

Cognition 830:305:01 Fall Semester, 2011. **Important Information.**

Instructor: Alan M. Leslie, Professor of Psychology and Cognitive Science

Exam schedule:

There will be two exams, a mid-term and a final and each will consist of approximately 36 multiple choice questions. If you really don't like that there will be TWO exams and ONLY two exams, then you should drop the course **now**. Because that's it - two exams of about 36 questions each (total around 72 points for the whole course).

Both exams take place in the regular classroom, SEC 208.

The mid-term exam will cover material from the first half of the course, while the final will concentrate on material from the second half. However, there may be a few questions in the final exam which refer back to the first half or which require you to put together material from the first and second halves of the course.

The emphasis throughout the exams is on showing that you *understand* the material rather than just regurgitating stuff you never understood in the first place.

Make-ups:

Anyone missing either exam for **any** reason will be required to take a make-up. This will be in the form of a **single essay question** requiring you to demonstrate knowledge and understanding of *all* the course material. One and a half hours will be allowed for writing this essay, at a time and place to be arranged. If you know beforehand that you cannot make an exam, let me know ASAP.

Grading:

Grades will be given in 10% bands starting at 90 – 100% = A ... down to 59% or less = F. There will be grades of A, B+, B, C+, C, D, and F (no minus grades).

I recommend you that you come to class. Most of the material in the exam is based on what we do in class. I don't require attendance because you're adults and are responsible for your own future, but I do recommend regular attendance. **Yes, it is possible to fail this class.**

Office hours:

I will usually be available Thursdays 3:30 - 4:30 in Rm A113 (Center for Cognitive Science, Psychology Department Annexe on Busch). Email me to check. *I'm also usually available immediately at the end of each class. You are welcome to come up and ask me questions then.*

My Lab web page:

Point your browser at: <http://ruccs.rutgers.edu/~aleslie/> Check out the research and intern opportunities there on the Undergraduates page.

Cognition 305:01 Fall 2011 Alan M. Leslie

Syllabus

Cognition is the power of the brain to perceive, think, reason, learn, decide, and act.

This course will examine a number of basic aspects of the way we perceive and think about the world. We will especially study the nature of learning and how mature cognition rests on foundations in infancy and the preschool years. However, we will also cover adult functioning. Throughout, we will be focused firmly on experimental studies. The topics covered include perception of faces, the cognition of objects, physical causality, attention, number, the computational basis of mind, pretending, agent detection, and understanding the thoughts and feelings (mental states) in other people (“theory of mind”). We will learn about some of the major brain systems involved in understanding both the physical and the social world, and their development. With an emphasis on the early development of cognition, we also examine related topics in adult cognition, together with findings from the study of adult brain damage and neuro-developmental disorders, such as autism.

There is no text book for the course. Instead, I will post on sakai PDF files of articles from scientific journals for you to read.

Week (approximate):

1. Introduction to the major theories of learning.
2. Perception of faces in adults and infants
3. Object cognition in infants and development of prefrontal cortex
4. Perception of causality in adults and infants
5. Understanding the physical world in infancy
6. Number, counting, and attending to objects in adults, infants, and animals
7. Memory and attention
8. Review and mid-term exam
9. The Mind-Body problem, consciousness, and computation
10. Human reasoning: a general or special ability?
11. Detecting agents, pretending, and “theory of mind”
12. Solving false belief problems
13. Autism, its biological basis, and “theory of mind” impairment
14. Moral reasoning and social cognitive neuroscience