtains and maintains student information required by the site, as applicable
- Creates and distributes:
  - Student schedules to students, faculty, and staff before clerkship start date
  - Didactics/Presentation schedules, if applicable
- Schedules mid-clerkship evaluations; tracks and keeps record of completion and provides to overall Clerkship Coordinator
- Informs faculty and overall Clerkship Coordinator of student absences
- Arranges and schedules educational resources as applicable (e.g., SIM lab, EMR & Scrub training) and helps students troubleshoot
- Provides students with necessary documents and resources needed to be oriented to site
- Monitors and processes evaluations for distribution to faculty and residents
- Collects timely feedback from faculty for mid and end of clerkship evaluations to meet School's deadlines
- Collects feedback and evaluation data from all physicians who work with each student by end of clerkship block to meet School's grading deadlines
- Understands evaluation system and all site requirements
- Communicates site information changes (e.g., faculty, rotation details) to School's Clerkship Director and Clerkship Coordinator
- Maintains communication with Clerkship coordinator centrally and response within one business day
- Coordinates site specific meetings and faculty development with School

### Primary Clinical Educators

- Sets and clearly communicates expectations to students
- Observes students' history taking and physical exam skills, and documents it on the FOCuS form
- Delegates increasing levels of responsibility to students based on clerkship requirements
- Maintains appropriate levels of supervision for students at site
- Creates and maintains an appropriate learning environment, modeling respectful and professional behaviors for and toward students
- Recognizes students with academic or professionalism difficulties and communicates to Clerkship Director in a timely fashion
- Gives students timely and specific formative feedback based on direct observations
- Assesses students objectively using School of Medicine's evaluation system
- Adheres to the AAMC Teacher-Learner Expectations guidelines

### Supervision

Initially, the primary clinical faculty members should designate time to observe you performing: **history taking, focused physical exam, clinical problem-solving and interaction with patients and patient education.**



Once the supervisor establishes the student's level of confidence and competency, the student should be delegated increasing levels of responsibility in patient care, as appropriate. Although students may initiate a particular patient encounter on their own and without direct supervision, the faculty must at some point review the encounter with the student and inform the patient in-person that the student's assessment and management plan has been reviewed and approved by the faculty. The faculty is ultimately responsible for the evaluation, treatment, management, and documentation of patient care. If students have concerns regarding their clinical supervision, the site director and clerkship director should be immediately notified. Any supervision concerns should also be immediately submitted through the ATM link or directly to the Associate Dean of Medical Education.

### Supervision and Delegating Increasing Levels of Responsibility

It is expected that the level of student responsibility and supervision will be commensurate with student's competency and level of confidence. When the student arrives to a new setting, a faculty may wish to observe you for the first session. Thereafter, you should begin to see patients on your own. In the outpatient setting, **the student should initially perform 4-5 focused visits per day in the first week, increasing to 6-12 thereafter. In the inpatient setting, the student should initially follow 1-2 patients and increased to 3-4 thereafter. This will vary slightly by clerkship.** When a student feels that they are being asked to perform beyond their level of confidence or competency, it is the responsibility of the student to promptly inform the preceptor. It is then the preceptor's responsibility to constructively address the student's concerns and appropriately restructure the teaching encounter to address the student's learning needs.

### Under no circumstances should the following occur:

- Patient leaves the office/hospital without having had a direct face-to-face encounter with clinical faculty/supervising resident.
- Primary faculty gives "prior approval" for student to perform intervention (order labs, prescribe meds) without satisfactory review.
- Patient leaves office/hospital without being informed that assessment/ management plan has been directly reviewed and approved by the faculty.
- Learning in which a student is expected to perform an intervention or encounter without the prerequisite training and/or adequate supervision.
- Student note provides the only record of the visit. Although all faculty see all patients, faculty must document that they were actually the person responsible for seeing and examining the patient.

### Intimate Exam Policy

Students participating in an intimate exam with a patient (which includes, pelvic, genitourinary and rectal exam) must have a chaperone with them, irrespective of the gender of the patient or the student. Permission to participate in an intimate exam must be obtained by the supervisor in advance of the examination itself. The patient has the right to decline student attendance at any examination. If a student is unable to perform any intimate exam due to patient preference, the student's evaluation will not be impacted and if necessary, the clerkship director will provide an alternative experience.

