

# LINGUISTICS (LING)

---

## LING 001 Introduction to Linguistics

A general introduction to the nature, history and use of human language, speech and writing. Topics include the biological basis of human language, and analogous systems in other creatures; relations to cognition, communication, and social organization; sounds, forms and meanings in the world's languages; the reconstruction of linguistic history and the family tree of languages; dialect variation and language standardization; language and gender; language learning by children and adults; the neurology of language and language disorders; the nature and history of writing systems. Intended for any undergraduate interested in language or its use, this course is also recommended as an introduction for students who plan to major in linguistics.

For BA Students: Natural Science and Math Sector

One-term course offered either term

Activity: Lecture

1.0 Course Unit

## LING 051 Proto-Indo European Language and Society

Most of the languages now spoken in Europe, along with some languages of Iran, India and central Asia, are thought to be descended from a single language known as Proto-Indo-European, spoken at least six thousand years ago, probably in a region extending from north of the Black Sea in modern Ukraine east through southern Russia. Speakers of Proto-Indo-European eventually populated Europe in the Bronze Age, and their societies formed the basis of the classical civilizations of Greece and Rome, as well as of the Celtic, Germanic and Slavic speaking peoples. What were the Proto-Indo-Europeans like? What did they believe about the world and their gods? How do we know? Reconstruction of the Proto-Indo-European language, one of the triumphs of comparative and historical linguistics in the 19th and 20th centuries, allows us a glimpse into the society of this prehistoric people. In this seminar students will, through comparison of modern and ancient languages, learn the basis of this reconstruction – the comparative method of historical linguistics – as well as explore the culture and society of the Proto-Indo-Europeans and their immediate descendants. In addition, we will examine the pseudo-scientific basis of the myth of Aryan supremacy, and study the contributions of archaeological findings in determining the 'homeland' of the Indo-Europeans. No prior knowledge of any particular language is necessary. This seminar should be of interest to students considering a major in linguistics, anthropology and archaeology, ancient history or comparative religion. (Also fulfills Cross-Cultural Analysis.)

For BA Students: History and Tradition Sector

Taught by: Noyer

Course not offered every year

Activity: Seminar

1.0 Course Unit

Notes: Freshman Seminar

## LING 054 Bilingualism in History

This course introduces the foundations of linguistics - the scientific study of language - through exploration of multilingualism in the USA and in different societies around the world. Contacts between groups of people speaking different languages are documented from earliest records, and around the world it remains the norm to find more than one language in regular use in a single community. In this course we will see that multilingualism is a catalyst for linguistic change: sometimes languages are lost; sometimes new languages are created; sometimes the structure of a language is radically altered. We will consider: Which parts of linguistic structure are most susceptible to change under conditions of bilingualism? Does language contact - whether a result of trade, education, migration, conquest, or intermarriage - influence language structure in predictable ways? How do individual speakers handle multiple languages? How have attitudes to speakers of multiple languages changed through history? How have socio-historical events shaped the linguistic situation in the USA?

Course not offered every year

Activity: Seminar

1.0 Course Unit

Notes: Freshman Seminar

## LING 058 Language and Social Identity

Language is an important part of both human cognition as well as social organization. Our identities, our societies, and our cultures are all informed by and how we use language. Language interacts with the social, political and economic power structures in crucial ways. This course will focus on the ways in which language and the social facts of life are dependent upon each other. In this course, we will examine issues related to class, race, gender, culture and identity, as well as how language exists to both challenge and uphold systems of power.

Taught by: Holliday

Course usually offered in fall term

Activity: Seminar

1.0 Course Unit

## LING 102 Introduction to Sociolinguistics

Human language viewed from a social and historical perspective. Students will acquire the tools of linguistic analysis through interactive computer programs, covering phonetics, phonology and morphology, in English and other languages. These techniques will then be used to trace social differences in the use of language, and changing patterns of social stratification. The course will focus on linguistic changes in progress in American society, in both mainstream and minority communities, and the social problems associated with them. Students will engage in field projects to search for the social correlates of linguistic behavior, and use quantitative methods to analyze the results.

For BA Students: Society Sector

Taught by: Tamminga

Course usually offered in spring term

Activity: Lecture

1.0 Course Unit

Notes: Satisfies Quantitative Data Analysis

**LING 103 Introduction to Language: Language Structure and Verbal Art**

The purpose of this course is to explore the relationship between linguistic structure and the use of language for artistic purposes.

