



**SYLLABUS  
NEUR-813C  
Neurology Clerkship**

## **Course Description**

The Neurology clerkship is designed to teach medical students the principles and skills needed to recognize and manage the neurological diseases that a general medical practitioner is most likely to encounter in practice. During this rotation, students will learn to perform an accurate Neurologic examination which will enable them to develop a differential diagnosis and treatment plan. The goal is for students to be comfortable assessing Neurologic problems no matter what field of medicine they pursue.

The Neurology clerkship involves a combination of inpatient work, outpatient practice, lectures, online didactic and case-based, interactive problem-solving sessions with an experienced Neurologist. Students will have the opportunity to work with attendings and residents in all settings.

In inpatient and outpatient clinical settings, students are taught a method of integrating the patient interview and neurological examination with an analytical approach to neurological diagnosis and management. Cases are presented to members of the neurological staff and discussed in detail. Weekly teaching conferences are given by the neurology faculty. This clerkship also offers a component on rehabilitative medicine. Students will attain a basic level of understanding of how to assess individuals with disabilities and how to utilize available resources for more in-depth evaluation and treatment of these individuals. The clerkship is a required course for all medical students.

While students are not expected to master all of Neurology by the end of this clerkship, students are expected to achieve a level appropriate for a M3 clinical student gaining expertise in clinical medicine.

## **Instructor and Contact Information**

**Holli Horak, MD**  
Clerkship Director  
520-626-7159  
[hhorak@arizona.edu](mailto:hhorak@arizona.edu)

**Donna Anderson**  
Clerkship Coordinator  
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**Kendall Wyllie, MD**  
Clerkship Assistant Director  
[kwyllie@arizona.edu](mailto:kwyllie@arizona.edu)

## **Clerkship Sites/ Site Directors**

Students will be divided amongst various services at Banner University Medical Center – Tucson, Banner University Medical Center – South, Southern AZ VA Health Care System, Tucson Medical Center, and outpatient clinics.

Banner – Main Campus

1625 N Campbell Ave

Tucson, AZ 85719

Banner - North Campus Clinic

3838 N Campbell Ave, Bldg. 2, Clinic E

Tucson, AZ 85719

All medical personnel must enter from the Allen Street Entrance

Banner – South Campus

2800 E Ajo Way

Tucson, AZ 85713

Banner Alzheimer's Institute

2626 E. River Road

Tucson, AZ 85718

Southern Arizona VA Healthcare System (SAVAHCS)

3601 S 6th Ave

Report to Building 80- 2<sup>nd</sup> Floor Mesquite Clinic

Multi-Purpose Specialty Clinic Rm 2727

Tucson Medical Center (TMC)

5301 E. Grant Rd

Tucson, AZ 85712

Students are responsible for completing all documents, obtaining badges, Federal fingerprinting requests, drug tests, and any other items requested by their site in a timely manner as determined by each site.

Site Director		
Banner – Main Campus	Holli Horak, MD	<a href="mailto:hhorak@arizona.edu">hhorak@arizona.edu</a>
Banner – North Campus	Holli Horak, MD	<a href="mailto:hhorak@arizona.edu">hhorak@arizona.edu</a>
Banner – South Campus	Holli Horak, MD	<a href="mailto:hhorak@arizona.edu">hhorak@arizona.edu</a>
Banner Alzheimer's Institute	Alex Hishaw, MD	<a href="mailto:AHishaw@neurology.arizona.edu">AHishaw@neurology.arizona.edu</a>
SAVAHCS	Tanya Lin, MD	<a href="mailto:tanya.lin@va.gov">tanya.lin@va.gov</a>
TMC	David Teeple, MD	<a href="mailto:dteeple@neurotucson.com">dteeple@neurotucson.com</a>

## Course Objectives

During this course students will:

1. Obtain a full history and perform a neurologic examination.
2. Recognize and interpret abnormal findings on the neurologic examination.
3. Use evidence-based approaches to patient care.
4. Appropriately self-assess and incorporate feedback to improve performance.
5. Advocate for quality patient care and access
6. Work appropriately within delivery systems, employing a cost-effective approach to the diagnostic work-up.

