

Cognitive and Linguistic Sciences

AN INTERDEPARTMENTAL MAJOR

Director: *Lucas (Psychology)*

Advisory Committee: *Keane (Psychology), Levitt (Linguistics and French), McIntyre (Philosophy), Hildreth (Computer Science)*

A major in cognitive and linguistic sciences is designed to provide students with the breadth necessary for an interdisciplinary approach to the study of language and mind, as well as with substantive training in one of the component disciplines (linguistics, psychology, philosophy, or computer science).

Students majoring in cognitive and linguistic sciences must take a minimum of nine units for the major, including four core units, one from each of the categories below, and a minimum of four electives in a concentration. It is recommended but not required that the ninth course be in a different concentration. Courses eligible for the major are listed below. Students are encouraged to consult the MIT catalog for additional offerings in the major.

Core Courses

Students must fulfill the following four core requirements:

- 1) Linguistics*: LING 114, MIT 24.9, or PSYC 216
- 2) Formal Systems Requirement: Consult individual concentrations for requirement
- 3) PHIL 215
- 4) CLSC 300

*For the linguistics requirement, students should choose the course that fits most clearly with their chosen concentration. Students concentrating in linguistics should choose LING 114 or MIT 24.9 rather than PSYC 216, and students concentrating in psychology should choose PSYC 216 rather than LING 114. Students with concentrations in philosophy or computer science can choose any one of the three courses.

Concentrations

In designing a concentration, students need to demonstrate the intellectual coherence of their choices. Therefore, concentrations must be designed in close collaboration with the director. Students must take at least one 300-level course in their concentration.

Linguistics

Students concentrating in linguistics must elect at least four courses from the following list. Three of these courses must be linguistics courses, including one 300-level course: LING 238, 240, 244, 312 or 319; CHIN 231/331, CS 235, EDUC 308 or 310; FREN 211 or 308; PHIL 207, 216, or 349; PSYC 216 or 316. ENG 363, SOC 216 and KOR 256 may be taken after consultation with the student's advisor.

Formal System Requirement for Linguistics: LING 240 or 244 or appropriate equivalent MIT course.

Students will also be expected to demonstrate proficiency in a foreign language above the College's foreign language requirement (at an intermediate level or above).

Psychology

Students concentrating in psychology must take PSYC 205 and one of 304R or 314R. In addition students must elect at least two courses from the following list: PSYC 214, 215, 217, 218, 219, 305, 316, 318, 319, 345 (when the topic for 345 is approved by the director). NEUR 100 can also count toward the major, but only as a ninth course.

Formal System Requirement for Psychology: One of CS 111 or CS 112, LING 240 or 244, or PHIL 216

Philosophy

Students concentrating in philosophy must elect at least four of any of the following courses: PHIL 207, 208, 209, 216, 217, 221, 313, 340, or 349. PHIL 345 may be taken after consultation with the student's advisor.

Formal System Requirement for Philosophy: PHIL 216

Computer Science

Students concentrating in computer science must take CS 230 and 232. In addition, students must elect at least two courses from the following list: CS 231, 235, 251, 303, 310, 331, 332, or 349 (when the topic for CS 349 is approved by the director).

Formal System Requirement for Computer Science: CS 111

Honors

The only route to honors in the major is writing a thesis and passing an oral examination. To be admitted to the thesis program, a student must have a grade point average of at least 3.5 in all work in the major field above the 100-level; the department may petition on her behalf if her GPA in the major is between 3.0 and 3.5. See Academic Distinctions.

CLSC 250 Research or Individual Study

Prerequisite: Open by permission of the instructor to first-year students and sophomores.

Distribution: None

Semester: Fall, Spring Unit: 1.0

CLSC 300/PSYC 300 Seminar. Topics in Cognitive and Linguistic Sciences

Lucas

Topic for 2008-09: Cooperation and Competition. According to traditional models of rationality, rational agents should act in ways that will maximize their self-interest. And the study of evolution teaches us that individuals are in competition for survival. Nonetheless, we have all experienced acts of apparent selflessness and societies could not function without cooperation among their members. How, then, can cooperative and selfless behaviors be explained? In this course, an interdisciplinary approach to the problem will be taken. Evidence and theories from psychological, economic, and neurobiological literatures will be examined. Cross-cultural, developmental, and cross-species differences will be explored as will the evolutionary origins of cooperation and competition and the role of cooperation in language. *Students may register for either CLSC 300 or PSYC 300 and credit will be granted accordingly.*

Prerequisite: Open to juniors and seniors who have taken one of PSYC 215-219, LING 114, PHIL 215, CS 111 or permission of the instructor.

