PSYCH 475/575 Cognitive Development Monday/Wednesday 4:00 to 5:20pm 115 Lawrence Hall

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<u>Course website:</u> Blackboard (<u>http://blackboard.uoregon.edu</u>) will be a critical source of courserelated information throughout the term. Lecture slides can be printed off blackboard by 12noon <u>the day after lecture</u>. Lecture slides are used for supplementing what is said in lecture, and reading them will not be a sufficient substitute for attending class. Course readings and test scores will be also posted on blackboard. Check the blackboard website regularly for courserelated announcements; important announcements will also be sent over e-mail, so it is best to get into the habit (if you're not already!) of checking your e-mail daily.

<u>Course Readings</u>: The required text for this course is Robert Siegler and Martha Alibali, *Children's Thinking* (4th Ed.). New Jersey: Prentice Hall, 2005. In addition to the text, there are required readings posted on blackboard consisting of journal articles and chapters written mainly for experts in the field. These articles are also listed at the end of the syllabus. <u>Be</u> sure to allow yourself enough time to read these carefully.

<u>Course description and objectives:</u> The goal of this course is to better understand how children's thinking and mental abilities change from infancy on. We will discuss the content of children's knowledge across a variety of domains and critically evaluate the major theories and explanations of intellectual growth. We will review and evaluate both classic findings and state-of-the-art research on cognitive development. We will also apply classroom knowledge to real-world issues that pertain to children's cognitive development.

Course requirements

1) Exams

The exams are designed to assess your knowledge and understanding of the fundamental concepts, theoretical accounts, and experimental evidence covered in the text, additional readings, and class lectures. You will be asked to define terms, illustrate important concepts, explain the rationale, describe the design, and summarize the findings of experiments, and use experimental evidence to evaluate a controversy in the field. There will be three short-answer and essay exams in this course. The third exam is a final exam and **it is worth twice as much as the midterm exams**. The final exam covers material since the second midterm and also includes essay questions that are cumulative and require integration of material across the term. You will be given an average exam grade based on your best grades from these three exams. If your

75%

lowest exam grade is one of the midterm exams, or if you miss a midterm exam, then it will be dropped. If the final exam is your lowest grade, then its value will be divided in half (because it is worth twice as much as the midterms). There will be no makeup exams except under exceptional circumstances. Examples of how this grading system works are described in the grading section below.

The dates of the exams are:

Midterm 1: Monday, October 15th Midterm 2: Monday, November 5th Final Exam: Monday, December 3rd: 3:15-5:15

2) Course Blog

25%

In addition to doing course readings, and attending class, it is important to take time to solidify your understanding of concepts and to connect what you are learning to other material and to your own experiences. You are encouraged to do this by asking questions and bringing up topics for discussion in class, and by posting to a course blog. You are required to create 5 posts throughout the course. At least 3 must be new posts, and no more than 2 can be comments on someone else's post. Weeks in which a blog post are due are marked in the course schedule by an asterisk. Posts are always due by 5pm on Fridays. Late posts will not be accepted. These posts can be based on any part of the class (lectures, class discussions, readings) and should be the equivalent of about a page of single-spaced text if you were writing a paper. Your posts will be evaluated based on how clearly they express your ideas and how well they demonstrate critical thinking. The blog is found at <u>http://uofocogdevo.blogspot.com/</u>

3) Attendance

Class attendance is critical to doing well in this course. If you miss lectures, you will be impairing your ability to perform well on exams and thus to earn a good grade. Attendance will not be recorded; you are expected to be responsible for your own decisions. The instructor will work hard to ensure that lectures are engaging, informative, and relevant to your life. If you anticipate missing more than three classes you should discuss your enrollment with the instructor at the beginning of the term.

Grading

Total Points:	400
Course Blog:	100 (20 points for each post)
Best Exams	300
Final:	200
Midterm 2:	100
Midterm 1: `	100 pts
Course Points	

Grading Scale A→360-400 B→320-359 C→280-319 D→240-279 Sample Grade Calculation: Student A

Midterm 1: 75/100, Midterm 2: 85/100, Final Exam: 180/200, Blogs: 95/100 \rightarrow Lowest Exam Grade = Exam 1: 75/100 \rightarrow dropped Average of Best Exam Grades = 85/100 + 180/200 = 265/300 Total Points = Best Exams + Blogs = 265/300 + 95/100 = 360/400 = 90% A Student B Exam 1: 82/100, Exam 2: 85/100, Final Exam: 160/200, Blogs, 90/100 \rightarrow Lowest Exam Grade = Final Exam: 160/200 \rightarrow divided in half = 80/100 Average of Best Exam Grades = 82/100 + 85/100 + 80/100 = 247/300 Total Points = Best Exams + Blogs = 247/300 + 90/100 = 337/400 = 84% B

EXTRA CREDIT: To improve your overall grade by up to 3%, you can participate in Psychology Department research through the Psychology Department Human Subjects Pool. For each credit of participation assigned to Psych 475, you can earn a 1% (4 pts) improvement to your final grade. You can gain information by contacting the human subjects coordinator, Jeff Loucks, by email at hscoord@uoregon.edu. You can also gain additional information by going to the HSP website at http://darkwing.uoregon.edu/~hscoord. An alternative to research participation is to write summaries (2-3 pages, double-spaced) of an empirical article related to cognitive development. This is more fully described in a document entitled "HSP Alternative," posted under Course Information.

Class Schedule and Assigments

* = post to the course blog is due by 5pm on Friday of this week. Late posts will not be accepted.