7. Apply knowledge of disease prevalence/incidence to the clinical care of patients.

## Expected Learning Outcomes

Upon completion of this clerkship, students will be able to:

1. Assess or evaluate a patient with a movement disorder or neuromuscular deficit.
2. Assess or evaluate a patient with a paroxysmal event or acute neurological deficit.
3. Assess a patient with altered level of consciousness.
4. Assess a patient with acute neurologic deficit due to ischemic or hemorrhagic stroke: identify risk factors, localize vascular distribution, and plan acute and chronic management.
5. Describe the role of the MD in community health and prevention and apply this knowledge to patient care.
6. Demonstrate punctuality, accountability, and honesty.
7. Demonstrate sensitivity and responsiveness to diversity, including culture, ethnicity, and income.
8. Demonstrate respect for patients and families.
9. Create and sustain a therapeutically and ethically sound relationship with patients and families.

## Course Objective and Learning Outcome Assessment Methods

Course Objectives	EPOs	Assessment Methods	Instructional Methods
CO-01 Obtain a full history and perform a neurologic examination.	PC-02, PC-04, PBL-01, MK-01, MK-02, MK-03, PROF-01, PROF-02, PROF-03, ICS-01, ICS-02	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotation
CO-02 Recognize and interpret abnormal findings on the neurologic examination	PC-03, PC-04, PC-05, PC-06, PBL-02, PBL-05, MK-01, MK-05, MK-09, PROF-02	WBA, Clinical evaluations, Written H&Ps, progress notes	Clinical rotations
CO-03 Use evidence-based approaches to patient care	ICS-01, ICS-02, ICS-05, PC-09, PBL-01, PBL-03, PBL-06, SBP-09, PROF-01, PROF-02, PROF-03, PROF-09	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
CO-04 Appropriately self-assess and incorporate feedback to improve performance	ICS-01, ICS-02, ICS-05, PC-09, PBL-01, PBL-03, PBL-06, SBP-09, PROF-01, PROF-02, PROF-03, PROF-09	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
CO-05 Advocate for quality patient care and access	ICS-01, ICS-02, ICS-05, PC-09, PBL-01, PBL-03, PBL-06, SBP-09, PROF-01, PROF-02, PROF-03, PROF-09	WBA, Clinical evaluations, Written H&Ps, progress notes	Clinical rotations

CO-06 Work appropriately within delivery systems, employing a cost- effective approach to the diagnostic work-up	ICS-01, ICS-02, ICS-05, PC-09, PBL-01, PBL-03, PBL-06, SBP-09, PROF-01, PROF-02, PROF-03, PROF-09	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
CO-07 Apply knowledge of disease prevalence/incidence to the clinical care of patients	ICS-01, ICS-02, ICS-05, PC-09, PBL-01, PBL-03, PBL-06, SBP-09, PROF-01, PROF-02, PROF-03, PROF-09	WBA, Clinical evaluations, Written H&Ps, progress notes	Clinical rotations
<b>Learning Outcomes</b>	<b>EPOs</b>	<b>Assessment Methods</b>	<b>Instructional Methods</b>
LO-01 Assess or evaluate a patient with a movement disorder or neuromuscular deficit	PC-02, PC-04, PC-05, PC-06, PC-08, PBL-01, MK-01, MK-02, MK-03, MK-09, PROF-01, PROF-02, PROF-03, PROF-04, PROF-07, ICS-01, ICS-02, ICS-03, ICS-04	WBA, Clinical evaluations, Written H&Ps, progress notes	Clinical rotations
LO-02 Assess a patient with a paroxysmal event or acute neurological deficit	PC-02, PC-04, PC-05, PC-06, PC-08, PBL-01, MK-01, MK-02, MK-03, MK-09, PROF-01, PROF-02, PROF-03, PROF-04, PROF-07, ICS-01, ICS-02, ICS-03, ICS-04	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
LO-04 Assess a patient with altered level of consciousness	PC-02, PC-04, PBL-01, MK-01, MK-02, MK-03, PROF-01, PROF-02, PROF-03, ICS-01, ICS-02	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
LO-04 Assess a patient with acute neurologic deficit due to ischemic or hemorrhagic stroke: identify risk factors, localize vascular distribution, and plan acute and chronic management.	PC-02, PC-04, PC-05, PC-06, PC-08, PBL-01, MK-01, MK-02, MK-03, MK-09, PROF-01, PROF-02, PROF-03, PROF-04, PROF-07, ICS-01, ICS-02, ICS-03, ICS-04	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
LO-05 Describe the role of the MD in community health and prevention and apply this knowledge to patient care	ICS-01, ICS-02, ICS-05, PC-09, PBL-01, PBL-03, PBL-06, SBP-09, PROF-01, PROF-02, PROF-03, PROF-09	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
LO-06 Demonstrate punctuality, accountability, and honesty	PROF-02, PROF-04, PROF-07	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations

