Term and Year: **Fall 2024** Course Number and Course Title: **GS14 1611: Current Topics in Neuroscience** Credit Hour**: 1** Meeting Location: **UTHH McGovern Medical School** Building/Room#: **MSB 7.046**	**Program Required Course: No** **Approval Code: No** **Audit Permitted: No** Classes Begin: **August 28, 2024** Classes End: **December 11, 2024** Final Exam Week: **N/A**

Class Meeting Schedule

Day	Time
Wednesday	**1:00 – 2:00 PM**

Course Director	Instructors
Course Director Name and Degree: **Shin Nagayama, Ph.D**. Title: Associate Professor Department: Neurobiology & Anatomy Institution: *UTH* 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: *UTH* Email Address: Keran.Ma@uth.tmc.edu Contact Number: 713-500-8946	**Instructors** 1. **Rodrigo Morales, PhD** Associate Professor Institution: UTHH Email add: Rodrigo.Moralesloyola @uth.tmc.edu 2. **John Byrne, PhD** Professor Institution: UTHH Email Address: John.Byrne@uth.tmc.edu 3. **Sheng Zhang, PhD** Associate Professor Institution: UTHH Email address: Sheng.Zhang @uth.tmc.edu 4. **Kartik Venkatachalam, PhD** Associate Professor Institution: UTHH Email add:Kartik.Venkatachalam@uth.tmc.edu

NOTE: Office hours are available by request. Please email me to arrange a time to meet.	5. **Jian Hu, PhD**
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	6. **Ruth Heidelberger, MD, PhD**
	   Professor
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	7. **Andrea Stavoe, PhD**
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	11.**. Long-Jun Wu, PhD**
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	12. **Shin Nagayama, Ph.D**.
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	13. **Keran Ma, Ph.D.**
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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. Studenrts learn the uniqueness of each faculty's science and their thinking style of building up their scientitifc 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 : *(May include the following:)*

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

CLASS SCHEDULE – Fall 2024

Date	Duration (Hour(s) taught by lecturer)	Lecture Topic	Lecturer/s
8/28	1	Protein misfolding in neurodegeneration	Rodrigo Morales
9/4	1	The Blood-Brain Barrier	Akihiko Urayama
9/11	1	Specialized SNARE proteins, mutations, and disorders of vision	Ruth Heidelberger
9/18	1	Lipid metabolism in brain tumor and neurodegeneration	Jian Hu
9/25	1	TBD	TBD
10/2	1	Network abnormalities in Alzheimer's disease	Keran Ma
10/9	1	TBD	TBD
10/16	1	Non-conventional DNA and RNA structures in neurodegeneration	Andrey Tsvetkov
10/23	1	Maintaining neuronal function during aging	Andrea Stavoe
10/30	1	Brain control of energy balance	Qingchun Tong
11/6	1	Network, cellular and molecular mechanisms of operant reward learning	Jack Byrne
11/13	1	Probiing neurodegenerative diseases with helps from buzzing flies	Sheng Zhang
11/20	1	Bioenergetic dysfunction in models of tauopathy	Kartik Venkatachalam
12/4	1	Glial cells in health and disease	Long-Jun Wu
12/11	1	TBD	TBD