Linguistics

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FACULTY OF THE DEPARTMENT OF LINGUISTICS

Professors   Stephen Anderson, Robert Frank (Chair), †Roberta Frank, Laurence Horn (Emeritus), †Frank Keil, †Joshua Knobe, †Jason Stanley, †Zoltán Szabó, Petronella Van Deussen-Scholl (Adjunct), Raffaella Zanuttini

Associate Professors Claire Bowern, Maria Piñango, Kenneth Pugh (Adjunct)

Assistant Professor Ryan Bennett, Jason Shaw, Jim Wood

† A joint appointment with primary affiliation in another department.

Linguistics is the scientific study of language. The major in Linguistics offers a program of study leading toward an understanding of phonological, grammatical, and semantic structure and of various approaches to descriptive, experimental, and historical linguistics. Majors may concentrate on theoretical, experimental, or computational linguistics, on various aspects of comparative grammar, or on a particular family of languages. Interested students should consult the director of undergraduate studies.

Students with no previous background in linguistics are encouraged to approach the field by taking a 100-level course.

The major requires twelve term courses in linguistics and related areas, distributed as follows:

1. Breadth requirement (four courses). All majors must take a course in each of the core areas of phonology (LING 232) and syntax (LING 253). In addition, at least one course must be taken in any two of the six remaining core areas of linguistics: phonetics, morphology, semantics/pragmatics, computational linguistics, language and mind/brain, and historical linguistics.

2. Depth requirement (two courses). In one of the eight core areas of linguistics, students must take two additional courses beyond the introductory level.

3. Electives (four courses). Four additional courses relating to linguistics are required, at least one of which must be at the 200 level or above. Electives may be chosen from courses offered by the Linguistics department or, with approval of the director of undergraduate studies, from related courses in programs such as Anthropology, Classics, Cognitive Science, Computer Science, English, Philosophy, Psychology, or foreign languages.

4. Research requirement (one course). LING 490, Research Methods in Linguistics, is required and is usually taken in the fall term of the senior year.

5. Senior requirement (one course). Students attend a research colloquium and write a senior essay in LING 491 during the spring term of the senior year.

Combined B.A./M.A. degree program   Exceptionally able and well-prepared students may complete a course of study leading to the simultaneous award of the B.A. and M.A. degrees after eight terms of enrollment. See Simultaneous Award of the Bachelor’s and Master’s Degrees under Special Arrangements in the Academic Regulations. Interested students should consult the director of undergraduate studies prior to the sixth term of enrollment for specific requirements in Linguistics.

REQUIREMENTS OF THE MAJOR

Prerequisites  None

Number of courses  12 term courses (incl senior req)

Specific courses required  LING 232, 253, 490

Distribution of courses  1 course each in 2 addtl core areas, as specified; 2 addtl courses beyond intro level in 1 core area; 4 electives, at least 1 at the 200 level or above

Senior requirement  LING 491

Introductory Courses

Courses in this group do not require previous study of linguistics.

* LING 105a, The Mental Lexicon   Maria Piñango
Examination of the mental lexicon, a hypothesized space in the mind that is built on long-term memory and that holds and manipulates the basic building blocks of language. The structure of this space as it is currently understood; subsystems connected by the mental lexicon, including word structure, sound structure, and meaning structure; real-time word processing and bilingualism. Prerequisite: intended for freshmen and sophomores new to linguistics.  SO
*LING 106b, Illusions of Language  Hadass Kotek
Introduction to linguistics, with special emphasis on sociolinguistics and psycholinguistics. Study of grammatical illusions: expressions the parser mistakenly accepts as grammatical despite making little sense and grammatical sentences which the parser has difficulty processing. Emphasis also on illusions and misconceptions about language, such as the belief that women speak more than men, that “vocal fry” can harm your voice, and that double negation is illogical.  SO

[LING 107, Linguistic Diversity and Endangerment]

LING 110a, Language: Introduction to Linguistics  Jim Wood
The goals and methods of linguistics. Basic concepts in phonology, morphology, syntax, and semantics. Techniques of linguistic analysis and construction of linguistic models. Trends in modern linguistics. The relation of linguistics to psychology, logic, and other disciplines.  SO