LO-07 Demonstrate sensitivity and responsiveness to diversity, including culture, ethnicity, and income	PC-07, PC-08, PC-09, PBL-07, PBL-08, PBL-09, SBP-07, SBP-08, ICS-01, ICS-02	WBA, Clinical evaluations, Written H&Ps, progress notes	Clinical rotations
LO-08 Demonstrate respect for patients and families	PC-07, PC-08, PC-09, PBL-07, PBL-08, PBL-09, SBP-07, SBP-08, ICS-01, ICS-02	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations
LO-09 Create and sustain a therapeutically and ethically sound relationship with patients and families	PC-07, PC-08, PC-09, PBL-07, PBL-08, PBL-09, SBP-07, SBP-08, ICS-01, ICS-02	WBA, Clinical evaluations Written H&Ps, progress notes	Clinical rotations

## Required Didactic Sessions and Learning Objectives

Attendance is mandatory at all student and resident didactics. The schedule for didactic sessions is provided by the clerkship coordinator at the beginning of the rotation. Learning objectives can be found in MedLearn.

### Didactic session topics are:

- **Neuroradiology Lecture**
- **Neuromuscular Emergencies Lecture**
- **Departmental Grand Rounds**
- **Stroke Lecture**
- **Spinal Cord Emergencies Lecture**
- **Headache Lecture**
- **Seizure and Epilepsy Lecture**

## Required Patient/Clinical Conditions

Each patient/clinical condition has an associated minimum level of student responsibility. Definitions for each level of responsibility are below:

**Perform:** Student applies knowledge and demonstrates skills necessary to provide patient care and/or perform an indicated procedure under appropriate supervision.

**Observe:** Student attentively observes patient care and/or the procedure being performed.

Patient Type and Clinical Condition	Clinical Setting	Level of Student Responsibility
Lumbar Puncture	Outpatient or Inpatient	Observe
Patient with a focal pain syndrome	Outpatient or Inpatient	Perform Evaluate; appropriately manage chronic or acute pain; discuss and address risk of opioid medications

Patient with a neurologic emergency or unconscious patient	Inpatient or Emergency department	Perform Perform specialized Comatose examination
Patient with a paroxysmal neurologic event	Outpatient or Inpatient	Perform Evaluate patient; apply EEG result.
Patient with cerebrovascular disease	Inpatient or emergency department	Perform Evaluate; assess CODE stroke.
Patient with neuromuscular disease	Outpatient or Inpatient	Perform Evaluate and localize patient's symptoms to PNS
Neurologic History and Physical	Outpatient or Inpatient	Perform

**Students are required to log all required patient/clinical conditions in MedLearn. The list of required patient/clinical conditions is referenced above.**

Students can access the patient log from the MedLearn Dashboard: <https://medlearn.medicine.arizona.edu/>

To complete a patient log, click the link that reads 'Add to Patient Log.' From there, students will be taken to a form where they can choose from the list of required cases.

## Alternative Experiences

If a student is unable to experience a required Patient Case/Clinical Condition, they must complete an alternative experience. All alternative experiences must be approved by the clerkship director.

Instructions for how to submit an alternative experience request:

[https://meddocs.medicine.arizona.edu/MedLearn\\_Clerkship\\_AltExp/](https://meddocs.medicine.arizona.edu/MedLearn_Clerkship_AltExp/)

Direct link to submit an alternative experience request:

<https://medlearn.medicine.arizona.edu/clerkship/altexp>

Note, after submitting an alternative experience request, students must log the case in their logbook with an explanation that the requirement was satisfied through an alternative experience.

## History and Physical Exam

Students are required to complete a History and Physical while on the Neurology rotation. Students must document this experience in MedLearn. Under the H&P tab on your home page, enter the date of the observation, the name of the observer and whether the observer was a faculty/preceptor or resident.

## Documenting Duty Hours

Students are expected to record their duty hours. Didactics, Labs and Orientation Days are included in duty hours. Days off are to be logged as "0". Duty hours must be logged on MedLearn.