### Physical Exam Demonstrations

The demonstration of the physical examination on students should not be done by any supervisor of students including residents and attending faculty. Practicing the physical examination on students places them in a position where they may feel pressure to consent to something they may not feel comfortable with.

### Third Year Student

Students are expected to adhere to BU's and Chobanian & Avedisian School of Medicine's policies, provided below in the [BU Policies and Student Support Services section](#).

### Professional Comportment

Students are expected to adhere to the AAMC-developed guidelines regarding Teacher-Learner Expectations, located on the Policies page, under "Academic Policies and Information"

(<https://www.bumc.bu.edu/camed/files/2015/05/AAMC-Teacher-Learner-Expectations.pdf>)

Students are expected to be aware of and follow the site expectations on professional comportment, including, but not limited to, dress code and the use of phones, pagers, and laptops. Students must arrive on time at their site and for any scheduled sessions. Any missed sessions and absences must adhere to the Attendance, Time Off, and Personal Days Policy.

Further, below are expectations for student professional conduct and behavior in the core clerkship curriculum. These include, but are not limited to:

- Treating and communicating with the clerkship team in a respectful manner.
- Engaging in the core curriculum and participating respectfully with peers and colleagues at all times.
- Arriving at clerkship didactic sessions on time and being present throughout sessions.
- Requesting faculty and resident evaluations in a timely manner.
- Reviewing and responding to e-mail requests in a timely manner.
- Returning borrowed clerkship materials on time.
- Handing in all assignments and clerkship documentation on time.
- Completing all logs and FOCuS forms by the clerkship specific deadline.
- Informing clerkship leadership and supervising faculty/residents of absences in advance of the absence.

Professional conduct will be reviewed at the mid-clerkship feedback session. Additionally, students will be given feedback prior to receiving their final grade when professionalism concerns are identified on the clerkship. If students are not meeting expectations for professional conduct and behavior in the clerkship or there are concerns, students will be made aware of the concerns noted by the clerkship directors, clerkship coordinator, faculty or residents.

### Ethical Behavior for Examinations and Mandatory Sessions

- Refrain from any conversation with your peers during exams and as you leave the L-11 testing space (when applicable), including within the vending room and elevator waiting area, until you are on the elevator.
- Refrain from leaving your computer camera view at any point during the examination. Any time where a student cannot be viewed may result in failure of the examination.
- Don't seek or receive copies of the examinations
- Signing in classmates, or signing in yourself and not staying for mandatory sessions is considered cheating and violations will be referred to Medical Student Disciplinary Committee
- If you are aware of any violations of the ethical standards listed above, within the Student Disciplinary Code of Academic and Professional Conduct, or otherwise, report it to the Clerkship Director

## Student Evaluation of the Clerkship

Student feedback is a highly valued, critical resource for helping us continually improve our curriculum. Evaluation of learning experiences is a requirement of the Liaison Committee on Medical Education. To ensure that we have a representative amount of data on our courses and clerkships, all students are expected to complete an evaluation via the School of Medicine's evaluation system, MedHub (<https://bu.medhub.com/>), for each of the courses/modules and their instructors. All evaluations are anonymous and aggregate data is only released to clerkship directors after grades have been submitted for the blocks. Please comment freely and honestly about your experience.

## Blackboard

Students will have access to a Blackboard site for the clerkship. The site is listed under "My Courses" on your Blackboard landing page.

Students who have questions about the Blackboard site or find that they do not have access to the site should contact the Clerkship Coordinator for assistance.

Blackboard Learn: <https://learn.bu.edu/>

## Patient Encounters/Case Logs

Across the third year, there are required patient encounters and procedures that must be logged whenever they are seen. To log the patient encounter, students must have participated in the history, physical exam, assessment and plan development of the patient.

### *Required Patient Encounters (The Core)*

Each core clerkship has a list of patient encounters and procedures that students are required to see before the end of the rotation. Students should log every time they see any patient with the required patient encounter and continue to log throughout all clerkships.

The full list of encounters and the clerkship-specific lists are available at <https://www.bumc.bu.edu/camed/education/medical-education/faculty-resources/>

### *Alternative Patient Encounters*

If a student has not been able to experience all patient encounters required for the clerkship, students must address any gaps in their patient encounters through an alternative experience. Alternative experiences may be simulation, videos, etc., depending upon the clerkship requirement.