LING 112a, Historical Linguistics  Claire Bowern
Introduction to language change and language history. Types of change that a language undergoes over time: sound change, analogy, syntactic and semantic change, borrowing. Techniques for recovering earlier linguistic stages: philology, internal reconstruction, the comparative method. The role of language contact in language change. Evidence from language in prehistory.  WR, HU

*LING 115a / SKRT 110a, Introductory Sanskrit I  David Brick
An introduction to Sanskrit language and grammar. Focus on learning to read and translate basic Sanskrit sentences in Devanagari script. No prior background in Sanskrit assumed.  L1 1½ Course cr

LING 116b / CGSC 216b, Cognitive Science of Language  Robert Frank
The study of language from the perspective of cognitive science. Exploration of mental structures that underlie the human ability to learn and process language, drawing on studies of normal and atypical language development and processing, brain imaging, neuropsychology, and computational modeling. Innate linguistic structure vs. determination by experience and culture; the relation between linguistic and nonlinguistic cognition in the domains of decision making, social cognition, and musical cognition; the degree to which language shapes perceptions of color, number, space, and gender.  SO

[LING 117, Language and Mind]

LING 125b / SKRT 120b, Introductory Sanskrit II  David Brick
Continuation of SKRT 110. Focus on the basics of Sanskrit grammar; readings from classical Sanskrit texts written in Devanagari script. After SKRT 110.  L2 1½ Course cr

[LING 130, Evolution of Language]

LING 138a / SKRT 130a, Intermediate Sanskrit I  David Brick
The first half of a two-term sequence aimed at helping students develop the skills necessary to read texts written in Sanskrit. Readings include selections from the Hitopadesha, Kathasaritsagara, Mahabharata, and Bhagavadgita. After SKRT 120 or equivalent.  L3

[LING 140, Computational Models in Cognitive Science]

LING 148b / SKRT 140b, Intermediate Sanskrit II  David Brick
Continuation of SKRT 130, focusing on Sanskrit literature from the kavya genre. Readings include selections from the Jatakamala of Aryasura and the opening verses of Kalidasa’s Kumarasambhava. After SKRT 130 or equivalent.  L4

*LING 150a / ENGL 150a, Old English  Roberta Frank
An introduction to the literature and culture of earliest England. A selection of prose and verse, including riddles, heroic poetry, meditations on loss, a dream vision, and excerpts from Beowulf, all read in the original Old English.  HU

[LING 169, Meaning]

*LING 183b / ENGL 155b, Readings in Old Norse Poetry and Prose: Chronicles of the Vikings  Roberta Frank
An introduction to the language and literature of earliest Norway and Iceland. Texts (to be read in the original) include runic inscriptions left behind by the Vikings, verse of their official skalds, the sometimes irreverent mythological poetry of the Edda, and the sagas telling of the Norse discovery of America.  HU

Intermediate Courses

Some courses in this group have prerequisites; others do not, and may be taken as a student’s first course in linguistics.

[LING 200, Experimentation in Linguistics]

LING 212b, Linguistic Change  Claire Bowern
Principles governing linguistic change in phonology and morphology. Status and independence of proposed mechanisms of change. Relations between the principles of historical change and universals of language. Systematic change as the basis of linguistic comparison; assessment of other attempts at establishing linguistic relatedness. Prerequisites: LING 112, 232, and 253.  SO
**LING 219a / ANTH 380a, The Evolution of Language and Culture** Claire Bowern
Introduction to cultural and linguistic evolution. How diversity evolves; how innovations proceed through a community; who within a community drives change; how changes can be "undone" to reconstruct the past. Methods originally developed for studying evolutionary biology are applied to language and culture. None  WR, SO

**LING 220b / PSYC 318b, General Phonetics** Jason Shaw
Investigation of possible ways to describe the speech sounds of human languages. Acoustics and physiology of speech; computer synthesis of speech; practical exercises in producing and transcribing sounds.  SO

* **LING 224a, Formal Foundations of Linguistic Theories** Robert Frank
Study of formal systems that play an important role in the scientific study of language. Exploration of a range of mathematical structures and techniques; demonstrations of their application in theories of grammatical competence including set theory, graphs and discrete structures, algebras, formal language, and automata theory. Evaluation of strengths and weaknesses of existing formal theories of linguistic knowledge.  QR, SO

