

PRE-SURVEY LINK: <https://forms.gle/shNnJeHvmS34NFaW8>

CLASS ZOOM LINK:

<https://scrippsresearch.zoom.us/j/97085799329>

Welcome to the 2023 TSRI ARC Summer High School Mentorship Program!

Course Goals

- Foster student passion in STEM and neurological sciences
- Explore the effects of alcohol and drugs on the brain
- Engage students through multimedia curriculum formats
- Prepare students for success in future science courses

Course Materials

- Pre-recorded (asynchronous learning) lectures
- Live Zoom/Topia synchronous lectures/discussions
- Interactive websites
- Supplemental research papers and articles

New course materials will be assigned every week and accessible through our class website, Google Drive, and Topia (avatar-based spatial platform with proximity video chat)

Course Description

The course consists of 4 weeks of content and 1 week of final project work. Students are expected to view the content and complete the work assigned by the end of each week. Most importantly, students should demonstrate their understanding of the curricula through the creation of a summative media piece (artwork, video, social media post, written work, webpage, etc.)

Weeks 1-2 – June 26-July 7

June 26th

1:00PM: Amanda Roberts: Introduction to the course, health disparities, alcohol use disorder
2:00PM: Jiaxing Brisbois: Introduction to Topia; NIDA Course: “Is This Legit? Accessing Valid and Reliable Health Information”

June 27th

1:00PM: Amanda Roberts: Introduction to neuroscience and brain development
2:00PM: Jiaxing Brisbois: Brainfacts Interactive; Build a Brain Project

July 30th

1:00PM: Jiaxing Brisbois: Exploring Mice vs. Human Brains; Weekly Work Share-Out
2:00PM: Amanda Roberts: Using animals to study the brain

July 5th

Amanda Roberts IN PERSON VISIT: Neuroscience project, brief intro to accessing BioRender

July 7th

1:00PM: Alicia Avelar introduction and then recorded video
2:00PM: Alicia Avelar - BioRender tutorial, provide students a choice of figure legends to choose from to make a figure

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Week 3

July 10th

1:00PM: Amanda Roberts – Learning & memory

2:10PM: Jiaxing/Alicia – Introduction to Sleep Journal, Design your own memory/neuroplasticity experiment; Start All of Us Data Analysis Project

3:30PM: (pre-recorded) Dr. Kiley Hughes – Alternative models for studying neuroscience
OR (pre-recorded) Dr. Elizabeth Sneddon – Chemogenetics: a neurobiological review

July 11th

1:00PM: (pre-recorded) Michelle Doyle & Selen Dirik - The brain's reward system and addiction

2:10PM: Jiaxing - *Learn Genetics Addiction* Interactive

2:45PM: (pre-recorded) Dr. Elizabeth Sneddon – History of sex differences in preclinical & clinical research

3:15PM: Discussion with Alicia on possible research topics

July 14th

1:00PM: Dr. Salvador Huitron-Resendiz - Sleep

2:10PM: Jiaxing - Sleep Journal and SLEEP101 Interactive; Finish All of Us Data Analysis Project; Share out weekly work on Topia

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Week 4

July 17th

1:00PM: Dr. Francisco Flores Ramirez – Mood disorders and summary/Q&A

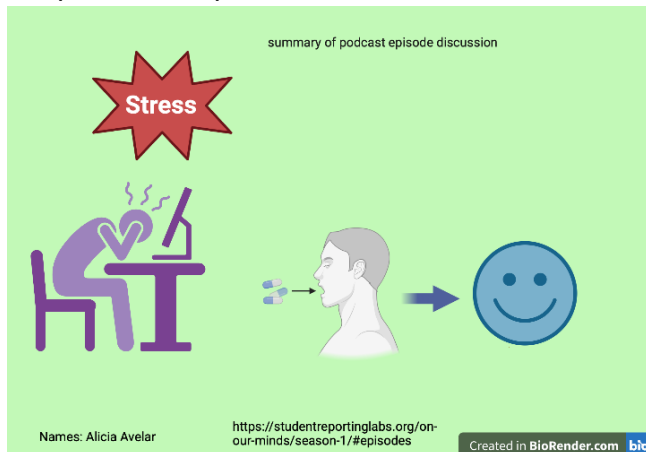
1:50 PM: 10 minute break

2 PM: Jiaying - Topia room decoration and linking content time- review how to do both with the students

2:35 PM: 5 minute break

2:40 PM: Alicia - You can work alone or with 1 or 2 other students. Choose one of the **On our minds** <https://studentreportinglabs.org/on-our-minds/season-1/#episodes> podcast full episodes (~ 30 minutes) to listen to and then write a short summary of what was discussed. Create a BioRender illustration to go along with your summary that helps represent the topic of the episode. If you work in a pair or small group, be sure to share the work with the others. Cite your source of information (the website). On the BioRender illustration canvas add your summary, citation, and your names. Share with the class in the chat when you have completed the activity.

Simplified example:



July 18th

1:00PM: Dr. Kiley Hughes – Dementia & neuromuscular disorders and summary/Q&A

1:50 PM: 10 minute break

2 PM: Jiaxing - *Correcting Misconception Surrounding Neurological Disorders*

Outreach/Awareness Project

2:45 PM: 5 minute break

3 PM: Alicia Avelar- introduce final project guidelines with students and give time to do some work on final project information research and for students to ask questions/brainstorm

July 21st

1:00PM: Dr. Amanda Roberts – Concussions, trauma, and brain injury and summary/Q&A

1:50 PM: 10 minute break

2 PM: Jiaxing - Concussion Crash Course; Constructing Injured Brain Models in Tinkercad

2:55 PM: 5 minute break

3 PM: Jiaxing - Analyzing Concussion Data in All of Us

If Time: Continue final project work; Possible check-in with students