Cognitive and Linguistic Sciences (CG) 1, Sem. I, 2007-08
Approaches to the Mind: Introduction to Cognitive Science

Required Texts
- Readings available on WebCT6

WEBCT6
Go to [https://mycourses.brown.edu](https://mycourses.brown.edu) to log in.
Your short ID is a field in the Electronic Address Book (EAB);
find your name: [http://www.brown.edu/cgi-local/webph](http://www.brown.edu/cgi-local/webph)
Your password the first time is your SIS #

Check the calendar on WEBCT6 for scheduling of topics, readings, and class lectures during the semester.

Syllabus
I. Introduction
   What is cognitive science?
   Theoretical issues
   Methodological issues
   Modularity
   Cognitive architecture


II. Cognitive Architecture Systems: Higher level vision
   Object recognition
   Visual search
   Object representation
   Visual Processing Streams – What & Where
   The binding problem
   Neglect
   Mental Imagery
   Category specificity: Are faces special?

Readings
- **WebCT reading**:

--- Kurson, R. *Crashing Through*, excerpts.

III. Concepts and Categories

Meaning in the Brain
- Category specificity for objects
- The link between perception and language

Representation of Categories
- Formal definitions
- Probabilistic theories
- Prototypes and exemplars

Readings
- **Kellogg**, ch. 7, pp. 183-193; reread pp.194-211.
- **WebCT reading:**

IV. Cognitive Architecture Systems: Language

Theory of language
- Levels of representation

Language processing
- Sound structure
- Categorical perception
- Lexical processing
- Sentence processing

Neural basis of language

Sensory-motor integration

Readings
- **Kellogg**, ch. 2, pp. 53-61; ch. 8, pp. 213-243.
- **WebCT reading:**

V. Cognitive architecture: Resources

Memory
Attention
The amnesias

Readings
*attention:*
CG1 Approaches to the Mind: Introduction to Cognitive Science

- **Kellogg**, ch. 3, pp. 63-84; reread 44-45, 84-91.
- **WebCT reading:**

**memory and amnesia:**
- **Hunt/Ellis**, ch.4, pp. 111-138; ch.5, 139-173; ch. 6, 174-201; ch. 7, pp.202-231.
- **WebCT reading:**

VI. Modeling: Computation and Representation

Modeling the Mind
- Reasoning and decision making
- Models as tools
- Cognitivism: The Mind as Computer
- Information processing and symbolic representation
- Artificial Intelligence
- Connectionism: Neural Modeling
- Parallel Distributed Processing (PDP)
- Models of the mind and networks in the brain

**Readings**
- **Kellogg**, ch.10, pp.279-309 (skim).
- **WEBCT Reading:**

VII. Nature/Nurture
- Critical periods
- Bird song
- Child language acquisition

**Readings**
- **WEBCT Reading:**
  -- review Kurson, R. *Crashing Through*, excerpts in vision folder.
VIII. Big ideas
   Emotion
   Evolution
   Theory of mind
   Consciousness

Readings
Emotion
   • Kellogg, pp. 13-14; 299-300.

Evolution
   • WEBCT Readings:

Theory of Mind
   • WEBCT Readings:

Consciousness
   • WebCT Reading:

COURSE REQUIREMENTS
   Exercises
   Exercise 1 due in class: Friday, Sept. 28
   Exercise 2 due in class: Friday, Oct. 12
   Exercise 3 due in class: Friday, Oct.26
   Paper topic due in class: Monday, Nov. 5
   paper (10 pages) due: Monday Dec. 3 by 5 pm
   final: Saturday, December 15 @ 2 pm

Instructor
   Professor Sheila Blumstein
   222 Metcalf Research
   ext. 3-2849; h 245-2114
   Sheila_Blumstein@brown.edu
   office hours: Wed. 2-4 and by appt.

Graduate TAs