

Psychology 451
Cognitive Development
Winter 2021
Instructor: Dr. Alexandra Twyman

Lecture Location:

Online; D2L

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Course Description

Current and classic research in the area of cognitive development is explored. Topics may include sensory and perceptual development, language acquisition, symbolic representation, concept formation, memory, and spatial development. The course will also discuss methodologies used in research with children.

Course Learning Outcomes

The Department of Psychology is committed to student knowledge and skill development. The table below lists the key learning outcomes for this course, the program-learning outcomes they facilitate (see <https://live-arts.ucalgary.ca/psychology/about#program-learning-outcomes>), and the expected level of achievement.

Course Learning Outcomes	Assessment Methods	PLO(s)	Level(s)
Describe and critically evaluate theories of cognitive development	Multiple choice exams, written assignments, oral presentations	1, 2, 4, 5, 6	A
Critically evaluate primary research articles on cognitive development	Written assignments and oral presentations	1, 2, 3, 4, 5, 6	A
Critically evaluate and summarize previous empirical studies in cognitive development	Written assignments and oral presentations	1, 2, 3, 4, 5, 6	A
Synthesize material from several sources (empirical articles, review articles, lectures) to formulate appropriate debates and conclusions regarding cognitive development, especially as it pertains to applied problems within cultural contexts	Written assignments and oral presentations	1, 2, 3, 4, 5, 7, 8	C, A
Deliver an effective oral presentation of the main components of your group research proposal	Oral Presentation	1, 2, 4, 5, 6	C, A
Learn how to translate a research question from theory into practice on demo day, conduct research with participants in culturally sensitive ways, and understand the importance of accurate replication	Written assignments and oral presentations	1, 2, 3, 4, 6, 8	C, A

Notes. PLOs = Program-Learning Outcomes: 1 = demonstrate knowledge of psychological sciences, 2 = think critically and solve problems, 3 = conduct research and analyze data, 4 = communicate effectively, 5 = demonstrate information literacy, 6 = understand and implement ethical principles in a diverse world, 7 = apply psychological knowledge and skills, 8 = Demonstrate multicultural competence and awareness of issues related to equity, diversity,* and inclusion. Level of PLO achievement facilitated by this course: I = introductory, C = competency, A = advanced.

Acknowledgments and Respect for Diversity

Our classrooms view diversity of identity as a strength and resource. Your experiences and different perspectives are encouraged and add to a rich learning environment that fosters critical thought through respectful discussion and inclusion. The Department of Psychology would also like to acknowledge the traditional territories of the people of the Treaty 7 region in southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III.

Course Format

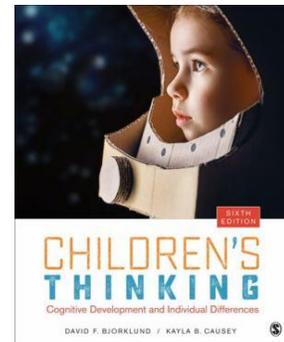
Class materials will be posted to the course D2L page as per the course schedule below.

Prerequisites

Psychology 300 and 301 (Research Methods and Data Analysis in Psychology I and II), 351 (Developmental Psychology) and admission to the Psychology major or Honours program or to the minor in Speech-Language Sciences for Linguistics Majors.

OPTIONAL Textbook

I DO NOT require a textbook in this course, as there are very few good undergraduate level books on cognitive development. If you are excited about the field of cognitive psychology, or prefer to have a textbook as an additional resource, then the book I have listed is an excellent resource, but it more of a graduate level textbook. The University Bookstore has copies of the text available. None of the questions on the exam will come directly from the book, everything that is testable is covered in the lecture content.



Bjorklund, D. F., & Causey, K. B. (2017). *Children's Thinking: Cognitive Development and Individual Differences* (6th Ed.). Sage.

Assessment Methods

Exams in this course are closed book. The use of resources, including class notes, the textbook, online resources, and calculators is prohibited during the exams in this course. Students may not communicate with others, either in person or electronically, about course material or the exam either in person or electronically during exams.

The exams are intended to be written within a 50 minute time period. To account for technical or situational difficulties, 50% extra time as been added to the exams, for a writing time of 75 minutes. Each quiz covers the material in that unit (see class schedule for exact topics in each unit test). They are posted on D2L at 1 p.m. on the exam writing date. Once you start the test, you will have the exam time limit (75 minutes) to complete the test. But the tests will be available for 24 hours after the start time for you to pick your ideal start time.

Exams

Exam 1 (30%) – Unit 1 Material- multiple choice – Monday Feb 8th (released at 1 p.m. on Monday Feb 8th, 75 minutes to write the exam, pick a start time within 24 hours, exam due at 1 p.m. on Tuesday Feb 9th)

Exam 2 (15%) – Unit 2 Material – short answer – Monday, April 12th (released at 1 p.m. on Monday April 12th, 75 minutes to write the exam, pick a start time within 24 hours, exam due at 1 p.m. on Tuesday April 13th)

Individual Assignment (one per student)

Please find a brief overview of each of the assignments in this course. Further details are posted on D2L.

