

NEUROLOGY REQUIRED CLERKSHIP

NEUR 701-XXX CRNXXXX
COURSE SYLLABUS
8 Credit Hours

CONTACT INFORMATION

Clerkship Director



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Clerkship Associate Director



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Clerkship Coordinator



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Clerkship Office: Neurosciences Center, Suite 201, 2130 W. Central Ave, Toledo, OH43606 419-291-6590

COURSE DESCRIPTION

The goal of this course is to develop a correct approach to diagnosis and management of neurological disorders. The primary objectives are to:

- Record a complete neurological history and perform a comprehensive neurologic physical exam
- Generate a differential diagnosis and a pick the most likely diagnosis based on history and exam
- Localize lesions to a very basic level (central vs peripheral, nerve vs. muscle, cortex vs brain stem, etc.)
- Formulate an assessment and treatment plan for common neurological disorders

This course follows the Third-Year Medical Student Academic Calendar, for key dates please follow this link: http://www.utoledo.edu/med/md/curriculum/curriculum3/

PREREQUISITES AND COREQUISITES

Students must have successfully completed the foundational science curriculum, bridge course and any other requirements per COMLS policy.

ECC Approved April 2024

ROTATION OVERVIEW

The students' time, during the 4 week rotation, is divided between two Neurology Inpatient Services: Primary and Stroke at ProMedica Toledo Hospital and the outpatient Neurology clinics at the Neurosciences Center. The expectation is students will work diligently to obtain the maximum benefit from the limited time on the rotation.

COURSE OBJECTIVES, Including Core Competencies, Instructional Methods & Outcome Measures

	Clerkship Objective	,	
Core	At the end of the Neuro Required	Instructional	Outcome Measure
Comp	Clerkship the student will be able to:	Method	
PC-1	Obtain and present a complete neurological history including all relevant components.	-Patient Care in Outpatient and Inpatient Settings -Medical Student didactic session -Standardized Patient Exercise	Clinical Competency Evaluation Skills exam
PC-1 MK-1	2. Conduct a comprehensive and complete neurological exam. The student should also be able to describe the anatomic and physiologic basis of the neurological examination as it relates to the clinical problem.	-Patient Care in Outpatient and Inpatient Settings -Medical Student didactic session -Standardized Patient Exercise	Clinical Competency Evaluation Skills exam
PC-1 IPC-1	3. Present and document a succinct and accurate neurological history and examination.	-Patient Care in Outpatient and Inpatient Settings -Medical Student didactic session	Clinical Competency Evaluation Skills exam
PC-7	4. Appropriately apply diagnostic studies to	-Patient Care in Outpatient	-Clinical Competency Evaluation
PC-6	the evaluation of neurological patients.	and Inpatient Settings -Medical Student didactic session	-NBME subject exam
MK-4	5. Develop a differential diagnosis based primarily on history and examination.	-Patient Care in Outpatient and Inpatient Settings -Medical Student didactic session	Clinical Competency Evaluation
MK-1 MK-4	6. List the major categories of neurological disease and describe the signs and symptoms patients will display.	-Patient Care in Outpatient and Inpatient Settings -Medical Student didactic session	Clinical Competency Evaluation NBME Subject Exam Medical student morning report(Case presentation)
PC-8	7. Recognize neurological emergencies and the need for immediate management and requirements for appropriate intervention.	-Patient Care in Outpatient Settings and Inpatient Settings -Medical Student didactic session	Clinical Competency Evaluation
PC-7 MK-4 PBL-2	8. Present a management plan for patients who present with major neurological disorders.	-Patient Care in Outpatient and Inpatient Settings -Medical Student didactic session	Clinical Competency Evaluation NBME Subject Exam. Medical student morning report (Case presentation)
MK-1 MK-4 MK-6 PC-6	9. Explain the pathophysiological mechanisms of neurological disease and how these process impact treatment choice.	-Patient Care in Outpatient and Inpatient Settings -Medical Student didactic session	Clinical Competency Evaluation NBME Subject Exam