The syllabus is organized as a sequence of units, each built around a particular theme. These include the sound structure of poetry (meter, rhyme, and other linguistic patterns in Jabberwocky, the Odyssey, Shakespeare, the Troubadours, and others); how precise linguistic data can be used to solve an outstanding literary problem (determining the approximate date when Beowulf was composed); and the structure of folktales of various cultures and of narratives of everyday experience.

For BA Students: Arts and Letters Sector

Taught by: Ringe

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 105 Introduction to Cognitive Science**

How do minds work? This course surveys a wide range of answers to this question from disciplines ranging from philosophy to neuroscience.

The course devotes special attention to the use of simple computational and mathematical models. Topics include perception, learning, memory, decision making, emotion and consciousness. The course shows how the different views from the parent disciplines interact and identifies some common themes among the theories that have been proposed. The course pays particular attention to the distinctive role of computation in such theories and provides an introduction to some of the main directions of current research in the field. It is a requirement for the BA in Cognitive Science, the BAS in Computer and Cognitive Science, and the minor in Cognitive Science, and it is recommended for students taking the dual degree in Computer and Cognitive Science.

Course usually offered in fall term

Also Offered As: CIS 140, COGS 001, PHIL 044, PSYC 207

Activity: Lecture

1.0 Course Unit

Notes: This counts as a Formal Reasoning course for College students.

**LING 106 Introduction to Formal Linguistics**

In this course, we study formal mathematical tools for the analysis of language that help us understand and classify the complex structures and rules that constitute language and grammar. These tools include set theory, formal language and automata theory, as well as aspects of logic, and will be applied to the syntax and semantics of natural language. In addition to learning something about formal tools for analyzing language, this will also enhance your general skills in analytical reasoning.

Course usually offered in spring term

Activity: Lecture

1.0 Course Unit

Notes: This is a Formal Reasoning course.

**LING 107 Language and Information**

This course is an introduction to Information Theory, as originated by Claude Shannon, emphasizing its application to the study of language, including both modern structural linguistics and the quantitative study of language in use. The course will be of interest to linguistics students, cognitive science students, and students with an interest in ongoing developments in contemporary language technology.

Taught by: Kroch

One-term course offered either term

Activity: Lecture

1.0 Course Unit

**LING 115 Writing Systems**

The historical origin of writing in Sumer, Egypt, China, and Mesoamerica; the transmission of writing across languages and cultures, including the route from Phoenician to Greek to Etruscan to Latin to English; the development of individual writing systems over time; the traditional classification of written symbols (ideographic, logographic, syllabic, alphabetic); methods of decipherment; differences between spoken and written language; how linguistic structure influences writing, and is reflected by it; social and political aspects of writing; literacy and the acquisition of writing.

For BA Students: History and Tradition Sector

Taught by: Buckley

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 150 The Keys to Language Structure (and How to Use Them)**

The purpose of this course is to introduce students to the basic concepts of sentence structure in a 'pretheoretical' framework, demonstrating that any natural human language must have certain structures and must choose the rest from a restricted universal set. The textbook, which was written for this course, discusses each set of structures with examples from six languages: English, Spanish, Latin, Biblical Hebrew, Mandarin, and Navajo. The instructor will add languages from among those with which the students are familiar, within the limits of his competence. This course will help students not only to learn foreign languages, but also to improve their own writing skills, by making the structures that they must use more explicit and intelligible.

Taught by: Ringe

Course offered fall; even-numbered years

Activity: Lecture

1.0 Course Unit

**LING 151 Language and Thought**

This course describes current theorizing on how the human mind achieves high-level cognitive processes such as using language, thinking, and reasoning. The course discusses issues such as whether the language ability is unique to humans, whether there is a critical period to the acquisition of a language, the nature of conceptual knowledge, how people perform deductive reasoning and induction, and how linguistic and conceptual knowledge interact.

Taught by: Trueswell

One-term course offered either term

Also Offered As: PSYC 151

Prerequisite: PSYC 001 OR PSYC 207 OR COGS 001 OR LING 105

Activity: Lecture

1.0 Course Unit

**LING 170 Experimental Methods for Linguists**

Controlled experiments are a key element of empirical research, and they play an increasingly important role in the study of language and communication. This course will be divided into two halves. In the first half, students will be introduced to the fundamentals of how to conduct an experiment, along with a basic introduction to statistical methods. The emphasis will be on understanding the basic logic of experimental design, but special lectures will focus on the application of particular methods to the study of language. In the second half, classes will become more like lab meetings as students develop their own experimental projects from the ground up. At the end of the semester they will write up these projects as papers.