**URL:** <https://medlearn.medicine.arizona.edu/>

Students must login daily to complete recording of duty hours. The Clerkship Directors and/or Clerkship

Coordinators will routinely review cumulative duty hours data and correct any systemic problems that prevent compliance with the stated duty hours policy. Students who stay over the limitations of duty hours on their own volition must provide a justification for the reason at the time the hours are recorded. Students will not be penalized for accurate reporting, nor will duty hours information be used to determine grades or for student evaluations. Duty hour reports will be retained in the electronic database systems. Grades will not be released until the student reports duty their hours.

## Assignments and Examinations: Schedule/Due Dates

- Required didactics and lectures; schedule provided at the beginning of the rotation
- Mid-Clerkship evaluation due on the second Friday of the rotation
- OSCE on the last Tuesday of the rotation
- Shelf Exam on the last Friday of the rotation
- Students are required to complete evaluations on the Neurology clerkship, clerkship sites and faculty instruction through New Innovations.

## Mid-Clerkship Formative Feedback

Mid-clerkship formative feedback is intended to serve as a vehicle to show progress and assist with being successful on the clerkship rotation. This is not a formal evaluation and will not be included in the formal grading process, however, completion is mandatory. Students are asked to distribute the mid clerkship feedback form to the resident or attendings on your service with whom you have worked with the most. Students should complete their section of the form before meeting with the supervising faculty members and residents.

The Clerkship Director will meet with each student for a brief mid-course feedback session, to be done the midpoint in the clerkship. Students are required to bring the completed form(s) to the mid-point feedback session at your scheduled time with the clerkship director. **Having one completed form at your mid-point feedback session is mandatory.** All student forms are stored in the clerkship office.

Based on a review of WBAs and patient log data, student experiences may be adjusted to meet clerkship experience expectations. Also, certain rotations may require a student to change their clinical site to gain the needed experiences.

## Readings

There are recorded lectures, readings, and other resources available in MedLearn under “Course Resources.” There are also additional resources in our “Neurology Clerkship Student Resources” Box folder. Access to Box will be provided at the beginning of your rotation. Note, none of the recorded lectures, readings, etc. are required, however, they are very helpful as students progress through the clerkship.

A pre-shelf exam textbook and neurology stroke booklet are shared with all students at the beginning of the clerkship.

## Required or Special Materials

- Stethoscope
- Ophthalmoscope is recommended but not required.

- Laptop
- Dress code as defined by the College of Medicine

*\* A reflex hammer and tuning fork (C-128) are provided to students on Orientation Day.*

## Grading Scale and Policies

### Neurology Clerkship Grading Scale:

Clinical Assessment	50%
Workplace Based Assessment (WBA)	20%
NBME Shelf Exam	15%
OSCE	10%
Professionalism	5%
Total	100%

#### Clinical Grade (50%):

The clinical grade is based on the average score of clinical evaluations. Evaluations are sent to all attendings, and residents students work with during the rotation. Once completed, evaluations will not be dropped for any reason. Please note, all evaluations are given the same weight regardless of whether they are from an attending or resident.

#### Workplace Based Assessments (20%):

Students are required to be assessed on a minimum of 4 different EPAs during each clerkship and must receive a minimum average of 1 WBA per week for each week of patient interaction. The Neurology Clerkship requires a minimum of 4 WBA's.

A minimum of four of the following Entrustable Professional Activities (EPA) must be seen by the end of the Neurology Clerkship:

- EPA 1: Gather a History and Perform a Physical Examination
- EPA 2: Prioritize a Differential Diagnosis Following a Clinical Encounter
- EPA 3: Recommend and Interpret Common Diagnostic and Screening Tests
- EPA 5: Document a Clinical Encounter in the Patient Record
- EPA 6: Provide an Oral Presentation of a Clinical Encounter

**The clerkship director may allow additional EPAs as part of the list of EPAs for this clerkship. Students are encouraged to talk to the clerkship director to obtain approval.**

A grade of "pass" is awarded for 20% of the grade when a student has completed:

- A minimum of 4 WBA forms submitted for an average of one per week for each week of patient interaction in the clerkship block.
- A minimum of 4 different Entrustable Professional Activities (EPAs) seen by the end of each clerkship block.
- A minimum of 2 faculty members and 2 residents must complete WBA assessments for the learner. If no resident is present in a clinical block or rotation (e.g., rural rotations, some community clinic rotations), then only the attending assesses the learner a minimum of two times a week.