* **LING 225a, Computing Meanings** Robert Frank
Introduction to mathematical and computational tools for assigning meanings to natural language sentences. Foundational skills for the development of formal models of human language syntax and semantics, and for practical applications of language technology such as text understanding and question-answering. Topics include syntactic structure and displacement, quantification and inference, and the dynamics of discourse. Prerequisite: LING 153 or permission of instructor.  SO

[ **LING 229, Language and Computation II** ]

[ **LING 230, Techniques in Neurolinguistics** ]

**LING 231b / PSYC 311b, Neurolinguistics** Maria Piñango and Sara Sanchez-Alonso
The study of language as a cognitive neuroscience. The interaction between linguistic theory and neurological evidence from brain damage, degenerative diseases (e.g., Alzheimer's disease), mental illness (e.g., schizophrenia), neuroimaging, and neurophysiology. The connection of language as a neurocognitive system to other systems such as memory and music.  SO

**LING 232a, Introduction to Phonological Analysis** Ryan Bennett
The structure of sound systems in particular languages. Phonemic and morphophonemic analysis, distinctive-feature theory, formulation of rules, and problems of rule interpretation. Emphasis on problem solving. Prerequisite: LING 220, or a grade of B or above in LING 110. (Formerly LING 132)  SO

* **LING 234a, Quantitative Linguistics using Corpora** Kevin Tang
Introduction to the basics of corpus linguistics. Students will be able to compile and process text corpora and conduct statistical tests to better understand linguistic patterns and will be provided with the background and tools necessary to pursue further research in this area. Digital humanities students from other departments are welcome. one entry level linguistics course (e.g. phonetics, phonology, syntax, and psycholinguistics), or with permission of the instructor.  SO

* **LING 235a, Phonological Theory** Ryan Bennett
Topics in the architecture of a theory of sound structure. Motivations for replacing a system of ordered rules with a system of ranked constraints. Optimality theory: universals, violability, constraint types and their interactions. Interaction of phonology and morphology, as well as the relationship of phonological theory to language acquisition and learnability. Opacity, lexical phonology, and serial versions of optimality theory. Prerequisite: LING 232 or permission of instructor.  SO RP

* **LING 241a, Field Methods** Ryan Bennett
Principles of phonetics, phonology, morphology, syntax, and semantics applied to the collection and interpretation of novel linguistic data. Data are collected and analyzed by the class as a group, working directly with a speaker of a relatively undocumented language. Open to majors in Linguistics, and to others with permission of instructor.  SO

[ **LING 247, Indigenous Languages of Australia** ]

**LING 253a, Syntax I** Raffaella Zanuttini
An introduction to the syntax of natural language. Generative syntactic theory and key theoretical concepts. Syntactic description and argumentation. Topics include the structure of clauses and noun phrases, movement operations, and the notion of parameter. (Formerly LING 153)  SO

**LING 254b, Syntax II** Jim Wood
Recent developments in the principles and parameters approach to syntactic theory. In-depth exploration of theoretical and empirical issues in long-distance dependencies (island effects, dependency types, movement vs. binding), the character of syntactic structure (constituency, thematic mapping, functional categories), and the architecture of grammatical derivations (logical form, operations for structure building, anaphora). Prerequisite: LING 253.  SO

**LING 263a, Semantics I** Hadas Kotek
Introduction to truth-conditional compositional semantics. Set theory, first- and higher-order logic, and the lambda calculus as they relate to the study of natural language meaning. Some attention to analyzing the meanings of tense/aspect markers, adverbs, and modals.  QR, SO
*LING 264b, Semantics II  Hadas Kotek
The model-theoretic approach to semantics and its treatment of core linguistic phenomena. Topics include quantification; tense, aspect, and modality; context and interpretation; and the semantics-pragmatics interface. Prerequisite: LING 263 or permission of instructor.