### *Patient Encounter Log*

Students are expected to log their patient encounters in MedHub (<https://bu.medhub.com/>). Patient logs help the clerkship ensure that each student is seeing a diagnostically diverse patient population, an adequate number of patients, and performing a sufficient number of required procedures and diagnoses. Students must bring a printed copy of their patient encounter and procedure log to their mid rotation feedback meeting.

## Learning Environment Expectations

Chobanian & Avedisian School of Medicine has a **ZERO** tolerance policy for medical student mistreatment. We expect students to be aware of the policy for appropriate treatment in medicine, including procedures for reporting mistreatment.

Learning more about the school's efforts to maintain and improve the learning environment at:  
<https://www.bumc.bu.edu/camed/education/medical-education/learning-environment/>

### **Appropriate Treatment in Medicine**

Students who have experienced or witnessed mistreatment are encouraged to report it using one of the following methods:

- Contact the chair of the Appropriate Treatment in Medicine Committee (ATM), Dr. Vincent Smith, MD, directly by email ([vincent.smith@bmc.org](mailto:vincent.smith@bmc.org))
- Submit an online Incident Report Form through the online reporting system  
<https://www.bumc.bu.edu/camed/student-affairs/atm/report-an-incident-to-atm/>

These reports are sent to the ATM chair directly. Complaints will be kept confidential and addressed quickly.

Appropriate Treatment in Medicine website: <https://www.bumc.bu.edu/camed/student-affairs/atm/>

### **Learning Environment Oversight (LEO)**

The Learning Environment Oversight group was established in June 2022 and serves as a mechanism to monitor all aspects of the learning environment and report back to the school community on a regular basis. The group is comprised of representation from the Medical Education Office, Student Affairs Office, Appropriate Treatment in Medicine Committee, and students from all curricular years.

### **Student Support Services**

#### **Academic Enhancement Office**

The Academic Enhancement Office (AEO) supports the academic and personal success of all medical students. Recognizing that individual students have different needs in order to be successful in medical school, various programs and services are available to all current medical students. Programs are designed to help students adjust to the rigors of medical school and strive to learn balance, with more effective study habits that promote and sustain lifelong learning. Through small group sessions and individual meetings, we work with students to leverage the necessary skills to balance academic and personal growth.

<https://www.bumc.bu.edu/busm/student-affairs/office-of-academic-enhancement/>

#### **Tutoring**

Peer tutors may be requested via the Academic Enhancement Office's Peer Tutoring Program at:

<https://www.bumc.bu.edu/camed/student-affairs/office-of-academic-enhancement/academic-enhancement/peer-tutoring-program/>

#### **Disability & Access Services**

Students who wish to request accommodations for learning at Chobanian & Avedisian School of Medicine can do so through Disability & Access Services. Information about the process is available on the Academic Enhancement Office's page: <https://www.bumc.bu.edu/camed/student-affairs/office-of-academic-enhancement/accommodations-for-learning/>

Disability & Access Services' goal is to provide services and support to ensure that students are able to access and participate in the opportunities available at Boston University. In keeping with this objective, students are

expected and encouraged to utilize the resources of Disability & Access Services to the degree they determine necessary. Although a significant degree of independence is expected of students, Disability & Access Services is available to assist should the need arise.

<https://www.bu.edu/disability/accommodations/>

## General Student Policies

### Policies and Procedures for Evaluation, Grading and Promotion of Students

This is a school-wide policy and can be located at: <https://www.bumc.bu.edu/camed/faculty/evaluation-grading-and-promotion-of-students/>

### Early Identification and Feed Forward Policy

[https://www.bumc.bu.edu/camed/education/medical-education/policies/early\\_identification\\_policy/](https://www.bumc.bu.edu/camed/education/medical-education/policies/early_identification_policy/)

### Medical Student Disciplinary Code of Academic and Professional Conduct

The School of Medicine expects all students to adhere to the high standards of behavior expected of physicians during all professional and patient care activities at the school and all of its academic affiliates. All students must uphold the standards of the medical profession. This includes, but is not limited to, being respectful of patients, staff, members of the faculty, their peers, and the community, being aware of the ways in which their conduct may affect others and conducting themselves with honesty and integrity in all interactions.

Students are also required to adhere to the highest standards of academic honesty and professional conduct in relation to their coursework.