What constitutes “fail” in WBA:

- Not meeting the minimum in one or more WBA requirement(s), as listed above.
- Being evaluated by an individual who is not an attending or resident (e.g., peer, friend, family member, etc.). This constitutes academic dishonesty and is subject to the consequences outlined in the Honor Code policy, including academic dismissal.

Note: Grading for WBA is “all- or- none”. That is, students are awarded 35% for completing the minimum WBA requirements as outlined above. If students do not meet the minimum by the end of the last day of the rotation, they are awarded 0% for this portion of the final clerkship grade. There is no remediation period.

**NBME Shelf Exam (15%):**

The student’s Equated Percent Correct Score (raw score) will be converted into a Percentile Rank using the NBME Academic Year Norms graph, and the quarter (1-4) in which the exam was taken. The Percentile Rank may change over the course of the academic year in each quarter (e.g., a raw score that converts to a percentile of 15% in quarter 1 may fall in the 10<sup>th</sup> percentile in quarter 4 for the same raw score). The quartile for grading is determined by the date the student sat for the exam and not the date the student started the clerkship.

Retake exams will utilize the same method. The Equated Percent Correct Score (raw score) will be converted to the Percentile Rank for the quarter (1-4) in which the retake exam was taken.

Students must score at least in the 5<sup>th</sup> percentile to pass the Neurology shelf exam. This score is based on national norms for Neurology clerkships.

**OSCE (10%):**

Students will participate in 2 OSCE cases with standardized patients at the end of the rotation.

**Professionalism Grade (5%):**

Professionalism accounts for 5% of the student’s grade; it is an all or nothing component. A significant lapse and/or a pattern of lapses will result in a deduction of the full 5%. The Clerkship Director makes the final decision. It is expected that most students will receive full credit.

The following list, while not exhaustive, should help to clarify what is included in the Professionalism grade throughout the clerkships.

Students will:

- Complete credentialing paperwork and site-specific requirements such as, but not limited to, fingerprinting and drug screening, by the stated deadline.
- Complete assignments by their due dates. This includes but is not limited to the following:
  - MedLearn (Duty hours, H&P feedback, Patient Logs)
  - Surveys (e.g., MedLearn, New Innovations)
  - Written History and Physicals
  - Mid-Clerkship Formative Feedback Form
  - Return of books and other borrowed items
- Respond to emails in a timely manner (within 2 business days)
- Refrain from using cell phones during meetings/sessions/didactics.
- Always inform your team/preceptor of your whereabouts.

- Be considerate to staff, faculty, residents, and/or patients.
- Be on time for required meetings/sessions and do not leave without permission or until dismissed.
- Sign-in for didactics or other activities when requested ONLY for yourself.
- Be punctual and comply with NBME Shelf Exam rules.
- Obtain advance permission from the Clerkship Director/Program Manager for absences from activities and/or wards; inform appropriate residents and/or attendings.

**A clerkship reserves the right to assign a failing grade for the entire clerkship if a student performs in an unprofessional manner in terms of interactions with patients and other health professionals, completing assignments, attendance at scheduled activities, or other inappropriate actions or activities.**

#### **Final Grade Distribution:**

The Department of Neurology, in keeping with the policy of the College of Medicine, will assign final grades using a cumulative, point-based system calculated with the above criteria. Final grades will be distributed across the block cohort using the following COM guidelines:

Honors: Awarded to students who score in the top 25% of the block cohort

High Pass: Awarded to students in the next 26-50% of the block cohort

The remaining cohort who did not meet the criteria for Honors or High Pas, and who met the minimum passing criteria will be awarded a grade of “Pass.”

Fail: see below

A failure of the Neurology Clerkship can occur in any of the following circumstances:

- WBA’s: incomplete submission of WBA’s (i.e., too few submitted/weeks, etc.)
- A Shelf Examination score (Percentile Ranking) of lower than 5% (If a student fails the shelf examination, they will be given one more opportunity to pass the examination before being required to repeat the Clerkship.
- A failing OSCE
- Failure of the professionalism component
- Failure to remediate any absences exceeding the allowable amount (2 days)
- Per the Grading and Progression Policy, failing any competency, including professionalism, will result in failing the clerkship.

## **University Policies**

### **Absence and Class Participation Policies**

Absences for any sincerely held religious belief, observance, or practice will be accommodated where reasonable. Refer to the [Religious Accommodation Policy](#).