[ LING 275, Pragmatics ]

Advanced Courses and Seminars

*LING 322b, Topics in Phonology: Prosody in Phonetics and Phonology  Ryan Bennett
Exploration of the phonetics and phonology of prosodic phenomena, in particular word-level prosody and phrase-level prosody. Phonetics topics include segmental and suprasegmental cues to prosodic structure, as well as the phonetics of tone, phonation, and stress. Phonology topics include case studies of prosodic patterning in individual languages. Particular emphasis on typologically unusual prosodic systems, such as ‘hybrid’ tone-stress systems and rich tonal systems. LING 220 and LING 235, or permission of instructor. The LING 235 prerequisite may be satisfied by enrolling in LING 235 concurrently with this course.

*LING 334a, Experimental Semantics  Maria Piñango
The structure of meaning as part of the human cognitive system. How language use, which is serial and local in nature, is able to package meaning, which is multidimensional and atemporal. Psycholinguistic and cognitive modeling of core phenomena in lexical and compositional semantics. Readings from the fields of neurocognition and cognitive psychology, model-theoretic and lexico-conceptual semantics, and pragmatics. Prerequisite: LING 005, 110, 117, 260, 263, or CGSC 110, or with permission of instructor.  

[ LING 341, Topics in Phonology: Prosody at the Interfaces ]

[ LING 355, Doubling in Syntax ]

[ LING 360, Topics in Syntax: Compositional Syntax ]

[ LING 364, Grammatical Diversity in U.S. English ]

*LING 366a, Questions and Focus  Hadas Kotek
Study of the syntax and semantics of questions and focus constructions. Theoretical discussion of two strategies used for scope taking, (covert) movement and focus alternative computation, both commonly employed in analysis of questions and focus constructions. Typological exploration of the shared overt morphosyntactic strategies that some languages use in expression of both constructions. Prerequisite: Syntax I (LING 253/653) or Semantics I (LING 263/663) or permission of instructor.

*LING 368b, Information Structure and the Syntax-Phonology Interface  Matthew Barros
Introduction to the syntax-phonology interface, that is, the mapping between sentence structure and phonetic, phonological, and gestural properties of the speech signal in which such structures are encoded in natural language. Study of the different theoretical analyses of the interface and the background and tools necessary to pursue research in this area. LING 253a (Syntax I).

[ LING 372, Meaning, Concepts, and Words ]

*LING 376b / PHIL 445b, Implicature and Pragmatic Theory  Laurence Horn
Theoretical and experimental approaches to conversational and conventional implicature. Pragmatic intrusion into what is said; constraints on truth-conditional content in neo-Gricean pragmatics and relevance theory. Arguments for and against the grammatical view of scalar implicature. Evidence from studies on the acquisition and processing of implicature and presupposition One course in semantics or pragmatics, or permission of instructor.

[ LING 390, Negation and Polarity ]

Research Courses

*LING 471b, Special Projects  Claire Bowern
Special projects set up by students with the help of a faculty adviser and the director of undergraduate studies to cover material not otherwise offered by the department. The project must terminate with at least a term paper or its equivalent and must have the approval of the director of undergraduate studies. Only one term may be offered toward the major; two terms may be offered toward the bachelor’s degree.

*LING 490a / PSYC 221 / PSYC 372a, Research Methods in Linguistics  Raffaella Zanuttini
Development of skills in linguistics research, writing, and presentation. Choosing a research area, identifying good research questions, developing hypotheses, and presenting ideas clearly and effectively, both orally and in writing; methodological issues; the balance between building on existing literature and making a novel contribution. Prepares for the writing of the senior essay.

*LING 491b, The Senior Essay  Maria Piñango
Research and writing of the senior essay under the guidance of a faculty adviser. Students present research related to their essays in a weekly colloquium. Prerequisite: LING 490.
Related Courses

* ANTH 309a, Language and Culture  Paul Kockelman
The relations between language, culture, and cognition. What meaning is and why it matters. Readings in recent and classic works by anthropologists, linguists, psychologists, and philosophers.  SO

* ANTH 333a, Bilingualism in Social Context  J. Joseph Errington
The linguistic phenomenon of bilingualism presented through broad issues in social description inseparably linked to it: growth and change in bilingual communities; bilingual usage, social identity, and allegiance; and interactional significances of bilingual speech repertoire use.  SO

