

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 the Graduate School's 504 Coordinator, Natalie Sirisaengtaksin, PhD. 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 2026 Course Number and Course Title: GS14 1611: Current Topics in Neuroscience Credit Hours: 1 Meeting Location: UTHealth Houston McGovern Medical School Building/Room#: MSB 7.046	Program Required Course: No Approval Code: No Audit Permitted: No Classes Begin: September 2, 2026 Classes End: December 9, 2026 Final Exam Week: N/A				
Class Meeting Schedule <table border="1"> <thead> <tr> <th>Day</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>Wednesday</td> <td>1:10 – 2:10 PM</td> </tr> </tbody> </table>		Day	Time	Wednesday	1:10 – 2:10 PM
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Course Director Name and Degree: Shin Nagayama, Ph.D. Title: Associate Professor Department: Neurobiology & Anatomy Institution: UTHealth Houston Email Address: Shin.Nagayama@uth.tmc.edu Contact Number: 713-500-5862 Course Co-Director/s: Name and Degree: Keran Ma, Ph.D. Title: Assistant Professor Department: Neurobiology & Anatomy Institution: UTHealth Houston Email Address: Keran.Ma@uth.tmc.edu Contact Number: 713-500-8946 NOTE: Office hours are available by request. Please email me to arrange a time to meet.	Instructors Rodrigo Morales, PhD Associate Professor Institution: UTHH Email add: Rodrigo.MoralesLoyola@uth.tmc.edu Sheng Zhang, PhD Associate Professor Institution: UTHH Email address: Sheng.Zhang@uth.tmc.edu Andrea Stavoe, PhD Assistant Professor Institution: UTHH Email Address: Andrea.K.Stavoe@uth.tmc.edu Mohan Hemanth, PhD Assistant Professor Institution: UTHH Email Address: Hemanth.Mohan@uth.tmc.edu Dongjoo Chai, PhD Assistant Professor Institution: UTHH				

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Course Description:

This course (P/F) will give an overview of the wide range of research being carried out in the GSBS Neuroscience Graduate Program and is open to all GS and MS students. Through presentations and discussions with various faculty members each week, students will gain an appreciation for the fundamental ideas and unsolved questions in Neuroscience research and become familiar with the experimental and theoretical approaches being used to tackle those questions.

Anyone with an interest in neuroscience research is welcome to take this class. There are no exams or reading assignments, but students are expected to attend all presentations and to actively participate in class discussions.

Course Objective/s:

Upon successful completion of this course, students will gain an appreciation for the fundamental ideas and unsolved questions in Neuroscience research and become familiar with the experimental and theoretical approaches being used to tackle those questions.

Specific Learning Objectives:

1. Students can directly face advanced neuroscientists and understand and discuss their sciences.
2. Students learn the uniqueness of each faculty's science and their thinking style of building up their scientific directions.

Student responsibilities and expectations:

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

- Participate in and contribute to course discussions during lecture.
- Attend all classes and enthusiastically join in the discussion.

Grading System: **Pass/Fail**

Student Assessment and Grading Criteria:

Percentage	Description
Workshop or Breakout-Session (50 %)	Actively join the class discussion
Participation and/or Attendance (50 %)	Attend all classes

CLASS SCHEDULE

Date	Duration (Hour(s) taught by lecturer)	Lecture Topic	Lecturer/s
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9/2	1	Prions, Abeta, and misfolded proteins in neurodegeneration	Rodrigo Morales
9/9	1	The microbiota-gut-brain axis in neurological disorders	Juneyoung Lee
9/16	1	TBD	TBD
9/23	1	Neuronal autophagy during development and aging	Andrea Stavoe
9/30	1	The Brain's navigation system: neural coding and spatial mapping	Yanjun Sun
10/7	1	Mechanisms of Neurodegeneration: Lessons from buzzing fling	Sheng Zhang
10/14	1	Cortical circuits for sensorimotor control	Hemanth Mohan
10/21	1	Gut neuroimmune integrations in neurodegenerative disease	Hana Janova
10/28	1	Reward, motivation, and addiction	Kang Seungwoo
11/4	1	G-quadruplexes in aging and neurodegeneration	Andrey Tsvetkov
11/11	1	Neuroimmune interaction: focusing on microglia	Long-Jun Wu
11/18	1	The role of astrocytes in Alzheimer's disease	Dongjoo Choi
12/2	1	TBD	TBD
12/9	1	Glia-vascular interaction in hemorrhagic stroke	Eunsu Park