

# BMED 6781 Syllabus

## Clinical Neurology

3 credits - virtual asynchronous - assessments on M/W

Optional Textbook: *Pocket Neurology* Website: *GT Canvas* ([canvas.gatech.edu](https://canvas.gatech.edu))

### Instructor

Cassie S. Mitchell, Ph.D.  
Associate Professor, BME

### Email

[cassie.mitchell@bme.gatech.edu](mailto:cassie.mitchell@bme.gatech.edu)

### General Information

Clinical neurology is the study of the nervous system's diseases and malfunctions. This is a clinically focused bioscience course that teaches the fundamentals of neuropathology from a clinical perspective, namely diagnostics, prognostics, therapeutics, and rehabilitative technology for neurological patient management and care.

#### Delivery Mode

This is a fully online course. *Lectures* (L) and *Solving* (S) sessions are pre-recorded (asynchronous) videos viewed online using the linked posted under Canvas > Pages. See p. 5 of syllabus for *Course Schedule*. Graded assessments and extra credit quizzes are open for 24 hours (12:01am - 11:59pm ET) on the scheduled days (Monday and Wednesday except for the Final Exam) per *Course Schedule*.

#### Pre-Requisites

It is expected that students have a basic understanding of human physiology

#### Course Goals and Learning Outcomes

In this course, students will:

- Describe the etiology and symptomology of neuropathology
- Perform clinical differential diagnosis and recommend relevant standard of care therapeutics
- Examine current challenges of neuropathology treatment
- Evaluate promising neuropathology research avenues

### Course Requirements & Grading

Assessment	Duration	†Canvas Availability Start	†Canvas Availability End	Weight
Regular Exam 1	30 minutes	Mon. Sept. 16 @ 12:01am ET	Mon. Sept. 16 @ 11:59pm ET	*25%
Regular Exam 2	30 minutes	Mon. Oct. 12 @ 12:01am ET	Mon. Oct. 12 @ 11:59pm ET	*25%
Regular Exam 3	30 minutes	Mon. Nov. 2 @ 12:01am ET	Mon. Nov. 2 @ 11:59pm ET	*25%
Regular Exam 4	30 minutes	Mon. Nov. 23 @ 12:01am ET	Mon. Nov. 23 @ 11:59pm ET	*25%
Final	45 minutes	Thur. Dec 10 @ 12:01am ET	Thur. Dec. 10 @ 11:59pm ET	25%

\***Lowest Regular Exam score is dropped**; best three Regular Exams AND the Final count towards final grade.

† Exams are online Canvas quizzes taken in continuum during the availability window.

#### Extra Credit Opportunities

See extra credit quizzes p. 2). Also credit if >=85% class CIOS survey participation by instructor stated deadline.

## Grading Scale

The final grading scale is based on cumulative points earned:  $SUM(\text{Best three Regular Exam scores} + \text{Final Exam} + \text{all Extra Credit points})$ . Each extra credit point is equivalent to an Exam point. The equivalent percentages shown are calculated using the truncated arithmetic mean percentage:  $TRUNC((\text{Best Four Assessment Scores} + \text{Earned Extra Credit Points})/4)$ . “Truncated” means only the whole integer is utilized (ex. 89.9% = 89%).

<u>Grade</u>	<u>Points</u>	<u>Equivalent Truncated Percentage</u>
A	>=360 points	90-100+ %
B	320-359 points	80-89 %
C	280- 319 points	70-79 %
D	240-279 points	60-69 %
F	<240 points	<60%

## Description of Assessments

**Regular Exams**— are 60-minute timed quizzes in Canvas with availability beginning and concluding per the posted schedule. Students may take Exams at the physical location of their choosing, but all work must be performed individually. Once a student starts the Exam, the Canvas quiz and corresponding automatic Canvas quiz countdown timer runs continuously and cannot be stopped [without submitting your quiz for a grade]. If you have not submitted your quiz after the Canvas quiz countdown timer goes to zero OR the Canvas live clock time exceeds the Canvas quiz availability clock time, your quiz will auto-submit. Regular Exams encompass material presented in lecture, solving, reading(s), homework, etc. Exams are open notes, open book, open laptop computer, open internet but closed communication (i.e. NO verbal, written, electronic communication, etc.). Questions are multiple choice with a single best answer. Randomized question banks ensure academic integrity while maintaining equivalency and fairness. Only one question at a time can be viewed in Canvas and must be answered in the presented order; students cannot return to previous questions. Students must take Exams as scheduled; see *Rescheduled/Missed Assessments* for rules regarding make-up policy. Saving or dispersing questions or answers before, during, or after the Exams is not allowed and will be considered an honor code violation. Students will immediately receive an Exam score upon submission. However, students will not receive post-submission online access to their Exams in Canvas.