<https://www.bumc.bu.edu/camed/about/diversity/prs/medical-student-disciplinary-code/>

### Attendance Policies

On-site hours must be limited to 80 hours per week, averaged over a two-week period. Violations should be reported directly to the clerkship director or to an Associate Dean (Medical Education or Student Affairs). As part of becoming a professional, medical students should have the flexibility to address personal and professional needs at their discretion. In the clerkship year, as students transition to more of a professional work environment, they gain the responsibility of a working professional, yet do not have the agency to attend to their personal needs. As such, the Student Affairs Office and Medical Education Office have developed this personal day policy in conjunction with the clerkship directors for the core clerkship year. In addition to addressing issues of wellness and professional development, this policy will teach students the importance of time management and managing days off.

Time off requests must comply with the Attendance, Time Off, and Personal Days Policy.

- **Attendance, Time Off, and Personal Days Policy:**

- <https://www.bumc.bu.edu/camed/education/medical-education/policies/attendance-time-off-policy/>

- **3<sup>rd</sup> Year Excused Absences & Personal Days Requests:**

- <https://wwwapp.bumc.bu.edu/MedPersonalDays/home/Index>

- **Work Hours:** <https://www.bumc.bu.edu/camed/education/medical-education/policies/work-hours/>

- **Jury Service:** <http://www.bu.edu/dos/policies/lifebook/jury-service/>
- **Religious Observance:** <https://www.bu.edu/chapel/religion/religiouslifepolicies/>
- **Weather Policy:** <https://www.bumc.bu.edu/camed/education/medical-education/policies/weather-policy/>

### Clerkship Specific Restricted Dates

Students may not request a personal day that falls within a clerkship’s restricted days. Clerkship-specific restricted days can be found on the Attendance, Time Off, and Personal Days Policy:

<https://www.bumc.bu.edu/camed/education/medical-education/policies/attendance-time-off-policy/#restricted>

### Scrubs Policy

<https://www.bumc.bu.edu/camed/education/medical-education/policies/scrubs-policy/>

### Needle Sticks and Exposure Procedure

The needle sticks and exposure policy outlines the appropriate preventative measures and what to do in the case of unprotected exposure to body fluids.

<https://www.bumc.bu.edu/camed/student-affairs/additional-student-resources/needle-stickexposure/>

### Boston University Sexual Misconduct/Title IX Policy

This university-wide policy can be located at: <http://www.bu.edu/safety/sexual-misconduct/title-ix-bu-policies/sexual-misconducttitle-ix-policy/>

### Boston University Social Media Guidelines

This university-wide policy can be located at: <http://www.bu.edu/policies/information-security-home/social-media-guidelines/>

### Using Generative AI in Coursework Guidelines

With the increased use of Generative AI, Boston University’s Faculty of Computing & Data Sciences has issued guidelines around use and attribution.

<https://www.bu.edu/cds-faculty/culture-community/conduct/gaia-policy/>

### School of Medicine Policies

In addition to the expectations listed above, all students are expected to adhere to Chobanian & Avedisian School of Medicine and Boston University policies.

<https://www.bumc.bu.edu/camed/education/medical-education/policies/>

## Instructional Tools

### MedHub

Chobanian & Avedisian School of Medicine uses MedHub for evaluation and assessment. MedHub uses Single-Sign-On with BU accounts, and contains tutorial and training resources under the “Help” tab once logged in. Students with technical issues or in need of additional help beyond the resources provided should submit a support ticket via: <https://www.bumc.bu.edu/evaluate/medhub-support-tickets/>

## Echo360/Technology

Echo360 may only be used for streaming captured lecture videos; the videos may not be downloaded. Taking smartphone or digital pictures or videos of any part of the lecture in class, or at home, is similar to downloading and is not allowed. There are a number of reasons for this, including that students and/or the University may be liable for violations of federal copyright and privacy laws as a result of the use of copied material.

