IMPORTANT: This syllabus form should be submitted to OAA (gsbs_academic_affairs@uth.tmc.edu) a week before the start of each semester.

NOTE to STUDENTS: If you need any accommodations related to attending/enrolling in this course, please contact one of the Graduate School's 504 Coordinators, Cheryl Spitzenberger or Natalie Sirisaengtaksin. We ask that you notify GSBS in advance (preferably at least 3 days before the start of the semester) so we can make appropriate arrangements.

Term and Year: **Fall 2022** Course Number and Course Title: **GS14 1181: Graduate Neuroanatomy** **Credit Hour: 1** Meeting Location: **MSB 2.107** Building/Room#: **UT McGovern Medical School**	**Program Required Course:** Yes **Approval Code:** Yes **(If yes,** the Course Director or the Course Designee will provide the approval code.) **Audit Permitted:** No **Classes Begin: Sept. 9, 2022** **Classes End: Oct. 13, 2022** **Final Exam Week:**

Class Meeting Schedule

Day	Time
9/9(Fri), 9/16(Fri), 9/23(Fri), 9/30(Fri), 10/6, (Thu) 10/13(Thu)	**8:30-11:30 am**

Course Director: Name and Degree: **Shin Nagayama, PhD** Title: Associate Professor Department: Neurobiology & Anatomy Institution: *UTH* Email Address: Shin.Nagayama@uth.tmc.edu Contact Number: 713-500-5862 **Course Co-Director/s:** (if any) Name and Degree: **Patrick Dougherty, PhD** Title: Professor Department: Pain Medicine Institution: *MDACC* Email Address: pdougherty@mdanderson.org Contact Number: 713-745-0438	**Instructor/s - (See attached)** 1. Name and Degree Institution: Email Address : 2. Name and Degree Institution: Email Address : 3. Name and Degree Institution: Email Address:

Course Description:

This is a mandatory course (P/F) for students who intend to attend GSBS Neuroscience Program. Students will attend the "Nervous System and Behavior Laboratory" course for medical students as special students and study a broad overview of the structure and function of the central nervous system. The general architecture of the nervous system and its functional systems are presented using human specimens in the classes. Graduate students will not only benefit from hands-on neuroanatomy laboratory sessions but also video lectures and online quizzes/answers. Through the course and interaction with faculties and other students each week, students will gain essential knowledge of the architecture of the nervous system and an appreciation for some of the fundamental ideas and unsolved questions in neuroscience research.

Textbook/Supplemental Reading Materials

- Nolte's The Human Brain: An Introduction to its Functional Anatomy 8th Edition, 2020
- Mosby and S.J. DeArmond, et al., Structure of the Human Brain; A Photographic Atlas, 3rd Edition, 1989, Oxford Press.
- Neuroanatomy Online at: https://nba.uth.tmc.edu/neuroanatomy
- NeuroLab program from: https://med.uth.edu/nba/neurolab/
- Neuroscience Online at: https://nba.uth.tmc.edu/neuroscience
- "UBC neuroanatomy", Season 1 Episodes 1 through 8, available on YouTube. http://neuroanatomy.ca

Course Objectives:

Upon successful completion of this course, students will know the basic structure and function of major neuroanatomical features of the human brain. Students also understand the diseases associated with the deficits of each brain region. In addition, students understand the associated neuroanatomical structures and features in other animals, which will help them in their own animal research projects.

***Specific Learning Objectives*:**

1. State the major structures and functions of each of the five divisions of the brain.
2. Discuss the formation and circulation of cerebrospinal fluid.
3. Delineate the major projection, association, and commissural tracts of the brain.
4. Identify key structures on whole brains and on sagittal and coronal slices of brains.

Student Responsibilities and Expectations:

Students enrolled in this course will be expected to perform the following activities each week.

1. Read and understand the book chapters relating to the week's topic.
2. Prepare for and take course quizzes based on course lectures/ readings.
3. Participate in and contribute to course discussions during lecture and Lab exercise sessions.

Students are expected to look over the assigned reading materials prior to class.

Grading System: **X** Pass/Fail	
Student Assessment and Grading Criteria : *(May include the following:)*	
Percentage	**Description**
Homework (%)	
Quiz (%)	
Presentation (%)	
Midterm Exams (%)	
Final Exam (%)	
Workshop or Breakout-Session (50 %)	
Participation and/or Attendance (50 %)	

CLASS SCHEDULE

Date	Duration (Hour(s) taught by Lecturer)	Lecture Topic	Lecturer/s
Sept. 9	3 hrs.	Major Spinal Pathways (Self Study: External Brain, Spinal Cord, and Pathways)	TBD
Sept. 16	3 hrs.	Motor Systems, Basal Ganglia (Self Study: Ventricles, Circulation)	TBD
Sept. 23	3 hrs.	Special Senses and Lesions	TBD
Sept. 30	3 hrs.	Brainstem	TBD
Oct. 6	3 hrs.	Diencephalon and Limbic System Cortical Regions	TBD
Oct. 13	3 hrs.	Section the Brain and Neuroimaging	TBD