Anthropology: Linguistic

CGSC 110a / PSYC 130a, Introduction to Cognitive Science  Brian Scholl
An introduction to the interdisciplinary study of how the mind works. Discussion of tools, theories, and assumptions from psychology, computer science, neuroscience, linguistics, and philosophy.  SO

* CHLD 128b / EDST 128b / PSYC 128b, Language, Literacy, and Play  Nancy Close and Carla Horwitz
The complicated role of play in the development of language and literacy skills among preschool-aged children. Topics include social-emotional, cross-cultural, cognitive, and communicative aspects of play.  WR, SO, RP

CPSC 201a or b, Introduction to Computer Science  Staff
Introduction to the concepts, techniques, and applications of computer science. Topics include computer systems (the design of computers and their languages); theoretical foundations of computing (computability, complexity, algorithm design); and artificial intelligence (the organization of knowledge and its representation for efficient search). Examples stress the importance of different problem-solving methods. After CPSC 112 or equivalent.  QR

Math: Stat/Applied Math

[ CPSC 430, Formal Semantics ]

CPSC 470a, Artificial Intelligence  Drew McDermott
Introduction to artificial intelligence research, focusing on reasoning and perception. Topics include knowledge representation, predicate calculus, temporal reasoning, vision, robotics, planning, and learning. After CPSC 201 and 202.  QR

CPSC 472a, Intelligent Robotics  Brian Scassellati
Introduction to the construction of intelligent, autonomous systems. Sensory-motor coordination and task-based perception. Implementation techniques for behavior selection and arbitration, including behavior-based design, evolutionary design, dynamical systems, and hybrid deliberative-reactive systems. Situated learning and adaptive behavior. After CPSC 201 and 202 or equivalents. May not be taken after CPSC 473.  QR

GREK 390a, Greek Syntax and Stylistics  Victor Bers
A review of accidence and syntax, elementary composition, and analysis of Greek prose styles of the fifth and fourth centuries B.C., including a comparison of “prosaic” and “poetic” syntax. Prerequisite: previous familiarity with some Greek prose beyond the elementary level, or permission of instructor.  L5, HU

LATN 110a, Beginning Latin: The Elements of Latin Grammar  Staff
Introduction to Latin. Emphasis on morphology and syntax within a structured program of readings and exercises. Prepares for LATN 120. No prior knowledge of Latin assumed. Preregistration, which is required, takes place at the Academic Fair. See the Calendar for the Opening Days or the departmental Web site for details about preregistration.  L1, RP  1½ Course cr

LATN 120b, Beginning Latin: Review of Grammar and Selected Readings  Staff
Continuation of LATN 110. Emphasis on consolidating grammar and on readings from Latin authors. The sequence LATN 110, 120 prepares for 131 or 141. Prerequisite: LATN 110 or equivalent.  L2, RP  1½ Course cr

* LATN 390b, Latin Syntax and Stylistics  Joseph Solodow
A systematic review of syntax and an introduction to Latin style. Selections from Latin prose authors are read and analyzed, and students compose short pieces of Latin prose. For students with some experience reading Latin literature who desire a better foundation in forms, syntax, idiom, and style.  L5, HU

PHIL 115a, First-Order Logic  Elizabeth Miller
An introduction to formal logic. Study of the formal deductive systems and semantics for both propositional and predicate logic. Some discussion of metatheory.  QR

PHIL 267b, Mathematical Logic  Sun-Joo Shin
An introduction to the metatheory of first-order logic, up to and including the completeness theorem for the first-order calculus. Introduction to the basic concepts of set theory. Prerequisite: PHIL 115 or permission of instructor.  QR

Math: Logic/Foundations
* PHIL 427b, Computability and Logic  Sun-Joo Shin
A technical exposition of Gödel’s first and second incompleteness theorems and of some of their consequences in proof theory and model theory, such as Löb’s theorem, Tarski’s undefinability of truth, provability logic, and nonstandard models of arithmetic. Prerequisite: PHIL 267 or permission of instructor. QR, HU
Math: Logic/Foundations

* SLAV 202a, Old Church Slavic  Harvey Goldblatt