If you experience any technical problems, please report the issue in one of the following ways to generate an IT ticket:

- **Echo360 Related Issues:** Create a ticket on the Ed Media site (<http://www.bumc.bu.edu/bumc-emc/instructional-services/echo360/>): sign in and provide pertinent information that will enable an effective response. Have a link to the problematic video ready to copy/paste into this form.
- **Educational Technology Related Issues:** For assistance with technology supported by BUMC's Educational Media (e.g., ExamSoft), tickets can be created via their website at: <http://www.bumc.bu.edu/bumc-emc/instructional-services/report-an-educational-technology-issue/>
- **Other Technology Related Issues:** For assistance with BU-wide technology, such as Blackboard, email an example (e.g., picture or very brief phone video) to [ithelp@bu.edu](mailto:ithelp@bu.edu) with a descriptive subject line and give as many details as possible on the what, where, how you are using the service and what type of computer, browser, etc. along with type of student (i.e. M3). Always include link(s) to or screen shots of where the issue is occurring.
- **School's Policy on Recordings:** <https://www.bumc.bu.edu/camed/education/medical-education/policies/classroom-recordings/>

# **Radiology**

## **Academic Year 2024-2025**

**Radiology**  
**MEDMD 321**  
**2024-2025**

**Clerkship Director: Ari Damla**  
**Clerkship Coordinator: Mariama Bah**



## Clerkship Learning Objectives

### Third Year Learning Objectives

During the third-year clerkships, students will

- Demonstrate use of patient-centered interviewing and communication techniques
- Take a clinical history that demonstrates both organization and clinical reasoning
- Perform accurate and relevant physical exam techniques
- Demonstrate an ability to synthesize clinical information and generate a differential diagnosis, assessment and plan
- Demonstrate a compassionate and patient-sensitive approach to history taking and physical examinations
- Communicate well organized, accurate and synthesized oral presentations
- Counsel and educate patients and families
- Demonstrate timely, comprehensive and organized documentation
- Demonstrate a fund of knowledge in the clinical discipline and apply this to patient care
- Demonstrate an awareness of one’s own learning needs and work to address these gaps
- Show respect and empathy for others
- Demonstrate accountability to the responsibilities of the student’s role and expectations of a clinical clerk
- Communicate effectively with the interprofessional team

<b>Radiology Clerkship Learning Objectives</b>	<b>Medical Education Program Objectives</b>
1. Identify and describe the basic principles of various imaging modalities.	MK.1; MK.2; MK.7
2. Recognize and describe common radiological findings in common disease entities.	MK.2; MK.3; MK.4; CSDR.2; CSDR.3
3. Describe and apply ACR Appropriateness Criteria in clinical scenarios.	MK.4; MK.7; CSDR.4; LL.5 LL.6
4. Describe the role of the radiologist in the health care system and the importance of multidisciplinary work and team-based management in radiology	C.4; C.5, C.9, PPD.1 PPD.2 LL.4
5. Demonstrate the ability to utilize virtual PACS and explain the benefits of technology in imaging.	CSDR.8 HS.6 LL.6
7. Integrate pertinent clinical history and imaging findings into the differential diagnosis and management.	CSDR.3
8. Communicates the pertinent information to include (e.g., relevant clinical history) when requesting diagnostic imaging.	C.4; C.5; C.6
9. Consistently demonstrate professional behavior consistent with the values of the medical profession	PPD.1; PPD.3
10. Display skills of lifelong learning including generating clinical questions or identifying one’s own learning needs, using appropriate resources to answer questions or close learning gaps, engaging in self-assessment and goal setting and demonstrating growth in response to feedback	LL.1; LL.2; LL.3; LL.4; LL.6

## Contact Information



### **Clerkship Director**

#### **Ari Damla, MD**

Radiology Medical Student Clerkship Director

Telephone: (617) 414-4914

Email: [Ari.Damla@bmc.org](mailto:Ari.Damla@bmc.org)

Office: Department of Radiology FGH Building 3<sup>rd</sup> Floor

820 Harrison Avenue, Room 3001

Office Hours: Contact Mariama Bah to set up a meeting with Dr. Damla



### **Assistant/Associate Clerkship Director**

#### **Bindu Setty, MD**

Assistant Medical Student Director

Telephone: (617) 414-4914

Email: [Bindu.Setty@bmc.org](mailto:Bindu.Setty@bmc.org)

Office: Department of Radiology FGH Building 4<sup>th</sup> Floor 820 Harrison Avenue, Room 4008

Office Hours: Contact Mariama Bah to set up a meeting with Dr. Setty



### **Clerkship Coordinator**

#### **Mariama Bah**

Medical Student Coordinator

Telephone: (617) 414-4914

Email: [Mariama.Bah@bmc.org](mailto:Mariama.Bah@bmc.org)

Office: Department of Radiology FGH Building, 3<sup>rd</sup> Floor 820 Harrison Avenue, Room 3004

Office Hours: Monday - Friday, 8:30am to 5:00pm

## Clerkship Description

### Focus of clerkship

Third-year radiology clerkship focuses on providing students with a basic understanding of radiological imaging and intervention, while also offering hands-on learning through observing radiologists, participating in multidisciplinary conferences, and using virtual PACS and simulation centers. The curriculum blends lectures and independent study, equipping students with basic essential radiology knowledge and skills for their future careers in various medical specialties.