As of 5/1/2008

Distribution: Epistemology and Cognition or Social and Behavioral Analysis
Semester: Fall Unit: 1.0

Students in any concentration may also elect independent studies and honors projects:

CLSC 350 Research or Individual Study

Prerequisite: Open by permission to juniors and seniors.
Distribution: None
Semester: Fall, Spring Unit: 1.0

CLSC 360 Senior Thesis Research

Prerequisite: By permission of the director. See Academic Distinctions.
Distribution: None
Semester: Fall, Spring Unit: 1.0

CLSC 370 Senior Thesis

Prerequisite: 360 and permission of department.
Distribution: None
Semester: Fall, Spring Unit: 1.0

LING 114 Introduction to Linguistics

TBA

Designed to familiarize students with some of the essential concepts of linguistic analysis. Suitable problem sets in English and in other languages will provide opportunities to study the basic systems of language organization—phonology, morphology, syntax, and semantics. Additional topics include introductions to language organization in the brain, child language acquisition, language change, and writing systems.

Prerequisite: None
Distribution: Epistemology and Cognition
Semester: Fall, Spring Unit: 1.0

LING 238 Sociolinguistics

Levitt

NOT OFFERED IN 2008-2009. OFFERED IN 2009-2010. The application of linguistics to the analysis of sociocultural variation in language. We will examine the way information about age, gender, social class, region, and ethnicity is conveyed by variations in the structural and semantic organization of language. We will also examine language attitude and language planning in multilingual societies.

Prerequisite: LING 114, PSYC 216, or by permission of the instructor.
Distribution: Social and Behavioral Analysis
Semester: N/O Unit: 1.0

LING 240 The Sounds of Language

Levitt

What are all the possible linguistically-relevant sounds of the human vocal tract? How does each language organize a subset of those sounds into a coherent system?

Examination of the sounds of language from the perspective of phonetics and of phonology. Each student will choose a foreign language for intensive study of its phonetic, phonologic, and prosodic characteristics. Includes extensive use of speech analysis and phonetics software.

Prerequisite: LING 114, PSYC 216, or by permission of the instructor.

Distribution: Epistemology and Cognition

Semester: Spring Unit: 1.0

LING 244 Language: Form and Meaning

NOT OFFERED IN 2008-09. OFFERED IN 2009-10. This course will consider some basic questions about language: What do we actually know when we know a language? How is the structure of language best described? Are there properties which all languages share, and what do those properties tell us about language itself? We will look at a number of specific problems in morphology, syntax, and semantics, and the strengths and weaknesses of a number of different linguistic theories will be considered. While many of the problems considered in this class will involve English, we will also be looking at a number of other languages, both European and non-European.

Prerequisite: LING 114

Distribution: Epistemology and Cognition

Semester: N/O. Offered in 2009-10. Unit: 1.0

LING 312 Bilingualism: An Exploration of Language, Mind, and Culture

Levitt

NOT OFFERED IN 2008-2009. OFFERED IN 2009-2010. Exploration of the relationship of language to mind and culture through the study of bilingualism. The bilingual individual will be the focus for questions concerning language and mind: The detection of “foreign” accent, the relationship of words to concepts, the organization of the mental lexicon, language specialization of the brain, and the effects of early bilingualism on cognitive functioning. The bilingual nation will be the focus for questions dealing with language and culture: societal conventions governing use of one language over another, effects of extended bilingualism on language development and change, and political and educational impact of a government’s establishing official bilingualism.

Prerequisite: Open to juniors and seniors who have taken a related 200-level course in linguistics, psychology, anthropology, philosophy, or permission of the instructor.

Distribution: Epistemology and Cognition or Social and Behavioral Analysis

Semester: N/O Unit: 1.0

LING 319 The Spoken and Written Word: Effects on Cognition and Culture

Levitt

For thousands of years, humans communicated via the ephemeral spoken word, and then writing was invented. How has the advent of writing affected us, both as individuals and members of cultural groups? To answer this question, we will explore the cognitive, linguistic, and cultural implications of spoken and written forms of communication. We start with an overview of the field of orality and literacy studies, followed by an examination of theories of the origin of human language and the history of the development of writing. We then move to an analysis of how the brain processes the spoken and written word and how these modes of communication affect memory and reasoning. From a cultural perspective, we examine the ways in which certain ancient and current societies differ as a function of their use of oral versus written forms of communication.

Prerequisite: Open to juniors and seniors who have taken a related 200-level course in linguistics, psychology, anthropology, philosophy, or permission of the instructor. Not open to students who took this course as a topic of CLSC 300 in spring 2006-07.

Distribution: Social and Behavioral Analysis or Epistemology and Cognition

Semester: Fall Unit: 1.0

LING 350 Research or Individual Study

Prerequisite: Two 200-level units.

Distribution: None

Semester: Fall, Spring Unit: 1.0