

COGS 160: Brain Waves Syllabus

Course Overview:

This course will provide an interactive and hands-on introduction to rhythms and large-scale electrical potentials of the brain. By the end of the course, students will be able to:

- 1) Describe rhythmic activity that occurs at microscopic (spiking neurons), mesoscopic (local field potential), and macroscopic (electroencephalogram) scales and the mechanisms through which rhythmic coordination is achieved.
- 2) Interpret rhythmic data in order to gain information about the neurobiological underpinnings of cognitive processes or neurological disorders.
- 3) Describe experimental methods used to study rhythmic brain activity, and incorporate these methods into the design of new experiments.
- 4) Refute or defend theories as to the importance of rhythmic coordination in the brain.

Each class will consist of a lecture and either a classroom discussion or a group activity. Participation grades will be based upon the completion and submission of an in-class activity worksheet that builds upon a pre-class reading assignment and/or guides group discussion.

Instructor:

Dr. Lara Maria Rangel, CSB 127, (858) 246-2042, lrangel@ucsd.edu
Office hours: Wednesday 2:00pm - 3:30pm, and by appointment

Course Website:

<http://neuralcrossroads.ucsd.edu/courses/160-brain-waves/>

Time and Location:

Monday, Wednesday, and Friday 10:00 - 10:50am, Solis 110

Units:

4

Grading:

20% Participation
20% Take-home Midterm 1
20% Take-home Midterm 2
40% Take-home Final

Take-home exams will be provided one week before they are due. Late exams will not be accepted. Cheating and plagiarism will not be tolerated. For more information regarding the definition and consequences of cheating, please consult the following university resource on [academic integrity](#).

Disability Access:

Students requesting accommodations for this course due to a disability must provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD) which is located in University Center 202 behind Center Hall. Students are required to present their AFA letters to Faculty (please make arrangements to contact me privately) and to the OSD Liaison in the department in advance so that accommodations may be arranged.

Contact the OSD for further information:

858.534.4382 (phone)

osd@ucsd.edu (email)

<http://disabilities.ucsd.edu> (website)

Title IX Compliance:

The Office for the Prevention of Harassment & Discrimination (OPHD) provides assistance to students, faculty, and staff regarding reports of bias, harassment, and discrimination. OPHD is the UC San Diego Title IX office. Title IX of the Education Amendments of 1972 is the federal law that prohibits sex discrimination in educational institutions that are recipients of federal funds. Students have the right to an educational environment that is free from harassment and discrimination.

Students have options for reporting incidents of sexual violence and sexual harassment. Sexual violence includes sexual assault, dating violence, domestic violence, and stalking. Information about reporting options may be obtained at OPHD at (858) 534-8298, ophd@ucsd.edu or <http://ophd.ucsd.edu>. Students may receive confidential assistance at CARE at the Sexual Assault Resource Center at (858) 534-5793, sarc@ucsd.edu or <http://care.ucsd.edu> or Counseling and Psychological Services (CAPS) at (858) 534-3755 or <http://caps.ucsd.edu>.

Students may feel more comfortable discussing their particular concern with a trusted employee. This may be a faculty member, department Chair, or other University official. These individuals have an obligation to report incidents of sexual violence and sexual harassment to OPHD. This does not necessarily mean that a formal complaint will be filed. If you find yourself in an uncomfortable situation, ask for help.