The purpose of the third-year clerkship in Radiology is to provide the fundamentals of radiological imaging and intervention. This Clerkship aims to immerse the student in Radiology and prepare them for encounters of radiological imaging or intervention in their future career in any chosen specialty. The clerkship will teach the basics of acquiring and interpreting common imaging modalities, such as X-rays, CT scans, MRI, and ultrasound, with the goal of identifying the basic relevant findings and their clinical implications. It will also teach how to integrate information from clinical history and imaging in order to produce a differential diagnosis and guide appropriate management.

During the clerkship, students will be exposed to the inpatient and outpatient imaging. They will learn about the radiologic diagnosis of common conditions using various diagnostic and interventional radiology techniques. Students will also learn about the American College of Radiology (ACR) Appropriateness Criteria, which guides the selection of the most appropriate imaging examinations for specific clinical conditions.

The curriculum features a blend of onsite lectures and independent study, with engaging opportunities for hands-on learning through interactive sessions using virtual PACS and simulation sessions. Students will also spend time in the reading rooms, observing radiologists and residents at work, experiencing the consultative nature of radiology with other specialties, and observing radiologists' roles in multi-disciplinary conferences.

In addition, the clerkship offers support to those considering Radiology as a future career. Radiology is an evolving field with continuous advancements in imaging technology and breakthroughs in therapeutics, including artificial intelligence-assisted diagnostics, minimally invasive image-guided interventions, and molecular imaging for personalized medicine, to name a few. This clerkship aims to provide a strong foundation in radiological knowledge and skills, fostering a deeper understanding of the field's impact on patient care across various medical specialties in the inpatient setting.

### *Pre-requisite knowledge and skills*

- Students must have completed their second-year curriculum and the Transitional Clerkship and have taken the Step-I exam prior to taking this clerkship.

### Clerkship Changes Made Based on Feedback

We are incorporating virtual PACS simulation into the selective so students have the opportunity to simulate the work of a radiologist by navigating a PACS and make basic findings.

Additional assessment reviews have been added to the schedule on a regular basis to ensure students receive feedback on their quizzes and OSCEs on a timelier basis.

We have converted to an on-site rotation so students can have more face-to-face time with faculty and residents.

## Diversity, Equity, and Inclusion Initiatives

We will continue to strive for excellence in this arena. We will dedicate a portion of time during orientation and the Imaging Bootcamp lectures to learning more about diversity, equity and inclusion in the field of radiology.

## Other Recent Changes to the Clerkship

Students will have several interactive sessions during their rotation including team-based learning, PACS simulation, time in the simulation center for hands-on activities, and time in the reading rooms. There will be a quiz every morning based on material learned the previous day that will be reviewed immediately after completion.

## Clerkship Sites

Site maps indicating the availability of student resources at our affiliate hospitals can be found under the Clinical Sites section of the Medical Education Office's Student Resources page at <http://www.bumc.bu.edu/busm/education/medical-education/student-resources/#siteinfo>.

### Boston University Medical Center

820 Harrison Avenue

Site Director: Dr. Ari Damla, (617) 414-4914, [ari.damla@bmc.org](mailto:ari.damla@bmc.org)

Site Administrator: Mariama Bah, (617) 414-4914, [mariama.bah@bmc.org](mailto:mariama.bah@bmc.org)

Description of site: In the event of a fully in person clerkship, medical students will spend the vast majority of their time in the following two locations:

1. All lectures, quizzes, OSCEs, Projects and Exams will take place **onsite**.
2. Virtual meeting links will be provided to the students for all supporting educational activities.

### Kaiser Permanent Santa Clara

700 Lawrence Expressway Santa Clara, CA 95051

Site Director: Dr. Lina Nayak, [Lina.Nayak@kp.org](mailto:Lina.Nayak@kp.org)

## Clerkship Schedules

This is an example of the basic schedule. Further details will be provided.

