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NEUR 491.02: Neurolinguistics

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NEUR 491.02 – CRN34356 – Neurolinguistics

Fall 2022 | 3 credits | In-Person/Campus – Curry Health 073 | Tuesdays & Thursdays 9:30 am-10:50 am |

CONTACT INFO

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Office Hours: Tuesdays 3:30-5:00 pm (SLHOS Room 027) or by appointment (in-person or Zoom)

COURSE DESCRIPTION

NEUR 491-02: Neurolinguistics. Offered spring. No suggested prerequisites, suggested for students in: Linguistics, Neuroscience, Psychology, SLHOS. Level: Upper-level undergraduate, graduate.

This course will introduce students to Neurolinguistics, the study of language in the brain, reviewing theories of how language is processed in the mind and the organizational bases of language within the human nervous system. The course includes information on the history of neurolinguistics, modern techniques and methods of neurolinguistic research, and also provides detailed examples of several recent studies in the field. We will discuss how language maps onto the brain in “time” and “space” from the perspective of different theoretical models, examining linguistics components of sound, meaning, and structural processing, as well as the constraints of neurolinguistic models. Topics will include the neurophysiological aspects of first and second language acquisition/bilingualism; literacy; neurogenetics of language; the neuroethology of language; and clinical research in speech, reading and writing disorders. In addition, you will gain a more general understanding of how to evaluate different theories of language and cognition. More specifically, you will gain practice in uncovering important questions about an area of interest, determining the appropriate methods to address these questions, and critically evaluating the conclusions drawn.

COURSE OBJECTIVES

By the end of the class students will be able to:

- Understand and describe the main areas and questions in the study of the cognitive neuroscience of language.
- Describe and differentiate between the different levels of language processing.
- Understand and describe how experimental evidence can bear on theoretical questions in language and cognition.
- Argue for and against different positions about the nature of language on the basis of valid empirical evidence.

MATERIALS

Required Textbooks

The primary required course texts include:

- ✓ Baggio, Giosuè. (2022). *Neurolinguistics*. MIT Press. ISBN: 9780262543262
- ✓ Brennan, Jonathan R. (2022). *Language and the Brain: A Slim Guide to Neurolinguistics*. Oxford University Press. ISBN: 9780198814764

Additional Course Resources

- ✓ Additional readings, podcasts, and video materials may be posted on the course website (Moodle).
- ✓ The UM Writing and Public Speaking Center provides one-on-one tutoring to students at all levels and at any time in the writing process. If you decide you are writing a paper for this course, you should consider consulting with them – visit early. Visit often. They're ready when you are. www.umt.edu/writingcenter.

Technology

You should have independent knowledge of and access to the following: sufficient internet speed/bandwidth, word processing, PDF converter, video recording, screen recording, and Zoom. When facing difficulty using technology (and Google can't help), please contact IT Help (406) 243-4357.

Please use technology during class in a responsible and respectful manner:

- Please silence all electronic devices before class begins
- If you receive an urgent phone call during class (e.g., a family emergency), please exit the classroom (or mute your microphone and stop your video) before initiating your conversation to minimize disruption
- While I won't be looking at your screen, please be mindful that people sitting behind you can be distracted by your screen

COURSE SCHEDULE/CALENDAR

Please see the following table for an overview of course sessions, topics, and deadlines.

Leave Policies

Cultural or ceremonial leave allows excused absences for cultural, religious, and ceremonial purposes to meet the student's customs and traditions or to participate in related activities. To receive an authorized absence for a cultural, religious or ceremonial event the student or their advisor (proxy) must submit a formal written request to the instructor. This must include a brief description (with inclusive dates) of the cultural event or ceremony and the importance of the student's attendance or participation. Authorization for the absence is subject to approval by the instructor. Appeals may be made to the Chair, Dean or Provost. The excused absence or leave may not exceed five academic calendar days (not including weekends or holidays). Students remain responsible for completion or make-up of assignments as defined in the syllabus, at the discretion of the instructor.