IPC-3	10. Recognize neurological issues	-Patient Care in Outpatient	-Clinical Competency Evaluation
MK-4	specifically related to aging.	and Inpatient Settings	-NBME Subject Exam
MK-1		-Medical Student didactic	-Multiple choice quizzes
MK-8		session	
		-End of Life online videos	
MK-7	11. Review relevant clinical literature as it	Patient Care in Outpatient	-Clinical Competency Evaluation
PC-6	pertains to specific neurological problems	and Inpatient Settings	
PBL-2	encountered and utilize evidence-based		
	guidelines in diagnosis and management of		
	patients (i.e. demonstrate lifelong		
	learning).		
IPC-3	12. Identify and discuss ethical issues	-Online Videos	Multiple choice quizzes
PC-2	relevant to care of the patient with	-Medical Student didactic	
SBP-1	neurological disorders.	session	
SBP-2			
SBP-6			
MK-8	13. After reading "Controversies in Brain	-Online Videos	Self-Learning Attestation
	Death Declaration: Legal and Ethical	-Reading	
	Implications in the ICU" and viewing brain		
	death case-based discussion video		
	students will be able to identify ethical		
	issues relevant to brain death.		
PB-1	14. All students participating in this	Patient Care in Outpatient	Clinical Competency Evaluation
PB-3	clerkship will meet or exceed the	and Inpatient settings	
PB-2	institutional standards for professional		
	behaviors.		

EDUCATIONAL RESOURCES, TEXTBOOKS and OTHER MATERIALS

- 1. College of Medicine and Life Sciences Library Website is filled with Neurology study resources https://libguides.utoledo.edu/md/neurology
- 2. Copies of Clinical Neurology by David Greenberg and High Yield Neuroanatomy by Gould and Bruechner-Collins is available to borrow from the department
- 3. Access Medicine CASE FILES: https://www.utoledo.edu/library/mulford/ Click on Access Medicine > Cases > Case Files Preview > Clinical Medicine > Case Files Neurology > select topic/case of interest

https://blackboard.utdl.edu The NEUR 701 black board course contains rotation-specific information and resources. If you have trouble accessing your account, contact 419-530-8835 or send requests to UTLV@utoledo.edu

REQUIRED ACTIVITIES

During the clerkship, students are expected to:

- Evaluate new and returning outpatients, document findings and present to a Neurology faculty member
- Perform a neurological history and physical on 5 new patients
- Evaluate assigned inpatients, review lab and test results and present on rounds
- Actively participate as a member of the treatment team
- Be prepared by reading about patient cases, diseases, diagnoses, etc.
- Log patient cases and work hours accurately and timely
- Attend and participate in the student lecture series, Neurology Grand Rounds and Neurovascular Case Conferences
- With your rotational team, present a case at the Chairman Rounds
- Participate in the Observation of Clinical Skills Session
- Participate in Lumbar Puncture and Fundoscopic examination simulation training
- Complete the LP Quiz
- Complete the NIH Stroke Scale Training
- Complete the Neuro Logic Cases & Follow-up quiz
- Complete Brain Death Attestation Statement in Blackboard after reading "Controversies in Brain Death Declaration: Legal and Ethical Implications in the ICU" and viewing Brain Death Case-Based Discussion video
- Secure the completion of Formative Feedback forms from faculty
- Participate in the Mid-Clerkship Formative Feedback Session
- Complete one (1) OSCE
- Complete the NBME Neurology Subject Exam
- Follow UT polices, including but not limited to professional behavior, work hours, absences, etc.
- Report on time; be prepared, in professional attire with a clean, pressed white coat.
- At the end of the clerkship, complete evaluations of preceptors and sites.

Not Required but Highly Recommended Activities

- Complete the American Academy of Neurology on-line Self-Assessment Examination
- Review recorded lectures regarding end of life and Neuroimaging on Black Board

CLINICAL EXPERIENCES

Students must log cases and educational hours and be at 100% completion at the end of the clerkship for each diagnosis. It is imperative that this be maintained with diligence. For a case to count toward the requirement, the patient encounter should meet the minimum level of involvement and should include all of the following 5 items:

- Independently gathered history information
- Independently performed physical/mental status
- Presented patient case
- Opportunity to offer and discuss differential diagnosis
- Opportunity of offer and discuss management options

Students are expected to perform a neurological history and physical on five new patients during the clerkship.

