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 2025** 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: August 27, 2025** **Classes End: December 10, 2025** Final Exam Week: **N/A**

Class Meeting Schedule

Day	Time
Wednesday	**1:00 – 2;:00 PM**

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

1. **Rodrigo Morales, PhD**
   Associate Professor
   Institution: UTHH
   Email add: Rodrigo.Moralesloyola @uth.tmc.edu
2. **Sheng Zhang, PhD**
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	6. **Shin Nagayama, Ph.D**. Associate Professor Institution: UTHH Email Address: Shin.Nagayama@uth.tmc.edu 7. **Keran Ma, Ph.D.** Assistant Professor Institution: UTHH Email Address: Keran.Ma@uth.tmc.edu 8.**. Andrey Tsuvetkov, PhD** Associate Professor Institution: UTHH Email Address: Andrey.S.Tsvetkov@uth.tmc.edu 9. **Kartik Venkatachalam, PhD** Professor Institution: UTHH Email add: Kartik.Venkatachalam@uth.tmc.edu 10. **Long-Jun Wu, PhD** Professor Institution: UTHH Email Address: Longjun.Wu@uth.tmc.edu

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
8/27	**1**	**TBD**	**TBD**
9/3	**1**	**The role of protein misfolding in neurodegenerative diseases**	**Rodrigo Morales**
9/10	**1**	**TBD**	**TBD**
9/17	**1**	**Circuits for feeding behaviors and related diseases**	**Qingchun Tong**
9/24	**1**	**Astrocyte in aging and neurodegenerative disease**	**Dongjoo Choi**
10/1	**1**	**Cortical circuit mechanisms for sensorimotor coordination**	**Hemanth Mohan**
10/8	**1**	**TBD**	**TBD**
10/22	**1**	**TBD**	**TBD**
10/29	**1**	**Neuronal Bioenergetics in Health and Disease**	**Kartik Venkatachalam**
11/5	**1**	**G-quadruplexes in aging and neurodegeneration**	**Andrey Tsvetkov**
11/12	**1**	**Network Dysfunction in Alzheimer's Disease**	**Keran Ma**
11/19	**1**	**TBD**	**Sheng Zhang**

12/3	**1**	**TBD**	**TBD**
12/10	**1**	**TBD**	**TBD**

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