COVID-19 Class Safety

As UM returns to primarily face-to-face classes, we anticipate most students will attend classes in person. If you need a COVID-related accommodation in order to attend class, email the Office of Disability Equity at ODE@umontana.edu. ODE will work with you and your advisor on a case-by-case basis. Please refer to the following webpage for additional COVID-related resources for mental health, academic support, and updates: <https://www.umt.edu/provost/communications/communications-posts/um-plans-for-fall-2022-vpss.php>. You may also visit the Curry Health webpage for symptom and health information related to COVID: <https://www.umt.edu/curry-health-center/corona-virus.php>

NEUR491-02 Spring 2023 - Tentative Class Calendar - subject to change as needed

Wk	Date	Topic	Readings	Assignments
1	17-Jan	intro to language science - morphology		
1	19-Jan	intro to language science - morphology		
2	24-Jan	intro to language science - syntax		Quiz 1 - morphology
2	26-Jan	intro to language science - syntax		

Wk	Date	Topic	Readings	Assignments
3	31-Jan	intro to language science - phonology		Quiz 2 - syntax
3	2-Feb	intro to language science - phonology		
4	7-Feb	brain anatomy for beginners	brennan1&2	Quiz 3 - phonology
4	9-Feb	brain anatomy for beginners		
5	14-Feb	normal bases of language processing 1 - phonology	brennan3&4	Exam 1
5	16-Feb	normal bases of language processing 1 - phonology		
6	21-Feb	normal bases of language processing 2 - lexicon	brennan5&6	Quiz 4 – phonological processing
6	23-Feb	normal bases of language processing 2 - lexicon		
7	28-Feb	normal bases of language processing 3 - syntax	brennan7-9	Quiz 5 – lexical processing
7	2-Mar	normal bases of language processing 3 - syntax		
8	7-Mar	normal bases of language processing 4 - modeling	baggio2-4	Quiz 6 – syntactic processing
8	9-Mar	normal bases of language processing 4 - modeling		
9	14-Mar	child language acquisition	baggio5	Exam 2
9	16-Mar	child language acquisition		
10	21-Mar	no class- spring break		
10	23-Mar	no class- spring break		
11	28-Mar	bilingualism and the brain	baggio6	Quiz 7 – child language
11	30-Mar	bilingualism and the brain		
12	4-Apr	literacy and the brain	baggio7	Quiz 8 - bilingualism
12	6-Apr	literacy and the brain		
13	11-Apr	language disorders - aphasia	baggio8	Quiz 9 - literacy
13	13-Apr	language disorders - aphasia		
14	18-Apr	neurogenetics of language – including animal communication	baggio9	Quiz 10 - aphasia
14	20-Apr	neurogenetics of language		
15	25-Apr	neuroethology of language	baggio10	Quiz 11 - neurogenetics
15	27-Apr	neuroethology of language		
16	2-May	the past & future of neurolinguistics	baggio1&11, brennan10	Quiz 12 - neuroethology
16	4-May	the past & future of neurolinguistics		
Finals Week – Final exam tba				

ASSIGNMENTS & GRADING POLICIES

Grading Criteria

A	93-100	B+	87-89	C+	77-79	D+	67-69	F	<60
		B	83-86	C	73-76	D	63-66		
A-	90-92	B-	80-82	C-	70-72	D-	60-62		

Assessment Information

Please review the following table for details about the course assessment information for NEUR491-02NEUR. All assignments are due prior to the start of class unless otherwise indicated.

Assignment	Assignment Description	Undergraduate Weight	Graduate Weight
Exam 1	Covers content weeks 1-4	20%	15%
Exam 2	Covers content in weeks 5-8	20%	20%
Final	Cumulative	30%	20%
Quizzes	Short quizzes begin classes	10%	15%
Attendance & Participation	Includes discussion board post completion	20%	10%
Final Paper	<i>Req'd only for grad students; topics tbd</i>	10%	20%
Extra Credit	<i>For language research participation</i>	5%	2%
<i>Total</i>		<i>115%</i>	<i>102%</i>

Exams

All exams will consist primarily of multiple-choice questions. Exam 1 will cover content in weeks 1-4; exam 2 will cover content in weeks 5-8. The final is cumulative. Make-up exams will only be arranged for students who present a documented justified excuse for missing the exam.

Quizzes

Each week (when there is no exam or break) will begin with a quiz (for a total of 12 quizzes). The purpose of these quizzes is to make sure students show up on time and have understand the required content.

Attendance & Participation

Students should participate during class meetings and through online discussion board posts. These activities will occur throughout the term, will be embedded in the course content, and will be graded. Students will not be able to make-up participation points if activities are missed.

Final papers

Graduate students are required to write a final paper about a topic related to the material we cover in class. The paper needs to be in a form of a research proposal in which a certain problem is identified, relevant literature reviewed, and an experiment is proposed. Undergraduate students may write a final paper of the same format for a maximum of 10 points of extra credit. Topics of final paper need to be clarified and approved by the instructor the week after spring break. Papers must follow written assignment requirements and use APA formatting. The minimum length of papers is 10 pages (not including title page or references).

