

## COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCE (CURE)

### RIDE THE WAVE! RESEARCH HOW THE BRAIN PROCESSES LANGUAGES

**LIN4930 SECTION 4106 CLASS NUMBER: 30254**

**Time:** Tuesday 1:55 2:45; Thurs 1:55-3:50  
**Classroom:** UST 0101 + EEG LAB (TURLINGTON)

**Instructors:** @Dr. Eleonora Rossi (Principal Investigator)  
Office: 4127 Turlington Hall, [eleonora.rossi@ufl.edu](mailto:eleonora.rossi@ufl.edu)  
@Megan Nakamura, Ph.D. student, [mnakamura@ufl.edu](mailto:mnakamura@ufl.edu)  
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**Office Hours:** By email appointment.

#### **Course rationale and objectives:**

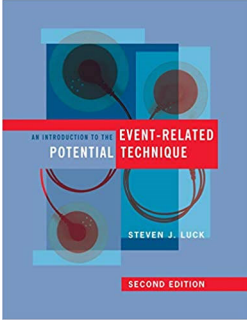
In this CURE course, you will learn the bases of electroencephalography (EEG) and its applications to understand human cognition, and in particular how language is processed by the human brain, both for speakers of one language alone, and for speakers who live their lives with more than one language. The course will include both in person theory classes supplemented with state-of-the-art online material, and hands-on training to learn how to collect EEG data from human subjects in Dr. Rossi's EEG Brain, Language, and Bilingualism Lab (BLAB). Once trained, students will participate in a research project in BLAB, and will use their newly acquired expertise to collect EEG data from human participants, and will learn also the bases of EEG data analysis. This course will provide students with key theoretical and practical skills that will be foundational for anyone who is interested in developing future research in neuroscience.

#### **Course website:**

Course materials (lecture notes, syllabus, etc.) and exercises will be made available on the course website on E-learning ([elearning.ufl.edu](http://elearning.ufl.edu)). Current **deadlines and grades** will also be posted on the website. You are responsible for checking the site regularly and for letting the instructor know promptly if anything is unclear, or if your grade has been entered incorrectly.

## Course readings:

### Required:



## Other important resources

ERP BOOTCAMP: <https://erpinfo.org/>

THE BRAIN ATLAS: <http://www.helpthereisabraininmyhead.com/brain-atlas>

Video lectures on Canvas

## Assessment:

### % of course grade

- |                                       |     |
|---------------------------------------|-----|
| • Online theory Quizzes + assignments | 20% |
| • Final Team Research presentation    | 30% |
| • EEG methodology practical exam      | 30% |
| • Quality data collection             | 20% |
| • Attempt data analysis               | 10% |

The course **grading** scale is:

92-100 = A    89-91.9 = A-    86-88.9 = B+    82-85.9 = B  
79-81.9 = B-    76-78.9 = C+    72-75.9 = C    69-71.9 = C-  
66-68.9 = D+    62-65.9 = D    58-61.9 = D-    Below 58 = E

For UF grading policies for assigning grade points, see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

## Details of assessments

**Homework Assignments:** Homework assignments will be made available on the course website about a week before they are due, and need to be turned within the due date.

**In-class EEG training:** All the hands-on EEG training will be compulsory. You will *receive information in class*.

**Final research presentation:** For the research part of this course, you will be split into two small teams. Each team will be involved in collecting some data for a project, and will conduct some basic -cleaning and pre-processing inn EEG-. During the final presentation, each team will present the preliminary data results (and the experience during testing) that you accrued during the semester.

**Covid statement:**

*Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.*

**Policy on working together:** You are more than welcome to work together on homework assignments and the EEG training and testing,

**Late policy and attendance:** Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

**Incorrect grades:** It is your own responsibility to keep track of whether your grade has been entered correctly. If you think a grade for an assignment or test is missing or incorrect, please contact the instructor promptly.

**Respect for others:** Students are expected to behave in a manner that is respectful to the instructor and to fellow students. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

**Accommodations for students with disabilities:** Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

**Health and wellness:** If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) or 352-392-1575 so that a U Matter We Care team member can reach out to the student in distress. In case of emergency, call 9-1-1.

**Course evaluations:** Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

**Schedule:** The following schedule is an estimate of the course's progress, with readings for the given week and approximate dates. The red dates designate the EEG LAB days, and days in which you may test (after the first half of the semester).

\*\*\*Please regularly consult the schedule on the course website for updates.\*\*\*

Dates	Topic	Readings/Assignment(s)
Jan 6	Introductions Instructions for CITI and IRB -The EEG lab environment	"Getting to know you" Create Teams for EEG studies
Jan 11	-History of EEG -Intro to EEG	Chapter 1 Luck
Jan 13	-EEG Training. The EEG lab environment. Build up, and important components.	
Jan 18	-EEG THEORY	Chapter 2 Luck
Jan 20	-EEG training. Capping and cleaning 1	Chapter 3 Luck
Jan 25	The ERP language components	
Jan 27	-EEG training. Capping and cleaning 2	
Feb 1		
Feb 3	-EEG training. Capping and cleaning 3	
Feb 8	<i>EEG experimental design</i>	- Watch Dr. Yanina Prystauka-Intro to Experimental Design Video
Feb 10	-EEG training. Capping and cleaning 4	
Feb 15	EEG experimental design cont.	- Watch Dr. Jorge González-Alonso Video
Feb 17	TESTING IN EEG LAB	
March 1	TOPIC: TBA	
March 3	<i>TESTING IN EEG LAB</i>	
March 8	<b>SPRING BREAK</b>	<b>SPRING BREAK</b>
March 10	<b>SPRING BREAK</b>	<b>SPRING BREAK</b>
March 15	TOPIC: TBA	
March 17	TESTING IN EEG LAB	
March 22	TOPIC: TBA	
March 24	TESTING IN EEG LAB	
March 29	TOPIC: TBA	
March 31	TESTING IN EEG LAB	
Apr 5	GROUP PRESENTATIONS (3)	
Apr 7	TESTING IN EEG LAB	
Apr 12	GROUP PRESENTATIONS (2)	
Apr 14	TESTING EEG LAB	
Apr 19	GROUP PRESENTATIONS (3)	