	Monday	Tuesday	Wednesday	Thursday
8:00	Orientation	Quiz 1 Imaging Modalities	Quiz 2 Chest Cases	Quiz 3 Chest Cases
8:30		Quiz 1 Review	Quiz 2 Review	Quiz 3 Review
9:00	Imaging Modalities 1	Chest 1	Chest 3	Abdomen 1
9:30				
10:00	Visiting X-Ray			
10:30	Visiting CT	Chest Shadowing	Chest Shadowing	Body Shadowing
11:00	Visiting Ultrasound			
11:30	Visiting MRI			
12:00	Noon Conference			
12:30				
13:00	Imaging Modalities 2	Chest 2	Chest 4	Abdomen 2
13:30				
14:00	Orientation to Simulation	Simulation	Simulation	Simulation
14:30				
15:00	Self Directed Resources	Self Directed Resources	Self Directed Resources	Self Directed Resources
15:30				
16:00				
	Monday	Tuesday	Wednesday	Thursday
8:00	Quiz 4 Body Cases	Quiz 5 GU	Quiz 6 Neuro	Quiz 7 Neuro
8:30	Quiz 4 Review	Quiz 5 Review	Quiz 6 Review	Quiz 7 Review
9:00	GU 1	Neuro 1	Neuro 3	MSK 1
9:30				
10:00				
10:30	Body Shadowing	Neuro Shadowing	Neuro Shadowing	MSK Shadowing
11:00				
11:30				
12:00	Noon Conference			
12:30				
13:00	GU 2	Neuro 2	Neuro 4	MSK 2
13:30				
14:00	Simulation	Simulation	Simulation	Simulation
14:30				
15:00	Self Directed Resources	Self Directed Resources	Self Directed Resources	Self Directed Resources
15:30				
16:00				
	Monday	Tuesday	Wednesday	Thursday
8:00	Quiz 8 MSK	Quiz 9 Nuclear	Quiz 10 IR	Quiz 11 IR
8:30	Quiz 8 Review	Quiz 9 Review	Quiz 10 Review	Quiz 11 Review
9:00	Nuclear 1	IR 1	IR 3	Breast 1
9:30				
10:00				
10:30	Nuclear Shadowing	IR Shadowing	IR Shadowing	Breast Shadowing
11:00				
11:30				
12:00	Noon Conference			
12:30				
13:00	Nuclear 2	IR 2	PEDS	Breast 2
13:30				
14:00	Simulation	Simulation	Simulation	Simulation
14:30				
15:00	Self Directed Resources	Self Directed Resources	Self Directed Resources	Self Directed Resources
15:30				

**Selective requirements: In addition to regular schedule (see above)**

- Final examination: Last Friday afternoon of each Block, students will have the weekend to complete the examination to be submitted by Sunday at midnight.
- Final Exams and Quiz make-ups: Make up for the weekly quizzes, OSCEs and final examination must be coordinated with the Medical Student Coordinator and Selective Director. Email the Medical Student Coordinator as soon as you know that you will not be able to attend the Selective, submit a time off form, and coordinate a time to make up the quiz. Contact the Selective Director if you are not going to be present on the day of the scheduled final examination and arrange for an alternate examination time.
- Absences, including sick days and personal appointments: If you must be absent due to illness or other reason such as medical or dental appointment, you must email or speak to the Medical Student Coordinator stating that you need to be out secondary to an illness or an appointment. In order that your privacy may be preserved, please do not indicate the nature of your illness or appointment.
- Days away for residency interviews: The Radiology Department allows for 7 max absences. Any additional days requested beyond 7 days must be approved by the Radiology Medical Student Director. Students must remediate each absence by doing an additional evening assignment or during a weekend call shift with one of the Radiologists. Please make sure the Radiology Medical Student Director is aware of the absence via e- mail. Please review the BUSM Time off Policy for further clarification which is on blackboard and at this desk.
- Dress code: Professional attire. Consistent with BUSM/BMC requirements.
- Cameras should remain on during didactic sessions to allow for direct student engagement and participation.
- Use of cell phones: Not permitted, including no cell phone use while attending virtual educational activities.
- Student Disciplinary Code of Academic and Professional Conduct:  
<https://www.bumc.bu.edu/busm/about/diversity/prs/medical-student-disciplinary-code/>

**Didactic Schedule**

There will be didactics in the morning and afternoon which will be mandatory attendance for CAMed students. Kaiser students may watch the recorded morning lectures and attend live for afternoon lectures.