Extra credit

Students can earn extra credit by participating in research language science being conducted on the UM campus or online. Each study you participate in will equal .5% of the final grade up to a maximum. As the number of available studies varies throughout the semester, you should start participating as soon as possible.

COURSE POLICIES

Expectations, Guidelines, & Policies

As in all college courses, attendance in class is expected and will contribute to your final grade. Researchers have found a positive correlation between class attendance and good grades. If you know in advance that you need to miss class, communicate with me in advance to make arrangements. If you need to miss on an exam day, you should make prior arrangements to take the exam on a different date/time.

Communicating with Respect & Use Person-First Language

This course involves learning about language and communication, a topic that most people have preconceptions about. In your communication in class, be respectful of difference, as either you or a peer may be unaware that

you are communicating a bias or preconception. We can all learn more by maintaining an open dialogue. In all work, use *person-first language* to be consistent. Emphasize a person more than a disability (e.g., *a person with aphasia*, NOT *an aphasic*).

Format Assignments Appropriately

Unless otherwise specified in the assignment description, all typed assignments must be double-spaced, using APA-approved fonts and font sizes submitted as **Word** documents (.doc or .docx, *not* .pdf or .pages, etc) named using the file-naming convention noted in the assignment description, "**Last Name-First Name_Assignment Title_NEUR491-02-Fall2022**" (Do not use spaces and symbols besides period (.), dash (-) and underscore (_) as these can prevent opening the file on some systems.)

Here is what I expect from you during the Fall 2022 term:

- 1. Participate & Attend Class.** All members of this class are expected to contribute to a welcoming, respectful, and inclusive environment for every other member of the class. Each student is expected to read assigned material prior to class and participate in class discussions. Students are expected to be present and participate in all discussions and in-class activities.
- 2. Notify the Instructor(s) about Absences.** Students must notify the instructor(s) of serious circumstances that result in missed deadlines to be considered for rescheduling. Should an unforeseen event such as hospitalization or family emergency result in missing a deadline, students must consult with the instructor(s) regarding possible accommodations to be determined at the discretion of the instructor; furthermore, students may be asked to provide written verification of the circumstances. Students who miss class (or any portion of class) are responsible for the content. Any student who misses a class has the responsibility for obtaining copies of notes, handouts, assignments, etc. from peers who were present during class meetings. If additional assistance is still necessary, an appointment should be scheduled with the instructor(s). Class time will not be used to go over material with students who missed class(es).
- 3. Avoid Plagiarism.** Plagiarism is defined in the University of Montana's Student Conduct Code as "Representing another person's words, ideas, data, or materials as one's own". Students must acknowledge the work of others using appropriate referencing procedures as described in the APA (7th Edition) Manual. Students may be penalized for plagiarism under academic misconduct policies, which may include disciplinary sanctions, suspension, or expulsion. Submission of work taken directly from another source (e.g., copied from a book, the Internet, or material developed by another student) will be considered plagiarism and grounds for no credit on the assignment. Students are encouraged to use a variety of resources in obtaining ideas that will help complete assignments. *See the APA Guide (7th edition)* for the correct method to cite other authors' work.
- 4. Have Academic Honesty.** The [Student Conduct Code](#) at the University of Montana embodies and promotes honesty, integrity, accountability, rights, and responsibilities associated with constructive citizenship in our academic community. This Code describes expected standards of behaviour for all students, including academic conduct and general conduct, and it outlines students' rights, responsibilities, and the campus processes for adjudicating alleged violations. The updated version of the Code takes effect on August 1, 2020: [Student Conduct Code](#) (PDF Format). [Student Conduct Code](#) (Word Format). Questions regarding general conduct or concerns about student misconduct may be directed to the UM Housing Office at (406) 243-2611, or by email at kelly.magnuson@umontana.edu. If you wish to report an incident, please fill out the form below: https://cm.maxient.com/reportingform.php?UnivofMontana&layout_id=1 Questions regarding academic conduct can also be directed to the Office of the Provost and Vice President for Academic Affairs at (406) 243-4689.

5. **Access Disability Modifications (if needed).** The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the [Office for Disability Equity](#). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with the Office of Disability Equity, please contact the Office of Disability Equity in Lommasson Center 154 or call 406.243.2243. The faculty of the School of Speech, Language, Hearing, & Occupational Sciences (SLHOS) are committed to working with you and the Office of Disability Equity to provide an appropriate modification.