Paper #1 (15%) – Media portrayal of cognitive development – In this assignment, you will be finding an advertisement or a media clip that is aimed to improve cognitive development. Using your growing knowledge, you will critically evaluate the advertisement claims. (March 12th)

Group Term Project

In the lecture portion of the course, I will be giving you a broad overview of the area of cognitive development. For the group project, you will have a chance to go in depth into one area of cognitive development that interests you/your group(such as language, or memory). You will be working in small groups (determined in class) to either replicate an existing experiment or suggest your own new experiment. You will be provided time during class to develop a topic of interest (topic approval assignment). You will then delve into the literature to learn more about your topic. Once your research question is finalized, you and your group will prepare a research project proposal in enough detail to be submitted for ethics review (ethics submission assignment). Once you have received ethics approval, your group will have a chance to work with a child to replicate (or use your new experiment) one of the classic findings of cognitive development (data collection assignment). This component will be done from a distance, either by phone, zoom, or some other use of technology to enable virtual data collection. You will be recording your data collection and then posting it on D2L to share with the class. Your group will share your research project with the class in the oral presentation. This presentation will be created online and shared with the class on D2L. In the final paper submission, your group will have a chance to reflect on your term project: did go according to plan? What did the results demonstrate? And would you have one anything differently in the future? Further details of all assignment components will be discussed in class and posted on D2L.

Term Project Assignment Components (one per Group)

Please find a brief overview of each of the components of the group term project in this course. Further details are posted on D2L. Each submission is due as one per group in the D2L dropbox folder by the due date.

Topic Approval (5%)- A brief overview of your proposed research project. (Feb 12th)

Ethics Submission (5%)- An account of your proposed research project for ethical review. (March 5th)

Data Collection (5%)- You will collect cognitive developmental data, and you will be evaluated on the data collection process. This is intended to foster the practical side of research in cognitive development. (March 12th, 19th, and 22nd)

Oral Presentation (10%)- An oral summary of the theory, data, and conclusions of your research project to disseminate your findings to our class. (March 29th)

Final Paper Submission (15%)- A written summary of the theory, data, and conclusions of your research project. (April 9th)

All assignments will be submitted electronically through D2L dropbox as one assignment per group. Without instructor approval, **late assignments will be penalized 10% per day, including weekends.** Without instructor approval, late presentations will be given a grade of 0%.

University of Calgary Academic Integrity Policy

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity.

Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional code of conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. It is your responsibility to ensure that you have read and are familiar with the student academic misconduct policy:

<https://www.ucalgary.ca/policies/files/policies/student-academic-misconduct-policy.pdf>.

Department of Psychology Criteria for Letter Grades

Psychology course instructors use the following criteria when assigning letter grades:

A+ grade: *Exceptional Performance.* An A+ grade indicates near perfect performance on multiple choice and short answer exams. For research papers/essays/course projects/presentations, an A+ grade is awarded for exceptional work deserving of special recognition and is therefore not a common grade.

A, A- Range: *Excellent Performance.* Superior understanding of course material. Written work is very strong in terms of critical and original thinking, content, organization, and the expression of ideas, and demonstrates student's thorough knowledge of subject matter.

B Range: *Good Performance.* Above average understanding of course material. Written work shows evidence of critical thinking and attention to organization and editing but could be improved in form and/or content.

C Range: *Satisfactory Performance.* Adequate understanding of course material. Knowledge of basic concepts and terminology is demonstrated. Written work is satisfactory and meets essential requirements but could be improved significantly in form and content. Note: All prerequisites for courses offered by the Faculty of Arts must be met with a minimum grade of C-.

D range: *Marginally meets standards.* Minimal understanding of subject matter. Written work is marginally acceptable and meets basic requirements but requires substantial improvements in form and content. Student has not mastered course material at a level sufficient for advancement into more senior courses in the same or related subjects.

F grade: *Course standards not met.* Inadequate understanding of subject matter. Written work does not meet basic requirements. Student has not demonstrated knowledge of course material at a level sufficient for course credit.

Grading Scale

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

As stated in the University Calendar, it is at the instructor's discretion to round off either upward or downward to determine a final grade when the average of term work and final examinations is between two letter grades.

To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (e.g., 89.5% will be rounded up to 90% = A and 89.4% will be rounded down to 89% = A-).

Course Credits for Research Participation

Extra Research Participation Course Credit is Not Offered for this Course. Research course credit is not allowed in 400- and 500-level courses.

Tentative Lecture Schedule

This lecture schedule is tentative and may be adapted at the lecturer's discretion.