**Final Exam**— is a comprehensive evaluation. More details will be provided during the Final Exam preparation. See *Rescheduled/Missed Assessments* for Final Exam conflicts.

## Extra Credit Quiz for Each Lecture (marked with “L” on p. 5)

**Extra Credit Quizzes/Surveys**—Extra credit is in Canvas > Quizzes. **Each online lecture (marked with “L” on p. 5) has a corresponding scheduled extra credit quiz available M/W between 12:01am - 11:59pm ET.** The extra credit schedule can be seen in Canvas > Quizzes with a quiz title that matches the corresponding scheduled lecture. There is no penalty for not taking an extra credit quiz or getting an incorrect answer. Extra credit quizzes are a very quick and completely risk-free way to acquire extra credit while practicing Exam-style questions. **Answers to the extra credit quizzes are viewable for 24-hours only after the quiz closes.** There are no extra credit quizzes on Exam days or holidays. Rules are the same as Exams *except* extra credit cannot be made up for any reason (see *Rescheduled/ Missed Assessments*). Earned extra credit points directly add to student point total (see *Grading Scale*).

## Practice Problems for Skill Development

**Online Practice Homework**— Exam-like practice opportunities are available online in *Canvas > Quizzes > Practice Quizzes* to practice problem solving. Each practice quiz is labeled as “homework” and the title illustrates which lecture(s) is covered in that homework. Homework can be accessed any time. Homework and solutions are viewable within the Canvas quiz through the duration of the course. Homework scores will not be included in the final grade. Homework is “optional”, but homework completion improves Exam preparation.

**Solving Sessions** — virtual solving provides guided practice with clinical problem solving.

## Course Materials

### Optional Course Text

**Pocket Neurology (either the 3<sup>rd</sup> Ed. or 2<sup>nd</sup> Ed. is fine).** The optional textbook is NOT required to get an “A” but is helpful to some students, especially those planning on future medical school. Go to *Canvas > Pages > Textbook Info* to see a picture of the textbook options. The GT library may also have an electronic copy available.

### **Required Computing**

Must have a device with internet access to take quizzes in Canvas.

### **Additional Materials, Course Website and Management**

Course material, communication & management is primarily via Georgia Tech’s *Canvas* & some via GT email.

## Course Expectations & Guidelines

Students will take Assessments as scheduled online in Canvas at the location of their choosing.

**Extra credit quizzes/surveys. Extra credit cannot be made up for any reason.**

**Make-up of Assessments are only allowed for excused, documented absence.** Documentation requirements are listed in the *Documentation for Make-Up Approval* section. A Make-up Exam may *not be identical* to the original Exam but will cover similar material. **All approved Make-up Regular Exams will be administered during the class’s scheduled Final Exam period.** A Final Exam conflict (as defined by the Institute) must be made up during the designated Final Exam conflict period.

**Documentation for Make-Up Approval.** Students experiencing a personal emergency or medical absence for an Exam must contact and submit documentation to the Georgia Tech Office of the Vice President or Dean of Students to request certification for excused absence using their website. For approved Institute activities (conference presentations, GT athletic events, religious observations, etc.), please contact the Student Academic and Financial Affairs Committee of the Academic Senate at least two weeks prior to the approved Institute activity event to obtain the appropriate approval letter. The Institute approved activity form is also available online. An Institute approval letter for a potential Make-Up Regular Exam or Final Exam conflict must be received via email to the professor by **November 30**. Only official correspondence from one of the above-named Institute offices will be accepted.

### **Academic Integrity**

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>.

### **Student-Faculty Expectations Agreement**

See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectations.

### **Accommodations for Students with Disabilities**

If you have a disability that requires accommodation, please contact the Office of Disability Services at 404-894-2563 or <http://disabilityservices.gatech.edu/> to obtain an accommodation letter. Students must request in the ODS online AIMS system any accommodations for each course each semester. Reach out to Dr. Mitchell as soon as possible to ensure timely implementation of your course accommodations

## Campus Resources for Students

Please see the following website for access to resources that cover these aspects of student life:  
<https://counseling.gatech.edu/content/campus-resources-0>.

### Attendance Policy

There is no formal attendance policy for lecture viewing. However, online participation is required for Assessments. See *Rescheduled/Missed Assessments* for Make-Up policy.

### Collaboration & Group Work

Collaboration is allowed for homework. All Assessments represent individual student work only.

### Class preparation and participation

This course is extremely flexible but requires self-discipline. It is critical to keep up with the schedule (lecture, studio, homework, extra credit, Exams). Optimal preparation includes some memorization, information retrieval, information synthesis, and critical thinking.