Diagnostic category	Minimum # of patients to be seen	Comments/Explanation
Cerebrovascular Disease	3	On inpatient or outpatient, evaluate at least 2 patients with cerebrovascular disease (cerebral infarct, intracerebral hemorrhage, subarachnoid hemorrhage)
Cognitive Impairment in the Elderly	1	Evaluate dementia or delirium in outpatient or inpatient setting
Epilepsy	3	Either in inpatient or outpatient setting
Headache and Facial Pain	3	Evaluate at least three patients with headaches in either outpatient or inpatient setting
Movement Disorders	2	Includes Parkinson's, Huntington's, and drug induced movement disorder on either inpatient or outpatient
Multiple Sclerosis/ Demyelinating Disorders	1	Evaluate one patient with demyelinating disease in outpatient or inpatient setting
Neuropathy	1	Evaluate at least one patient with peripheral neuropathy in outpatient or inpatient setting
Acute or chronic pain	1	Either inpatient or outpatient

MID-CLERKSHIP FORMATIVE FEEDBACK

Students are required to ask two faculty members to complete a Formative feedback form evaluating skills they observed during a student-patient clinical encounter. The forms should be completed by the mid-clerkship Formative Feedback Session.

Half way through the clerkship, students will meet with the Clerkship Associate Director for a Mid-Clerkship Formative Feedback session. This purpose of the feedback session is to discuss the student's progress and any areas

of concern, as well as review case logs, feedback forms, and a patient note. Students are required to bring to the session the completed formative feedback forms and the written patient note to review.

Clerkship Grading

Your clerkship grade will consist of 3 components:

Overall Grade	1. CCE profile	2. NBME (PERCENTILE based on National NBME average from the previous year)	3. Departmental Education Program Points (20)	
Fail	Fail PC**	< 5%	< 11	
Defer	Pass/High Pass/Honors	≥5 th	< 11	
	Pass/High Pass/Honors	<5 th	≥ 11	
	Pass/High Pass/Honors	<5 th	< 11	
	Fail (PROF*) OR (PBLI or IPCS) ***	≥5 th	≥ 11	
Pass	Pass	≥5 th	≥ 11	
	Honors/Pass	≥ 55 th	≥ 11	
High Pass	High Pass	≥5 th	≥ 11	
	Honors****	≥5 th	≥ 11	
Honors	Honors	≥ 55 th	≥ 17	

PROF = Professionalism; PC = Patient care; PBLI = Practice Based Learning and Improvement; IPCS = Interpersonal Communication Skills

^{*} Remediation through OSA/conduct and ethics committee

^{**} Repeat clerkship

^{***} Remediation determined by Clerkship Director

^{****} High Pass (with Clinical Excellence)— will be distinguished on the MSPE on the end of clerkship narrative PLEASE READ FOLLOWING SECTIONS FOR ADDITIONAL INFORMATION!

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	Fail (PB*) OR (PBL or IPC) ***	≥5 th	≥ 11	
Pass	Pass	≥5 th	≥ 11	
	Honors/High Pass/ Pass	≥ 55 th	≥ 11	
High Pass	Honors/ High Pass	≥5 th but <55th	≥ 11 but < 17	
High Pass	Honors****	≥5 th but <55th	≥ 17	
Honors	Honors	≥ 55 th	≥ 17	

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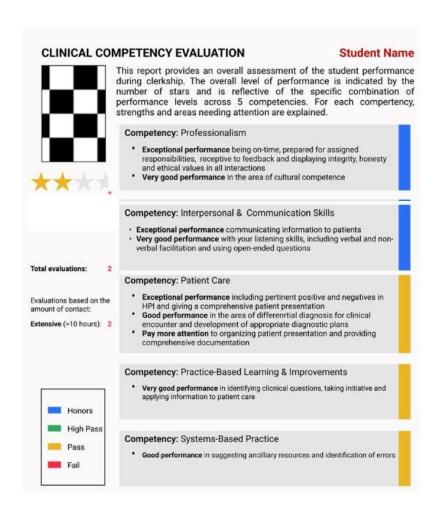
1. Clinical Competency Evaluation (CCE) performance

a. <u>Weighting of preceptor evaluations</u> – the weight of each preceptor evaluation will be determined by the amount time (direct contact hours) a student has with each preceptor:

Direct Contact Hours	Weight
Extensive (>40 hours)	X16
Substantial (11 to 40 hours)	X8
Moderate (5 to 10 hours)	X4
Limited (1 to 4 hours)	X2
No Contact (<1 hour)	0

- b. Your CCE grade will be based on your performance in each of the 5 competencies. Final grade can be found in the highlighted boxes.
 - i. To qualify for CCE honors a student must have HONORS IN PROFESSIONALISM.
 - ii. If the professionalism grade is HP or Pass, the highest CCE grade that can be assigned is HP.
 - iii. Patient care and Interpersonal communication skills are vital components of the CCE grade.
 - iv. Receiving Honors in Systems based practice and Practice based learning and improvement can improve your grade, but receiving High pass or Pass cannot lower your grade.

	Competency Grades for		PROFESSIONALISM		
	Patient Care, Interpersonal and Communication Skills	Systems-Based Practice, and Practice-Based Learning and Improvement	HONORS	HIGH PASS	PASS
1	2H	Either H or HP or P	Н	HP	Р
2	1H + 1HP	HONORS in both SBP and PBL required	Н	HP	Р
3	1H + 1HP	All others except HONORS in both SBP or PBL	HP	<mark>HP</mark>	Р
4	2HP	Either H or HP or P	HP	HP	Р
5	1H + 1P	HONORS in both SBP and PBL required	Н	HP	Р
			НР	P	Р
6	1H + 1P	All others except HONORS in both SBP or PBL			
			HP	P	Р
7	1HP + 1P	Either HP or H or P			
8	2P	Either HP or H or P	Р	P	Р



High Pass with Clinical Excellence – If a student performs at an honors level for clinical performance and departmental points, a designation of "High pass with clinical excellence" will be noted in the MSPE narrative for the relevant clerkship.

- d. Fail in one competency for assessment of clinical performance will result in the following
 - If a student fails Professionalism, Practice-Based Learning and Improvement, or Interpersonal and Communication Skills, a grade of DEFER will be assigned and REMEDIATION will be required. Once the remediation is successfully completed, the student's transcript grade will be changed to a PASS.
 - ii. If a student fails Patient Care, a grade of FAIL will be assigned, and the clerkship must be REPEATED in its entirety.
 - iii. The lowest grade possible for the Systems-Based Practice competency is a pass.

2. NBME subject exam: Most recent national data from NBME will be used. For the 2024-2025 academic year, data from 2022-2023 will be used.

a. Honors: > 55 %tile = 83 or higher

b. HP/P: 5-54 %tile = 67-82

c. Fail: < 5%tile*

The NBME exam is created and administered electronically by the National Board of Medical Examiners (NBME). According to institutional protocol, all students must start the exam at the same time; therefore, if any student is late and the exam has started, they will be unable to sit for the exam at that time. Students will need to reschedule the exam through the Office of Student Affairs.

The Subject Exam is scheduled on the last day of the clerkship; for date, time and location of the NBME Neurology Subject Exam; please refer to the clerkship lecture schedule. You will also receive a confirmation email from the testing center and a reminder email from the Clerkship Coordinator.

For the 2024/2025 academic year, students must earn a passing score equal to or higher than the 5th percentile based on the prior years' national performance data – 67

* Students must achieve the 5th percentile on the NBME subject examination to successfully complete the clerkship. Failure to achieve the 5th percentile will require the student to retake the subject examination and a grade of DEFER will be assigned. A second attempt on the NBME subject examination must be completed within one year from the first attempt. If the student achieves the 5th percentile or higher on the second attempt a grade of PASS will be assigned. PASS is the highest grade that can be achieved after a DEFER grade. If a student fails the NBME exam on a second attempt, then the final grade is FAIL and the clerkship must be repeated.