Final Paper Submission (15%)- A written summary of the theory, data, and conclusions of your research project.

Date	Topic/Activity/Readings/Due Date (revise and add columns & rows as necessary)
M Jan 11	<i>Start of Classes.</i> Course Outline
W Jan 13	Foundational Concepts (Introduction)
F Jan 15	Evolution
M Jan 18	Genetics
W Jan 20	Brain Development
R Jan 21	<i>Last day to drop Winter Term half-courses.</i>
F Jan 22	<i>Last day to add or swap a course.</i> Brain Development
M Jan 25	Brain Development
W Jan 27	Brain Development
F Jan 29	<i>Fee payment deadline for Winter Term fees.</i> Group Work Day (Select topic and pick group)
M Feb 1	Social/Cultural Context
W Feb 3	Social/Cultural Context
F Feb 5	Social/Cultural Context

M Feb 8	Exam #1 from Monday at 1 p.m. until Tuesday at 1 p.m. (Dr. Twyman available from 1-1:50 p.m. on Monday, Feb 8th)
W Feb 10	Group Work Day
F Feb 12	Group Work Day Group Topic Approval Due Today at 1 p.m.
M Feb 15	<i>Alberta Family Day</i>
Feb 14-20	<i>Term Break, No Classes (University if Open, Except on Alberta Family Day)</i>
M Feb 22	Methods in conducting research with infants
W Feb 24	Infants sense of touch
F Feb 26	Infant visual development
M Mar 1	Group Project Time
W Mar 3	Infant face processing and audition
F Mar 5	Group Ethics Submission due at 1 p.m. Infant intermodal perception and perceptual narrowing
M Mar 8	Jean Piaget, Implicit, and Explicit Measure of Cognitive Development
W Mar 10	Group Prep Day for Data Collection
F Mar 12	Individual Paper # 1 Due at 1 p.m. Data Collection Day #1
M Mar 15	Core Knowledge Theory (Elizabeth Spelke)
W Mar 17	Spatial Development
F Mar 19	Data Collection Day #2
M Mar 22	Data Collection Day #3
W Mar 24	Information Processing: I
F Mar 26	Information Processing: II
M Mar 29	Group Oral Presentations Due at 1 p.m. Group Oral Presentation Day #1
W Mar 31	Group Oral Presentation Day #2
F Apr 2	<i>Good Friday, University Closed</i>
M Apr 6	<i>Easter Monday, University Closed</i>
W Apr 7	Language Development
F Apr 9	Group Final Paper Submission due at 1 p.m. Mathematical Reasoning: Guest Lecture: Dr. Daniel Ansari from Western University
M Apr 12	Exam #2 from Monday at 1 p.m. until Tuesday at 1 p.m. (Dr. Twyman available from 1-1:50 p.m. on Monday, April 12th)
W Apr 14	Cognitive Development
R Apr 15	<i>Last day of classes, last day to withdraw from winter courses</i>
Apr. 19-29	<i>Final Exam Period</i>
R Apr 30	<i>End of Term</i>

Absence From A Test/Exam

Makeup tests/exams are **NOT** an option without the approval of the instructor. Students who miss a test/exam have up to 48 hours to contact the instructor to ask for a makeup test/exam. It's the instructor's discretion if they will allow a make-up exam. Students who do not schedule a makeup test/exam with the instructor within this 48-hour period forfeit the right to a makeup test/exam. At the instructor's discretion, a makeup test/exam may differ significantly (in form and/or content) from a regularly scheduled test/exam. **Once approved by the instructor a makeup test/exam must be written within 2 weeks of the missed test/exam on a day/time scheduled by the instructor. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam** <https://www.ucalgary.ca/registrar/exams/deferred-exams>.

Travel During Exams

Consistent with University regulations, students are expected to be available to write scheduled exams at any time during the official December and April examination periods. Requests to write a make-up exam because of conflicting travel plans (e.g., flight bookings) will NOT be considered by the department. Students are advised to wait until the final examination schedule is posted before making any travel arrangements. **If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam** <https://www.ucalgary.ca/registrar/exams/deferred-exams>. **Students with an exceptional extenuating circumstance (e.g., a family emergency) should contact the Department of Psychology (psyugrd@ucalgary.ca).**

Reappraisal of Graded Term Work <http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

Reappraisal of Final Grade <http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

Academic Accommodations

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

Academic Misconduct

For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>

Instructor Intellectual Property

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor.

The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Freedom OF Information and Protection of Privacy

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary

Student Support and Resources

<https://www.ucalgary.ca/registrar/registration/course-outlines>

Important Dates

The last day to drop this course with no "W" notation and **still receive a tuition fee refund** is **Thursday, January 21, 2021**. Last day add/swap a course is **Friday, January 22, 2021**. The last day to withdraw from this course is **Thursday, April 15, 2021** <https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>