Taught by: Roberts

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 175 Language, Cognition and Culture**

This is a course on how language relates to other cognitive systems. We will discuss the question of whether and how the language one speaks affects the way one thinks, the relation between words and concepts, the link between language acquisition and conceptual development in children, and the potential role of language in shaping uniquely human concepts. The course incorporates cross-linguistic, cross-cultural and developmental perspectives and combines readings from linguistics, psychology, philosophy, neuroscience and other fields within cognitive science.

Taught by: Anna Papafragou

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 210 Introduction to Language Change**

This course covers the principles of language change and the methods of historical linguistics on an elementary level. The systematic regularity of change, the reasons for that regularity, and the exploitation of regularity in linguistic reconstruction are especially emphasized. Examples are drawn from a wide variety of languages, both familiar and unfamiliar. The prerequisite for the course is any course in phonetics or phonology, or Ling 001, or permission of the instructor. Note that this course does NOT satisfy any sector requirement.

Taught by: Ringe

Course not offered every year

Prerequisite: LING 001

Activity: Lecture

1.0 Course Unit

**LING 220 Phonetics I: Experimental**

This course focuses on experimental investigations of speech sounds. General contents include: the fundamentals of speech production and perception; speech analysis tools and techniques; and topics in phonetic studies. The course consists of integrated lectures and laboratory sessions in which students learn computer techniques for analyzing digital recordings.

Taught by: Kuang

Course usually offered in fall term

Also Offered As: LING 520

Activity: Lecture

1.0 Course Unit

**LING 230 Sound Structure of Language**

An introduction to phonetics and phonology. Topics include articulatory phonetics (the anatomy of the vocal tract; how speech sounds are produced); transcription (conventions for representing the sounds of the world's languages); classification (how speech sounds are classified and represented cognitively through distinctive features); phonology (the grammar of speech sounds in various languages: their patterning and interaction) and syllable structure and its role in phonology. Prerequisite: A prior course in linguistics or permission of instructor.

Taught by: Noyer

Course usually offered in spring term

Also Offered As: LING 503

Prerequisite: LING 001 OR LING 105 OR LING 220

Activity: Lecture

1.0 Course Unit

**LING 241 Language in Native America**

This course is an introduction to linguistic perspectives on the languages native to the Americas (their nature and distribution, typological similarities and differences), with an emphasis on North America. The diverse languages of this region will be examined from the point of view of particular linguistic phenomena, such as phonology, morphology, and syntax; and in addition we will study their historical development and their place in culture, society, and thought.

Taught by: Buckley

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 242 Construct a Language**

In this course, students construct their own language, one that is compatible with what is known about possible human languages. To this end, the course investigates language typology through lectures and examination of grammars of unfamiliar languages. Topics include language universals, points of choice in a fixed decision space, and dependencies among choices. Prerequisite: Students who have taken LING 140: Construct a Language are not eligible to enroll in LING 242.

Course not offered every year

Activity: Seminar

1.0 Course Unit

Notes: Students who have taken Ling 140: Construct a Language are not eligible to enroll in Ling 242.

**LING 247 Structure of American Sign Language**

This course covers the linguistic structure of American Sign Language (ASL), including its phonology (articulatory features, phonological constraints, nonmanuals), morphology (morphological constraints, compounds, incorporation, borrowing), and syntax (syntactic categories, basic phrase structure, common sentence types). Also discussed are the topics of classifiers and deixis. In keeping with the comparative perspective of linguistic theory, parallels and differences between ASL and other (primarily spoken) languages are pointed out where appropriate. Historical and sociolinguistic issues are addressed where they are relevant to elucidating linguistic structure. Though the course focuses on ASL, it necessarily touches on issues concerning sign languages more generally, notably the possible effects of modality (sign vs. speech) on linguistic structure and the implications of the signed modality for general linguistics. Although the course does not presuppose knowledge of ASL, it does require acquaintance with basic concepts of linguistics.

Taught by: Fisher/Santorini

Course not offered every year

Prerequisite: LING 001 OR LING 072

Activity: Lecture

1.0 Course Unit

**LING 250 Introduction to Syntax**

This course is an introduction to current syntactic theory, covering the principles that govern phrase structure (the composition of phrases and sentences), movement (dependencies between syntactic constituents), and binding (the interpretation of different types of noun phrases). Although much of the evidence discussed in the class will come from English, evidence from other languages will also play an important role, in keeping with the comparative and universalist perspective of modern syntactic theory.

Taught by: Santorini

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 270 Language Acquisition**

An introduction to language acquisition in children and the development of related cognitive and perceptual systems. Topics include the nature of speech perception and the specialization to the native language; the structure and acquisition of words; children's phonology; the development of grammar; bilingualism and second language acquisition; language learning impairments; the biological basis of language acquisition; the role in language learning in language change. Intended for any undergraduate interested in the psychology and development of language.