### Course Structure

Class structure primarily includes online lectures and problem solving sessions. Graded performance is primarily Exam-based. Four major Sections include:

- [Section 1](#) lays the neuroscience, neuroanatomy, and clinical neurology foundation.
- [Section 2](#) focuses on neurotrauma and rehabilitation engineering.
- [Section 3](#) focuses on neurodegenerative diseases.
- [Section 4](#) focuses on interdisciplinary topics in clinical neurology

Each Section's survey lectures consist of disease etiology; patient presentation & diagnostic differentiation; summary treatment, intervention, and rehabilitation protocols. Problem solving comprises real- life clinical case studies or similar experiences as applied to neurological disease and therapy.

### Course Schedule

See p. 5 for the detailed *Course Schedule*. Please be sure to regularly check Canvas each course day for new material, updates, and announcements.

*Course syllabus & schedule may be subject to change due to unforeseen circumstances.  
Any revisions will be given in writing through the course website (Canvas) as soon as possible.*

# Fall 2026 Course Schedule

## Clinical Neurology

Watch course videos anytime on [online](#): [Canvas](#) > [Pages](#) > [Lecture Recordings](#)  
**Take the extra credit quiz in [Canvas](#) > [Quizzes](#) for each Lecture marked by "L"**

Date	Topic	Optional Readings
Mon. 8/24	Class Structure	Course Syllabus
Wed. 8/26	L1.1. Neuroanatomy	neuroanatomy handbook (posted in Canvas)
Mon. 8/31	L1.2. Foundations in Clinical Neurology	NI (p.14-26), NC & IN (p.37-58), BN (p.119-125)
Wed. 9/2	L1.3. Foundations in Neuroscience	
<b>Mon. 9/7</b>	<b>NO CLASS - Labor Day</b>	
Wed. 9/9	L1.4. Seizures	SEE (p.59-93)
Mon. 9/14	S1. Clinical Problem Solving	
<b>Wed. 9/16</b>	<b>REGULAR EXAM 1 - <u>60 minutes</u> - available 12:01am ET- 11:59pm ET in Canvas &gt; Quiz</b>	
Mon. 9/21	L2.1. Vascular disease & hypoxia	VN (p.27-57), CNSV (p.185-188)
Wed. 9/23	L2.2. Neurotrauma I	NC (p.37-52)
Mon. 9/28	L2.3. Neurotrauma II	SSCD (p.223), RP (p.241-245)
Wed. 9/30	L2.4. Rehabilitation engineering	
<b>Mon. 10/5</b>	<b>NO CLASS - Fall Break</b>	
Wed. 10/7	S2. Clinical Problem Solving	
<b>Mon. 10/12</b>	<b>REGULAR EXAM 2 - <u>60 minutes</u> - available 12:01am ET- 11:59pm ET in Canvas &gt; Quiz</b>	
Wed. 10/14	L3.1. Movement disorders	MDs (p.130-141)
Mon. 10/19	L3.2. Motoneuron Disease	MND (p.227-231)
Wed. 10/21	L3.3. Demyelinating Disease	MSOCNS (p.201-219)
Mon. 10/26	L3.4. Dementia	DEM (p.111-119), BN (p.119-125)
Wed. 10/28	S3. Clinical Problem Solving	
<b>Mon. 11/2</b>	<b>REGULAR EXAM 3 - <u>60 minutes</u> -12:01am ET- 11:59pm ET in Canvas &gt; Quiz</b>	
Wed. 11/4	L4.1. Neuro-oncology, -infection, -rheumatology	NO (p. 272-296), MEBA (p. 141-155), NI (p.155-176), NR (p.261-272)
Mon. 11/9	L4.2. Peripheral disease, NMJ, myopathy	PN (p.232-241), NJD (p.245-250), MPT (p.250-257)
Wed. 11/11	L4.3. Pain, headache, sleep	HA (p.176-185), PAIN (p.189-195), SM (p.296-304)
Mon. 11/16	L4.4. Neuro-ophthalmology, otology	NO (p.313-331), DAD (p.196-201)
Wed. 11/18	S4. Clinical Problem Solving	
<b>Mon. 11/23</b>	<b>REGULAR EXAM 4 - <u>60 minutes</u> - available 12:01am ET- 11:59pm ET in Canvas &gt; Quiz</b>	
<b>Wed. 11/25</b>	<b>NO CLASS - Thanksgiving Break</b>	
Mon. 11/30	S5. Case Study Development	
Wed. 12/2	Individual Case Study Extra Credit - due at 11:59pm ET Canvas	
Mon. 12/7	<i>Pre-Approved Regular Exam Make-Up Exam Period</i>	
<b>Thurs. 12/10</b>	<b>FINAL EXAM - available 12:01am ET- 11:59pm ET in Canvas &gt; Quiz</b>	