3. **Departmental educational program** (20 points total)

a. Honors: ≥ 17b. HP/P: 11-16c. Fail < 11 points

The Departmental portion of the grade is broken down as follows:

- Up to 6 Points for completing the Neuro OSCE *a score of 70% is required
- Up to 5 Points for completing the **Neuro Logic Cases**
- Up to 3Points for completing the Follow-up Neuro Logic Cases Quiz
- Up to 1 Point for completing the NIH Stroke Scale Training
- Up to 3 Points for completing the LP Quiz
- Up to 2 Points for completing the In-Person Hands-On LP/Fundoscopic Training

A minimum of 11 total points must be achieved in the Departmental Education Program. If a student does not meet the minimum threshold a grade of DEFER will be assigned until remediation is completed. PASS is the highest grade that can be achieved after a DEFER grade is resolved.

If a student wishes to dispute their final clerkship grade, they must follow the COMLS policy.

ACADEMIC POLICIES/UT COMLS POLICIES

Students are responsible for following the UT COMLS policies, which can be located here: http://www.utoledo.edu/policies/academic/college of medicine/ this link includes, but is not limited to:

COMLS Policy Supervision of Medical Students

Excerpts from policy:

When performing any procedures or clinical activity which poses *any* risk to patient safety, students must be *directly* supervised by a faculty member or resident or fellow at the hospital or other clinical facility. In certain clinical situations, Advanced Practice Providers (APP) such as Physician Assistants, Nurse Practitioners and Midwives may provide supervision, if noted to be within their scope of practice.

*Direct Observation/Supervision: the observing/supervising physician is physically present with the student and patient.

**Indirect Observation/Supervision: Once student assessed to be appropriate for indirect supervision, direct observation/supervision remains immediately available--the supervising physician is either physically within the hospital or other site of patient care or is immediately available by a reliable and rapid method of communication to provide direct observation.

Institutional Classroom Attendance Policy

Please be aware that the university has implemented an attendance policy, which requires faculty to verify student participation in every class a student is registered at the start of each new semester/course. If you have not attended/participated in class (completed any course activities or assignments) within this period, I am required by federal law to report you as having not attended class. This date varies by the part of term, in which your course started, these dates can be found here: https://www.utoledo.edu/offices/provost/mandatory-attendance-tracking.html. Unfortunately, not attending/participating in class impacts your eligibility to receive financial aid, so it is VERY important that you attend class and complete course work early. Please contact me as soon as possible to discuss options and/or possible accommodations if you have any difficulty completing assignments.

Clerkship Excused Absences

Students must submit an absence request form to the Clerkship Coordinator for all absences. Unexcused absences may result in a Professional Behavior Report.

Policy:

Excused Absences from Required Academic Activities in the M.D. Program - 3364-81-17

• Learning Environment & Faculty Development

If there is a faculty or staff member who has demonstrated outstanding professionalism and contributed to your learning environment or has detracted from your experience, complete the Learning Environment Assessment and Event Report. This report is accessible from an icon in this course Black Board home page or you can go directly to the site at http://utmc.utoledo.edu/learningenvironment All responses are anonymous. If you indicate that the event is of a serious nature and warrants immediate follow up, you will receive a prompt to enter a contact name and phone number.

• Professionalism

Students and physicians should maintain the highest standards of professional and have a number of professional responsibilities that they are obligated to uphold. Breach of a professionalism standard will result in a professionalism behavior report based on the institutional policy. Policy:

<u>3364-81-04-017-02 - Professionalism and Related Standards of Conduct for MD Students</u>

Conflict of Interest – Separation of Roles

The health professionals who provide sensitive medical and healthcare services to medical students will have no involvement in the academic, professionalism, or disciplinary evaluation, promotion, or dismissal of students receiving those services. If you are comfortable you may work with the provider, however they may not evaluate you. Inform the Coordinator of any such relationships with the department prior the start of the clerkship. Policy: 3364-81-04-016-05 - Separation of Roles to Assure Confidentiality in the Provision of Health and Counseling Services to Medical Students and Absence