Week	Date	Lecture	Readings
1	M Sep 24	Introduction/ Perspectives	none
	W Sep 26	Developmental Neuroscience	Text Chapter 1 (pp 1-25)
2	M Oct 1	Perceptual Development	Text Chapter 5 (pp 141-181)
	W Oct 3	Representations of the Physical World	Text Chapter 2 (pp 26-38)
3*	M Oct 8	Representations of the Physical World	Articles Group 1
	W Oct 10	Concrete Operations	Text: Chapter 2, pp 46-64
4	M Oct 15	Exam 1	
	W Oct 17	Quantitative Concepts	Text: Chapter 8, pp 283-297, Articles Group 2
5*	M Oct 22	Language Acquisition	Text: Chapter 6, pp 183-224
	W Oct 24	Language and Conceptual Development	Text: Chapter 8, pp 268-283 Articles Group 3
6*	M Oct 29	Knowledge of Complex Domains: Biological "Theories"	Text: Chapter 8, pp 297-302
	W Oct 31	Reasoning and Problem Solving	Text: Chapter 10, pp 341-380, Articles Group 4
7	M Nov 5	Exam 2	
	W Nov 7	Memory	Text: Chapter 7, pp 226-267
8*	M Nov 12	Metacognition and Imagination	Articles Group 5
	W Nov 14	Social Cognition	Text: Chapter 9, pp 305-340
9*	M Nov 19	Social Cognition	Articles Group 6
	W Nov 21	Applications of Cognitive Development (1)	Text: Chapter 4, pp 107-140 Articles Group 7
10	M Nov 26	Applications of Cognitive Development (2)	Text: Chapter 11, pp 381-421
	W Nov 28	Conclusions	Text: Chapter 12, pp 422-456
11	M Dec 3, 3:15pm	Final Exam (2 hours)	

Assigned Articles

Group 1: Representations of the Physical World

Spelke, E.S. (1988). The origins of physical knowledge. In L.Weiskrantz (Ed.), *Thought without language*. Oxford: Oxford Press, pp 168-184.

Wynn, K. & Chiang, W. (1998). Limits to infant's knowledge of objects: The case of magical appearance. *Psychological Science*, *9*, 448-455.

Baillargeon, R. (2004) Infants' physical world. *Current Directions in Psychological Science*, 13, 89-94.

Diamond, A. (1985). Development of the ability to use recall to guide action, as indicated by infants' performance on AB. *Child Development*, *56*, 868-883.

Group 2: Quantitative Concepts

Starkey, P., Spelke, E.S., & Gelman, R. (1990) Numerical abstraction by human infants. *Cognition*, *36*, 97-126.

Feigenson, L., Carey, S., & Hauser, M. (2002) The representations underlying infants' choice of more: object files versus analog magnitudes. *Psychological Science*, *13*, 150-155.

Group 3: Language Acquisition

Holowka, s. & Petitto, A. (2002). Left hemisphere cerebral specialization for babies while babbling. *Science*, 297, 1515.

Johnson, J.S., and Newport, E.L. (1989). Critical period effects in second language learning: The influence of maturational state on the acquisition of English as a second language. *Cognitive Psychology*, *21*, 60-99.

Saffran, J.R., Aslin, R.W. & Newport, E.L. (1996). Statistical learning by 8 month old infants. *Science*, 274, 1926-1928.

Markman, E.M. (1991). The whole object, taxonomic, and mutual exclusivity assumptions as initial constraints on word meanings. In J.P. Byrnes and S.A. Gelman (Eds.), *Perspectives on language and cognition : interrelations in development.*, pp 72-106. Cambridge: Cambridge University Press.

Group 4: Problem Solving and Reasoning

DeLoache, J. S. (1995) Early understanding and use of symbols; The model model. *Current Directions in Psychological Science*, *4*, 109-115.

Gelman, S.A., Coley, J.D. & Gottfried, G.M. (1994). Essentialist beliefs in children: The acquisition of concepts and theories. In L.A. Hirschfeld and S.A. Gelman (Eds.) *Mapping the mind: Domain specificity in cognition and culture*, pp. 341-365. Cambridge: Cambridge University Press.

Group 5: Memory and Metacognition

Fivush, R. & Nelson, K. (2004). Culture and language in the emergence of autobiographical memory. *Psychological Science*, *15*, 573-577.

Kuhn, D. (2000) Metacognitive development. *Current Directions in Psychological Science*, *9*, 178-181.

Group 6: Social Cognition

Johnson, S. C. (2000). The recognition of mentalistic agents in infancy. *Trends in Cognitive Science*, *4*, 22-28.

Wellman, H.M. and Woolley, J.D. (1990). From simple desires to ordinary beliefs: The early development of everyday psychology. *Cognition*, *35*, 245-275.

Carlson, S.M. & Moses, L.J. (2001). Individual differences in inhibitory control and children's theory of mind. Child Development, 72, 1032-1053.

Group 7: Applications

How to talk with children. Bing Writer's Group, Stanford University

Rice, M. L., Huston, A. C., Truglio, R, & Wright, J. (1990). Word from "Sesame Street": Learning vocabulary while viewing. *Developmental Psychology*, *26*, 421-428.

Lepper, M.R., Woolverton, M., & Mumme, D.L. (1993) Motivational techniques of expert tutors: Lessons for the design of computer-based tutors. In S.P. Lajoie & S.J. Derry (Eds.), *Computers as cognitive tools*, (pp. 75-105). Hillsdale, N.J.: Erlbaum.