

Syllabus

615:441
615:471

Linguistics and Cognitive Science **Topics in Linguistics**

Spring 2006

Classroom: SEM-001 (Linguistics Dept., 18 Seminary Place, CAC)
Time: MW (2:50 pm – 4:10 pm)

Instructor: Dr. Bruce Tesar
E-mail: tesar@rutgers.edu
Office: SEM 302
Office Hours: M 1 pm – 2 pm, or by appointment
Office Phone: (732) 932-6933

Prerequisites: 615:201 and (615:305 or 615:315 or 615:325)

Texts

The primary text is a course packet available from Pequod Printing, 119 Somerset Street. The cost is \$25.

Course Website

The website for the course may be found at <http://ruccs.rutgers.edu/~tesar/ling441>. Handouts and problem sets will be downloadable from this site, and last-minute announcements will be posted there.

Requirements

Problem Sets: Several problem sets will be given during the semester, for 45% of the final grade. Collaboration between students on graded problem sets is not permitted, unless explicitly specified by the instructor. *Late problem sets will not be accepted.*

Exercises will be assigned occasionally; they will be discussed in class, but not graded. Students may freely work together on exercises.

Exams: One midterm and one final (cumulative) exam will be given, for 45% of the final grade. Exams will be in-class, closed-book, and closed-notes.

Term Paper: one short paper (limit 5 pages, single-spaced) describing an interest of yours in cognitive science, for 10% of the final grade. This could be a description of a particular project you are interested in, or a brief survey of research of a certain type, or a discussion of an issue in cognitive science that you find interesting. *The term paper is due on 4/19.*

Any student caught cheating will be penalized, as per Rutgers policy.

Mid-Course Online Survey

Students will get a chance to pass anonymous comments on the course to the instructor via the Teaching Excellence Center's online survey service. Students are welcome (but not required) to use this facility any time during the semester, once the URL for the survey has been determined.

Schedule (subject to change)

- 1/18 First Day: What is Cognitive Science?
- 1/23 Behaviorism: read Chomsky, *A Review of B. F. Skinner's Verbal Behavior*
1/25 Formal Languages: read Tesar, *Computation* (from *Formal Methods for Linguistics*)
- 1/30 Regular and context-free grammars
2/1 Unrestricted grammars
- 2/6 Finite-state automata
2/8 Pushdown automata
- 2/13 Turing machines
2/15 Computability theory
- 2/20 Parsing
2/22 Parsing
- 2/27 Garden-path sentences: read Fodor, *Comprehending Sentence Structure*
3/1 The GP processing model
- 3/6 Catch-up and review
3/8 **Midterm Exam**

Spring Break

- 3/20 Self-paced reading and the Active Filler Hypothesis
3/22 Cross-modal priming
- 3/27 Speech errors: read Dell, *Speaking and Misspeaking*
3/29 Spreading activation models of memory
- 4/3 Connectionist networks: read Bechtel and Abrahamsen, *Connectionist Architectures*
4/5 Connectionist networks: read Bechtel and Abrahamsen, *Learning*
- 4/10 Hopfield Networks: read Asimov, *Runaround*
4/12 Harmonic Grammar
- 4/17 Optimality Theory: read Tesar, Grimshaw and Prince, *Explanation in Optimality Theory*
4/19 Optimality Theory: **Term Paper is due**
- 4/24 Dynamic Programming
4/26 Parsing in Optimality Theory
- 5/1 Catch-up and review
5/4 **Final Exam, 8 – 11 am**