Assigned Educational Hours

To ensure that there is an appropriate balance of assigned educational activities and self-directed learning, students' scheduled activities should:

- o Not exceed 80 hours per week, with no more than 30 consecutive hours,
- o Have at least 24 consecutive hours (1 day) of non-scheduled time per week.
- o Notify the clerkship coordinator if they are approaching 70 hrs/week.

https://www.utoledo.edu/policies/academic/college_of_medicine/pdfs/3364-81-04-004-00%20%20Assined%20education%20hours%20for%20medical%20students%20during%20clinical%20clerkships.pdf

AMERICANS WITH DISABILITIES ACT

Policy Statement on Non-Discrimination on the Basis of Disability (ADA)* The University is an equal opportunity educational institution. Please read <u>The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.</u> Students can find this policy along with other university policies listed by audience on the <u>University Policy webpage</u> (http://www.utoledo.edu/policies/audience.html/#students).

• Academic Accommodations

The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an Accommodations Memo from the Office of Accessibility and Disability Resources, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course. For students who have not established accommodations with the Office of Accessibility and Disability Resources and are experiencing disability access barriers or are interested in a referral to health care resources for a potential disability, please connect with the office by calling 419.530.4981 or sending an email to StudentDisability@utoledo.edu.

 Religious Accommodations* (Include the following, verbatim; please refer to the face-to-face syllabus guidelines for more guidance/details.)

A student is permitted to be absent, *without penalty*, for up to three days each academic <u>semester</u> to take holidays for reasons of faith or religious or spiritual belief system or to participate in organized activities conducted under the auspices of a religious denomination church, or other religious or spiritual organization. <u>3364-71-30 Religious accommodations policy</u> and <u>3364-71-30.01 Religious accommodations procedure</u>.

Grievance procedure A student may notify the institution of any grievance regarding the policy's implementation using the <u>3364-71-05.1 Academic grievance procedure</u>.

Academic and support services

Please follow this link to view a comprehensive list of <u>Student Academic and Support Services</u> (http://www.utoledo.edu/studentaffairs/departments.html) available to you as a student.

• Safety and Health services for UT students

Please use the following link to view a comprehensive list <u>Campus Health and Safety Services</u> available to you as a student.

• Blood Borne Pathogen Exposure Protocols

Follow this link: https://www.utoledo.edu/policies/academic/college_of_medicine/pdfs/3364-81-04-016-04.pdf In the event of blood or body fluid exposure:

When at The University of Toledo Health Science Campus:

- 1. Flush area thoroughly for 15 minutes; wash with soap if applicable.
- 2. Notify supervising faculty member or preceptor.
- 3. Always report to UTMC Emergency Department for initial assessment of injury and exposure.
- 4. Immediately obtain and submit all lab results from both you and the primary source of contact to Ruppert Health Center, Family Medicine.
- 5. Complete a UTMC employee injury report at utoledo.edu/depts/safety/Forms.html and send to Safety and Health.
- 6. After hours/weekends, call UT Emergency Department at 419.383.3888 to address questions or concerns.
- 7. Notify clerkship director of incident.

Whenever exposure occurs at a non-UTMC site:

Contact the supervisor or preceptor at site to find out individual protocol. Follow up treatment after initial treatment may be obtained at occupational health which is located in the Emergency Department of University of Toledo. Exposed medical student needs to bring appropriate records from outside facility to avoid delays in treatment. Occupational health can be reached at 419-383-5598. Also inform the clerkship office.

• Inclusive Classroom Statement

In this class, we will work together to develop a learning community that is inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, gender identity/expression, socioeconomic background, and a myriad of other social identities and life experiences. We will encourage and appreciate expressions of different ideas, opinions, and beliefs so that conversations and interactions that could potentially be divisive turn, instead, into opportunities for intellectual and personal development.

Course Offered: Required M3 Year · Class Location: Varies · Class Day/Time: Varies · Lab Location: N/A · Lab Day/Time: N/A.

^{***}Please note that the syllabus is subject to change, and that it is the student's obligation to keep aware of developments***