**Call Schedule**

No call for this rotation.

**Holidays**

Holidays by Clerkship can be viewed on the Medical Education website at:

<http://www.bumc.bu.edu/busm/education/medical-education/academic-calendars/#clerkhols>

**Clerkship Grading**

HOW MUCH EACH PART OF YOUR GRADE IS WORTH:	
3 OSCEs	33.33%
CSEF	33.33%

Shelf/Exam Percentage	33.33%
<b>HOW YOUR FINAL WORD GRADE IS CALCULATED:</b>	
Pass	> 70% total on the OSCEs and Final Summative Exam >2.50 average score in all observed CSEF Domains
Fail	<70% total on the OSCEs and Final Summative Exam <2.5
<b>SHELF/EXAM GRADING</b>	
Exam minimum passing (percentile/2 digit score)	No minimum passing score
<b>What is "Other" and what percentage is it worth?</b>	
Item	
Percentage	
<b>Other components that need to be completed in order to pass the clerkship</b>	
None	
<b>Standard Clerkship Clinical Grade Procedures/Policies</b>	
<ul style="list-style-type: none"> <li>Preceptors will provide clinical evaluations that contain the "raw data" on the student's clinical performance. Preceptors DO NOT determine the final "word" grade. 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.</li> <li>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.</li> </ul> <p>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.</p> <p>Any average of &lt;1.50 in any domain = an automatic fail for the clerkship  Any average of &lt; 2.50 in any domain = an automatic pass for the clerkship and a meeting with the MEO for clinical coaching  &gt;2.50 in all domains, standard rounding will be used      &lt;2.00 = Clinical fail which will = a fail for the clerkship      2.00-3.44 = Clinical pass      3.45-4.44= Clinical high pass      &gt;4.45=Clinical honors</p> <p>The clinical grade will be reported in the CSEF final narrative</p> <ul style="list-style-type: none"> <li>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</li> </ul>	

used towards the final grade calculation, weighted as indicated in the table above as "Clinical grade percentage" (varies by clerkship).

- 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.

#### **Clerkship Specific Clinical Grade Procedures/Policies**

- The clinical grade will be worth 1/3 of the final grade of the clerkship and will be calculated out of a 5-point scale from the CSEF
- The final exam is worth 1/3 of the final grade of the clerkship.
- The average score of the three OSCE evaluations will be worth 1/3 of the final grade of the clerkship.

#### **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 below in [professional comportment sections](#). If there are multiple professionalism concerns through a clerkship or a student fails to meet the administrative expectations of a clerkship, the student will not be eligible to receive honors on the clerkship. A student will be given feedback prior to receiving their final grade for the clerkship if their professional conduct is of concern. Prior to receiving a final grade, if a clerkship director determines that a student does not meet the professional conduct and expectations of the clerkship, a student will fail the clerkship. Any professionalism lapses resulting in either a clerkship fail or ineligibility to receive honors will require narrative comments by the clerkship director in the summative comments section of the final evaluation and the student will be given feedback in advance of the final grade form submission.

#### **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. 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. Students would still be eligible to receive a clinical honors.
- If a student 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/>

## Recommended Texts

- **Felson's Principles of Chest Roentgenology**

- **Squire's Fundamentals of Radiology Suggested chapters:**

- o 1 – Basic Concepts
- o 2–The ImagingTechniques
- o 11–How to Study the Abdomen
- o 12 – Bowel Gas Patterns, Free Fluid, and Free Air
- o 13 – Contrast Study and CT of the Gastrointestinal Tract o 14 – The Abdominal Organs
- o 16 – Men, Women, and Children
- o 18 – The Central Nervous System
- o 19 - Interventional Radiology
- o 20 – The Latest in Diagnostic Imaging

- **Squire's Fundamentals of Radiology Reference chapters – Please review the images and figures:**

- o4 – How to Study the Chest
- o 5-TheLung
- o 6 – Lung Consolidations and Pulmonary Nodules
- o 7 – The Diaphragm, the Pleural Space and Pulmonary Embolism o 8 – Lung Overexpansion, Lung Collapse, and Mediastinal Shift
- o 9 – The Mediastinum
- o 10–TheHeart

- **Imaging Atlas of Human Anatomy, 4th edition, by Weir, Abrahams, Spratt, and Salkowski - Reference.**<sup>2</sup>

## Session Learning Objectives and Notes

*Please refer to Blackboard*