Absences pre-approved by the University Dean of Students (or dean’s designee) will be honored.

### **Classroom Behavior/Attendance Policy**

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we

can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Students are asked to refrain from disruptive conversations with people sitting around them during lectures. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lectures or discussions and may be reported to the Dean of Students.

College of Medicine – Tucson Attendance Policy: <https://medicine.arizona.edu/form/attendance-policies-medical-students-com>

### **Threatening Behavior Policy**

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

### **Accessibility and Accommodations**

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

### **Code of Academic Integrity**

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: <https://deanofstudents.arizona.edu/policies/code-academic-integrity>.

The University Libraries have some excellent tips for avoiding plagiarism, available at <http://new.library.arizona.edu/research/citing/plagiarism>.

### **UA Nondiscrimination and Anti-harassment Policy**

The University is committed to creating and maintaining an environment free of discrimination; see <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

**Confidentiality of Student Records** <https://www.registrar.arizona.edu/privacy-ferpa/ferpa>

### **University and COM-T Policies**

See [University of Arizona Policies](#)

See [COM-T Student Policies](#)

### **Subject to Change Statement**

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.

**SUBJECT EXAMINATION PROGRAM**

## CLINICAL NEUROLOGY EXAMINATION

## 2022-2023 ACADEMIC YEAR NORMS

**Equated Percent Correct (EPC) Summary Statistics**

	Academic Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4
<b>Number of Examinees</b>	14,663	3,480	3,323	3,380	3,401
<b>Mean</b>	81.0	80.4	80.9	81.5	81.3
<b>SD</b>	7.3	7.3	7.2	7.2	7.1

**Interpreting Academic Norms**

- Norms are provided to aid in the interpretation of examinee performance.
- They make it possible to compare examinees' scores with the performance of a norm group.
- Norm group characteristics:
  - Examinees from LCME-accredited medical schools who took a form of this examination as an end-of-course or end-of-clerkship examination for the first time during the academic year from 8/1/2022 through 7/31/2023.

**Quarterly Norms**

- The percentile ranks for each quarter are defined using the school reported start date of the first rotation for this subject.
- Using the start date of the first rotation, examinees are assigned to the appropriate quarter based on the assumption that their test date would be at least four weeks later.
- For example, if a school's start date for the first rotation is March, then the performance of examinees from that school that tested in April, May or June would be represented in the first quarter.
- Since quarterly norms are based only on schools that supplied the start date of the first rotation for this subject, the number of examinees reported across quarters may not add up to the total norm group for the academic year.

**Using the Table**

- Locate an examinee's score in the column labeled "EPC" and note the entry in the adjacent column for the academic year or quarterly testing period of interest. This number indicates the percentage of examinees that scored at or below the examinee's equated percent correct score.

**Percentile Ranks**

EPC	Acad. Year	Q1	Q2	Q3	Q4
100	100	100	100	100	100
99	100	100	100	100	100
98	100	100	100	100	100
97	100	100	100	100	100
96	100	100	100	100	100
95	100	100	100	100	100
94	99	99	99	99	99
93	98	99	98	98	98
92	97	98	97	97	97
91	95	96	95	95	95
90	93	94	93	92	92
89	90	92	91	89	89
88	85	87	86	83	84
87	81	84	82	79	80
86	76	79	77	73	75
85	71	74	73	68	70
84	66	69	67	63	65
83	61	64	62	57	60
82	53	56	54	49	51
81	48	51	49	44	46
80	43	45	44	39	41
79	38	41	38	35	35
78	33	36	34	31	31
77	29	32	29	27	27
76	25	28	25	23	23
75	22	25	21	20	20
74	17	20	17	15	17
73	16	17	15	14	15
72	13	14	13	11	12
71	11	12	11	9	10
70	9	10	9	7	8
69	7	8	7	6	7
68	6	7	5	5	5
67	5	6	4	4	4
66	4	5	4	3	3
65	3	4	3	3	2
64	3	3	3	2	2
63	2	2	2	2	1
62	2	2	2	1	1
61	1	1	1	1	1
60	1	1	1	1	1
59	1	1	1	1	0
58	1	1	1	0	0
57	0	0	1	0	0
56	0	0	0	0	0
55	0	0	0	0	0
≤ 54	0	0	0	0	0