

LING 212

Infant Brain and Language Development

(Fall 2020, 5 cr)

Instructor: Naja Ferjan Ramírez

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Class Website: <https://canvas.uw.edu/courses/1399854>

Class Time: T, Th 8:30-10:20 PST & Asynchronous

Group Review Session: Tu 9:30-10:20 am PST, on Zoom

Individual Office Hours: M 8:30 am PST, on Zoom.

Final exam date, time: December 15th, 10:30-12:20 on Canvas

Course Description

This course examines the interplay of biology and early experiences in shaping language and brain development in early childhood. The course will begin by introducing students to the basics of typical language and brain development through readings and discussions of state-of-the-art research methods and practices. Students will learn about the striking variability within typical language development, and will study its causes and consequences to understand how and why early language and brain growth affect education and societies worldwide. Discussions and readings will introduce concepts through the study of current experimental research, and will take an interdisciplinary approach relating language development to neuroscience, cognitive science, education, and psychology. Among other topics, students will learn about the effects of social deprivation and institutionalized care (orphanages) on language and brain development; bilingualism and multilingualism in early childhood; mirror neurons; the effects of socioeconomic status on language learning and brain growth; early language learning from screen media; the environmental “ingredients” that the infant brain needs to be prepared for a lifetime of learning. Students will be tested with variety of assignments, including weekly online quizzes, weekly homework assignments, case-study assignments, and exams.

By the end of this class, students should be able to:

- Understand the fundamentals of neural architecture for language learning and processing, as well as the fundamentals of brain development in response to maturational processes and active learning.
- Understand changes in language development related to environmental factors (such as socioeconomic status), biological factors (such as brain growth), and experience (such as exposure to multiple languages).
- Understand the role of early language learning and brain growth in relation to school readiness and long-term cognitive and academic achievement.

Course structure

This course will be delivered online, mostly through Zoom. Please download Zoom, and read how to use it here: <https://itconnect.uw.edu/connect/phones/conferencing/zoom-video-conferencing/zoom-software/>. In this syllabus, **Synchronous** (S) sessions will refer to sessions when we all meet together on Zoom, whereas **Asynchronous** (A) sessions refer to sessions which will not require a meeting in real time, but will be prerecorded. **As you will notice in the schedule at the end of this syllabus, most content lectures will be prerecorded, and therefore Asynchronous (exceptions noted in the class**

schedule). I plan to post all materials for Tuesday classes by the previous Monday at 8:30 am PST, and all materials for Thursday classes by the previous Wednesday at 8:30 am PST.

SECTION: Every Tuesday between 9:30 and 10:20 am PST, I will hold a *synchronous* (live) section on Zoom, to go over the learning objectives that will be covered on that week's homework and quiz, both of which are due on Wednesdays (see Weekly schedule at the end of this syllabus). For example, the section on Tuesday of Week 4 will be held at 9:30 am, and will cover the material from Thursday of Week 3 and Tuesday of Week 4. In section, I will be available to answer any questions that you may have, and we will review any material that was unclear or particularly difficult. Note that section is scheduled the day before your weekly HW and Quiz are due. It is best if you have worked through all of the Th and Tu materials before section, but you are welcome to attend even if you have not done so yet. Section is completely optional and no new material will be covered.

Accessing lectures, review sessions, and office hours

To access the synchronous lectures (those marked with S in the class schedule), Tuesday review sessions, and office hours, please click on the "Zoom" button within the Canvas site. Then find the correct meeting day and time, and join. **All synchronous lectures and all Tuesday review sessions will be recorded.** You may watch the recordings after, in the same location (click on "Zoom" within Canvas, and navigate to "Cloud Recordings". Find the correct date and time, and watch). This is also the location where you can access the prerecorded (asynchronous) lectures. **To find out which recording to watch with which lecture, please check the recording number on the first slide of the posted lecture slides.** Individual office hours (M at 8:30 am) will NOT be recorded.

Required readings

There is no textbook for this course. Assigned readings are drawn from a variety of articles/chapters from current linguistic and developmental neuroscience research and will be posted on Canvas, within each weekly module. In addition to the articles and chapters, for most weeks, I have also assigned videos, TED talks, or online modules available on the web. The purpose of these materials is to identify relevant connections to real world problems.

Course Webpage & Mini Syllabi

We will use Canvas as the course webpage. Within Canvas, you will find a **module** for each week. In each module, you will find a **mini syllabus**, which summarizes everything that you need to cover and know in any given week. The mini syllabus also lists all the assignments. The readings and links to online materials are included in each week's module. In short, the weekly modules and the mini syllabi are what you want to check and work through each week to stay on track.