Here is what you can expect from me this spring:

1. If the class meeting will be recorded, I will notify you of this recording prior to the start of class.
2. I use Moodle for course management purposes. All course information will be posted to Moodle and all assignments will be submitted to Moodle.
3. I use Powerpoint slides to supplement my lectures and class activities. I share my general slides/lecture notes on Moodle. I highly recommend that you take your own notes during class lectures and workshops/activities as not all of the information we discuss in class will be on the PowerPoint slides. I highly recommend taking hand-written notes to increase your learning. I share these general lecture notes to: (1) decrease the amount of in-class note-taking, thereby allowing more time for in-class activities, and (2) provide students who are unable to attend that class with an overview of the content covered.
4. Student work will be returned as scheduled on the syllabus. All work will be returned via Moodle unless otherwise specified.
5. I will make every effort to create a learning environment in which students will feel comfortable asking questions, engaging in respectful debates, and discussing potentially sensitive issues without fearing judgment, ridicule, or backlash (from the instructor or classmates).
6. I will treat you with respect and I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability, and other visible and nonvisible differences. I will gladly honor your request to address you by an alternate name or gender pronoun.
7. I will keep our outside-of-class conversations confidential. Personal information conveyed to me (e.g., request to extend a deadline due attendance at a grieving ceremony, incarceration of a family member, mental health issues) will be kept confidential.

Communicating with the Instructor(s)

Please use class time and office hours for communicating with the instructor. If you have a question about something, chances are, so do your classmates. It is far more efficient to ask these questions and have them answered during class so that all students can benefit from the clarification. Please be mindful of the fact that your professors' time is limited, and frequent interruptions are detrimental to completing tasks in a timely fashion. We do truly love talking with you- but don't always have time! **Allow at least 2 business days between the hours of 9:00 am and 5:00 pm for your instructor to respond to emails.** Make sure that the message in the subject line of the email reflects the content in the message being sent.

ACKNOWLEDGEMENTS

Acknowledgments on Language Varieties & Accents

- All language varieties (often called dialects) are equally deserving of respect. All varieties are equally logical, structured and grammatical. No healthy adult speaks their native variety ungrammatically. Most of us speak varieties of English that are not typically considered "Academic English". Sound differences between varieties are represented as accents. Everyone has an accent.

- As a linguist, I will respect and celebrate your variety and accent!
- As language science scholars and future SLPs, you are expected to respect language variations. This includes learning about the variety of your peers, instructors, and future patients in order to have successful interactions and provide appropriate care. This follows current ASHA knowledge standards.
- If you would like to write using your language variety or dialect, you are welcome to do so for this class. We are here to learn to develop your writing skills and ability to craft an argument, but you can develop these skills in any language variety that you are comfortable using.
- Conventions of 'Academicese', a register (way of speaking and writing) at universities, will be discussed in passing. Typical conventions will be analyzed overtly, since this way of communicating is often expected in academic settings but is not a native dialect for any speakers.

Land Acknowledgment

The University of Montana acknowledges that we are in the aboriginal territories of the Salish and Kalispel people. Today, we honor the path they have always shown us in caring for this place for the generations to come.

RESOURCES

Student Resources

Please see the course Moodle shell for a list of campus resources available to help students be successful across UM courses. UM provides a wide range of supports for tutoring, financial, and personal development.

Campus Safety & Emergency Procedures

[Campus safety](#) is of the utmost importance at the University of Montana. Emergencies are rare, but if one should arise during class, everyone will need to work together. Be aware of your surroundings and familiar with some basic safety and security concepts. Emergency procedures will be discussed during the first class of each semester or session. **Above all, remember to dial 911 to report all emergencies.** Emergency procedures are posted in every classroom. Should a building evacuation become necessary, know the evacuation route, the location of the nearest fire extinguisher and the location of the nearest area of refuge. Areas of refuge are located at the elevator doors. Please notify your instructor(s) at the beginning of the semester if you have special needs or will require assistance during an emergency situation. [UM's emergency notification system](#) notifies the campus community of emergencies by sending subscribers a text or email. Sign up for notifications through Cyberbear. Please report suspicious activity by calling 911 or (406) 243-4000. [An online form is also available](#). You may elect to remain anonymous when making a report. [Active shooter preparedness](#) requires that we develop a survival mindset. [UM recommends the "Run, Hide, Fight"](#) response for an [active shooter](#) incident. Finally, stay current with campus safety information by following [UM's Police Department](#) on Twitter @UMPublicSafety.

RUN

- Quickly assess your situation.
- Leave your belongings behind.
- Keep your hands visible for law enforcement.

HIDE

- Hide in an area out of the shooter's view.
- Block entry to your hiding place and lock the doors.
- Silence your cell phone and/or pager.

FIGHT

- As a last resort and only when your life is in imminent danger.
- Attempt to incapacitate the shooter.
- Act with physical aggression and throw items at the active shooter.