

LING 212

Infant Brain and Language Development

(Spring 2020, 5 cr)

Instructor: Naja Ferjan Ramírez

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Class Website: <https://canvas.uw.edu/courses/1373292>

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

Group Review Session: F 2:30-3:20 pm, on Zoom

Individual Office Hours: M 3:00-3:50 pm, on Zoom

Final exam date, time: 6/9 at 10:30 am, 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 live meeting, 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).

Every Friday between 2:30 and 3:20 pm PST, Dr. Ferjan Ramírez will be available *synchronously* (live) on Zoom, to go over the learning objectives and answer any remaining questions that you may have. Please note that no new material will be covered during these synchronous sessions. Instead, you may think of these as “review sessions” or “group office hours” that all students can attend to review the material that they have already covered. Attendance is optional. It is recommend you complete all Asynchronous (A) materials before taking the quiz or doing the homework, as materials from these sessions will be tested on these assignments in addition to the two exams over the quarter. Please note that all assignments must be submitted through Canvas in due time, as specified on the course schedule and within the mini syllabi (see details below under Course webpage and mini syllabi).

Accessing lectures, group review sessions, and office hours

To access the synchronous lectures (those marked with S in the class schedule), Friday group 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 Friday group 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.

Individual office hours (M at 3:00 pm) 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. 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 equip students with additional background knowledge, and/or to identify relevant connections to real world problems and issues.

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%

(1) Weekly Quizzes (20% total)

A series 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 Thursdays and close 11:59pm the

Monday night 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. These should not be simple facts from the readings or web materials, but a way to show your deep understanding and critical thinking of the material. The grading rubric for your homework assignments is below. As you can see, the homeworks will be graded on effort and thoughtfulness. There will **not** be opportunities to make up missed homework assignments, and 0 credit will be given for late assignments.

Criteria	Grades			Points
Does the homework cover all of the learning objectives?	Yes! 2 pts	More than half are covered. 1 pt	Half or fewer of the learning objectives are covered. 0 pts	2
Do the explanations exemplify critical thought about the material, and do they provide meaningful connections to real life or other content?	Yes! 2 pts	Some thought was put in, but there could be more time spent on it. 1 pt	The answers are superficial, ignorant of the content, or irrelevant. 0 pts	2
Are the explanations easy to read?	Yes! 1 pt		No! 0 pts	1

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

Four untimed “Case Study” assignments (Labs) 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, and 0 credit will be given for late assignments.

(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.

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	Tu 3/31	The Amazing Baby Brain	S	W1 HW opens; due Sun 4/5 11:59p*
1	Th 4/2	The Amazing Baby Brain	A	W1 Quiz opens; due Mon 4/6 11:59p*
2	Tu 4/7	Theories Language & Brain	A	W2 HW opens; due Sun 4/12 11:59p
2	Th 4/9	Theories Language & Brain	A	W2 Quiz opens; due Mon 4/13 11:59p
3	Tu 4/14	Language Acquisition	A	W3 HW opens; due Sun 4/19 11:59p CS1 opens; due Wed 4/22 11:59p
3	Th 4/16	Language Acquisition	A	W3 Quiz opens; due Mon 4/20 11:59p
4	Tu 4/21	Acquisition Wrap-up	A	W4 HW opens; due Sun 4/26 11:59p
4	Th 4/23	Brain Fundamentals	A	W4 Quiz opens; due Mon 4/27 11:59p CS2 opens; due Fri 5/1 11:59p
5	Tu 4/28	Brain Methods	A	W5 HW opens; due Sun 5/3 11:59p
5	Th 4/30	Review	S	None
6	Tu 5/5	Midterm	S	W6 HW opens; due Sun 5/10 11:59p
6	Th 5/7	Age of Acquisition	A	CS3 opens; due Fri 5/15 11:59p
7	Tu 5/12	Word Gap	A	W7 HW opens; due Sun 5/17 11:59p
7	Th 5/14	Beyond Word Gap	A	W7 Quiz opens; due Mon 5/18 11:59p
8	Tu 5/19	Social Brain: Interaction	A	W8 HW opens; due Sun 5/24 11:59p CS4 opens; due Wed 5/27 11:59p
8	Th 5/21	Social Brain: Neglect	A	W8 Quiz opens; due Mon 5/25 11:59p
9	Tu 5/26	Screen Media & Brain	A	W9 HW opens; due Sun 5/31 11:59p
9	Th 5/28	Bilingual Brain	A	W9 Quiz opens; due Mon 6/1 11:59p
10	Tu 6/2	Infant Bilingualism: Myths	A	HW10 opens; due Sun 6/7 11:59p
10	Th 6/4	Wrap-Up; Review	S	None
11	Tu 6/9	Final Exam: 10:30a	S	

*Assignments for Week 1 are ungraded, but meant for you to get a feel for how the assignments work.

**Weekly Friday group office hours / section at 2:30 pm on Zoom. Attendance is optional and no new material will be covered.