Requirements & Assessment

You will be assessed based on the following (a detailed description of each is below):

- Weekly Quizzes on Canvas: 20%
- Weekly Homework Assignments on Canvas: 20%
- Case Studies (Labs): 20%
- Midterm: 20%
- Final: 20%

Please note that all assignments must be submitted through Canvas in due time, as specified on the course schedule and within the weekly mini syllabi.

(1) Quizzes (20% total)

A series of timed multiple choice-type quizzes will occur throughout the quarter on Canvas. You will have 10 minutes to complete each quiz. These quizzes will be closed book, and you will not be able to use notes on them. They will open at 10:30 am on Tuesdays and close 11:59pm the Wednesday after. There will **not** be any opportunities to turn in quizzes late, but the lowest score (and the Week 1 quiz) will not count towards your final grade.

(2) Weekly homework assignments (20% total)

Throughout the quarter, there will be weekly homework assignments that you can use to show that you have achieved the learning goals for each week. There will **not** be opportunities to make up missed homework assignments. Late assignments will be accepted for 24 hours after they are due. If you submit your homework within this 24 hour window, you can receive up to 80% credit for it (example: if the total number of available points is 10 and you answer all questions correctly, your final grade can be no higher than 8/10). After the 24 hour window has passed, no late assignments will be accepted.

(3) Case Studies (Labs) (20% total; 5% each)

Four untimed "Case Study" assignments will test your ability to apply the knowledge and skills gained within the course to real world situations or problems. Each case study assignment will be presented by an expert in the field: somebody who has studied the topic in depth, and has built their career around it. The expert will first talk about their career path in a short video, and you will then be asked to answer some questions related to the topic. In addition to asking you to apply your knowledge to real world situations, the purpose of these case study assignments is to showcase different career paths related to the course topics. The format of the case study assignments will include short-answer and longer, multi-part, analysis questions involving data sets or language problems. The number of points available for each question will be clearly marked, and each case study assignment is worth 5% of your final grade. You will have about a week to work on each of the case study assignments. The assignments will be posted on Canvas in each week's module, in Word format, which you must download and use as a template for your answers. You must then upload the Word document (a PDF will be accepted as well) with your answers onto Canvas, by the date and time specified in the syllabus and on Canvas. There will **not** be any opportunities to make up missed case study assignments. Late case study assignments will be accepted for 24 hours after they are due. If you submit your case study within this 24 hour window, you can receive up to 80% credit for it (example: if the total number of available points is 10 and you answer all questions correctly, your final grade can be no higher than 8/10). After the 24 hour window has passed, no late case studies will be accepted.

(4) Midterm Exam (20%) and Final Exam (20%)

There will be two exams. The first is a midterm exam and will cover the topics of the first half of the class (through Brain Methods). The second is a cumulative final exam, but with a focus on the material covered since the midterm. The exams will cover information from the lectures, readings, and the web materials. Prior to each of the exam, I will hold a synchronous (S) Zoom session to go over any questions that you may have.

Grading

The following UW grading scale will be used

(www.washington.edu/students/gencat/front/Grading_Sys.html)

Percent = Grade

≥ 95% = 4.0	88 = 3.3	81 = 2.6	74 = 1.9	67 = 1.2
94 = 3.9	87 = 3.2	80 = 2.5	73 = 1.8	66 = 1.1
93 = 3.8	86 = 3.1	79 = 2.4	72 = 1.7	65 = 1.0
92 = 3.7	85 = 3.0	78 = 2.3	71 = 1.6	64 = 0.9
91 = 3.6	84 = 2.9	77 = 2.2	70 = 1.5	63 = 0.8
90 = 3.5	83 = 2.8	76 = 2.1	69 = 1.4	60-62 = 0.7
89 = 3.4	82 = 2.7	75 = 2.0	68 = 1.3	< 60 = 0.0

Policies

Powerpoint slides: I will post the Powerpoint slides that I use within each weekly module. **On the first slide, you will find the number of the Zoom recording that goes with the slides.**

Grading challenges, questions, complaints: If you have a question or complaint about a wrong answer on an exam or quiz, or wish to make a grading challenge or appeal, you must wait 24 hours after receiving the grade and then arrange to talk to me about it during my office hours.

Questions and email etiquette: If you have a question about course material, you may send me an email. When you send me an email, please: 1) use polite language; 2) use a relevant and informative subject line that includes 'LING 212' 3) use your UW email or sign off using your full name so I can identify you; and 4) allow up to 48 hours to receive a response.

Academic integrity and conduct: Students are expected to conduct themselves with the highest standards of academic ethics, honesty and integrity. Academic misconduct includes (but is not limited to) plagiarism, harassment, cheating, using books or other written or online materials during quizzes or exams, posting quiz, homework, or exam questions to external sites, falsification, or disruptive behavior. Such behaviors will not be tolerated. It is your responsibility to read and understand the University's expectations in this regard (<http://www.washington.edu/cssc/for-students/student-code-of-conduct/>). Any student found to be in violation of proper academic conduct will be reported to the Advisory Committee on Student Conduct for a hearing.

Hand in your own work: I highly encourage you to study together with your classmates. It is also ok to discuss your homework and case study assignments. However, you must take the quizzes and the exams by yourself, and without using any materials (web or printed). When you submit written homework and case study assignments, you must use your own words. Identical assignments will not be graded. If you have worked on an assignment in a pair or in a group, include a note about this in your write up. (Example: I worked with John Smith and Maria Muñoz on this Weekly sheet. We discussed the learning objectives, and then each of us drew their own schematics).

Special accommodations: To request academic accommodations due to a disability (e.g., a note taker, extra time on exams etc.), please contact Disabled Resources for Students (DRS), 011 Mary Gates, 543-8924(V), 543-8925 (TTY), uwdrs@uw.edu. If you have a letter or email from DRS indicating that you have a disability which requires special academic accommodations, please come to see me *at your earliest convenience* so the proper accommodations can be discussed and met.

Religious accommodations: Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy (<https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/>). Accommodations

must be requested within the first two weeks of this course using the Religious Accommodations Request form (<https://registrar.washington.edu/students/religious-accommodations-request/>).

Schedule Overview

Note: It is possible that dates, topics and assessments may change. You will be notified of any changes ahead of time. Always check the mini syllabi on Canvas to get the most up to date information.

Week	Day & Date**	Topic	Class type	Assignments
1	Th 10/1	Introduction	S	HW1 opens; due W 10/7 11:59p*
2	Tu 10/6	The Amazing Baby Brain	A	Quiz1 opens; due W 10/7 11:59p*
2	Th 10/8	Where Does Language Come From?	A	HW2 opens; due W 10/14 11:59p
3	Tu 10/13	The Critical Period	A	Quiz2 opens; due W 10/14 11:59p
3	Th 10/15	Language Acquisition: Listening	A	HW3 opens; due W 10/21 11:59p CS1 opens; due F 10/23 11:59p
4	Tu 10/20	Language Acquisition: Speaking	A	Quiz3 opens; due W 10/21 11:59p
4	Th 10/22	Language Acquisition: Wrap-up	A	HW4 opens; due W 10/28 11:59p
5	Tu 10/27	Brain Fundamentals	A	Quiz4 opens; due W 10/28 11:59p CS2 opens; due W 11/4 11:59p
5	Th 10/29	Brain Methods	A	HW5 opens; due W 11/4 11:59p
6	Tu 11/3	Review	S	None
6	Th 11/5	Midterm	S	HW6 opens; due W 11/11 11:59p
7	Tu 11/10	Age of Acquisition	A	CS3 opens; due F 11/20 11:59p
7	Th 11/12	The Word Gap	A	HW7 opens; due W 11/18 11:59p
8	Tu 11/17	Social Brain: Poverty	A	Quiz5 opens; due W 11/18 11:59p
8	Th 11/19	Social Brain: Interaction	A	HW8 opens; due W 11/25 11:59p
9	Tu 11/24	Social Brain: Neglect	A	Quiz6 opens; due W 11/25 11:59p
9	Th 11/26	Thanksgiving: No CLASS		
10	Tu 12/1	Screen Media	A	HW9 opens; due W 12/9 11:59p CS4 opens; due W 12/9 11:59p
10	Th 12/3	Bilingualism: Myths	A	Quiz7 opens; due F 12/4 11:59p
11	Tu 12/8	Bilingualism: Brain	A	HW10 opens; due Sat 12/12 11:59p
11	Th 12/10	Wrap-Up; Review	S	None
12	12/15	Final Exam: 10:30-12:30	S	On ZOOM

*For HW1 and Quiz1, we will assign you a grade, but it will not count towards your final grade in the course. We're only assigning the grade for HW1 and Quiz1 so that you can get a feel for the difficulty level.

** All asynchronous Tuesday lectures and materials will be posted by the previous Monday at 8:30 am PST. All asynchronous Thursday lectures and materials will be posted by the previous Wednesday at 8:30 am PST.

***Weekly SYNCHRONOUS review section will be held every Tuesday 9:30-10:20 am (exceptions will be announced in weekly mini syllabi and/or via email). In section, I will be available to answer any questions that you may have, and we will review any material that was unclear or particularly difficult. Note that section is scheduled the day before your weekly HW and Quiz are due. It is best if you have worked through all of the Th and Tu materials before section, but you are welcome to attend even if you have not done so. Section is completely optional and no new material will be covered.