Taught by: Yang

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 295 Thinking with Models: Cultural Evolution**

When a flu pandemic strikes, who should get vaccinated first? What's our best strategy for minimizing the damage of global climate change? Why is Philadelphia racially segregated? Why do most sexually reproducing species have two sexes, in roughly even proportions? These and many other scientific and practical problems require us to get a handle on complex systems. And an important part of deepening our understanding and sharpening our intuitions requires us to think with models, that is, to use models in our deliberations about what to believe and what to do. Modeling is the construction and analysis of idealized representations of real-world phenomena. This practice is ubiquitous across the sciences, and enters into many practical decisions from setting international policy to making everyday business decisions. The principal aim of this course is to acquaint students with the modeling process and, especially, to help students learn how to think critically about modeling results, as well as how to construct, analyze, and verify such models. Students who take this course will learn about the varied practices of modeling, and will learn how to construct, analyze, and validate models. Most importantly, students who take this course will learn how to critically evaluate the predictions and explanations generated by models, whatever the source of these results. While we will familiarize students with a variety of types of models, our primary focus will be on computer simulations, as they are increasingly relied upon for scientific research and practical deliberation. In addition to studying general methodological discussions about modeling, this will be a 'hands on,' laboratory-based course. Students will practice manipulating, modifying, and analyzing models, as well as constructing models from scratch. The conduct of the course will be heavily influenced by SAIL (structured active in-class learning) ideas. As such, in most class meetings there will be a short lecture and Q&A session, followed by individual and group exercises, which will be discussed later in the class. As an essential feature of learning about modeling we will actually design and build (program) models, which we then study. NetLogo will be the main programming environment. Students will learn to program in it and build agent-based models. NetLogo was designed to be easy to learn and we assume no prior programming experience. For approximately the first 2/3 of the course we will focus on learning NetLogo and building and analyzing models in it. During approximately the last 1/3 of the semester, students will work on their term projects and the course presentations will focus on modeling issues that transcend or extend the basics of modeling in NetLogo.

Taught by: Clark

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 300 Tutorial in Linguistics**

This tutorial allows students to deal in a concentrated manner with selected major topics in linguistics by means of extensive readings and research. Two topics are studied during the semester, exposing students to a range of sophisticated linguistic questions. Senior status or permission of the instructor to enroll. Majors only.

Taught by: Legate

Course usually offered in fall term

Activity: Seminar

1.0 Course Unit

**LING 301 Conference**

An independent study for majors in linguistics.

One-term course offered either term

Activity: Independent Study

1.0 Course Unit

**LING 302 Linguistic Field Methods**

Instruction and practice in primary linguistic research, producing a grammatical sketch and a lexicon through work with a native-speaker consultant and some reference materials. Consultant work is shared with LING 502.

Taught by: Buckley/Legate

Course not offered every year

Also Offered As: LING 502

Prerequisite: LING 230 AND LING 250

Activity: Seminar

1.0 Course Unit

**LING 304 Neurolinguistics**

This course is an upper level undergraduate/graduate seminar in neurolinguistics. We will explore language in the brain through readings and discussions.

Taught by: Schuler

Also Offered As: LING 504

Activity: Seminar

1.0 Course Unit

**LING 310 History of the English Language**

This course traces the linguistic history of English from its earliest reconstructable ancestor, Proto-Indo-European, to the present. We focus especially on significant large-scale changes, such as the restructuring of the verb system in Proto-Germanic, the intricate interaction of sound changes in the immediate prehistory of Old English, syntactic change in Middle English, and the diversification of English dialects since 1750.

Taught by: Ringe/Kroch

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 380 Introduction to Semantics**

This course provides an introduction to formal semantics for natural language. The main aim is to develop a semantic system that provides a compositional interpretation of natural language sentences. We discuss various of the aspects central to meaning composition, including function application, modification, quantification, and binding, as well as issues in the syntax-semantics interface. The basic formal tools relevant for semantic analysis, including set theory, propositional logic, and predicate logic are also introduced.

Taught by: Schwarz

Course usually offered in fall term

Also Offered As: LING 580

Prerequisite: LING 250

Activity: Lecture

1.0 Course Unit

**LING 398 Senior Thesis**

One-term course offered either term

Activity: Independent Study

1.0 Course Unit

**LING 404 Morphological Theory**

This course will explore some issues concerning the internal structure of words. After a brief introduction to some basic terms and concepts, we will discuss the interaction of morphology with phonology. We will look both at how morphology conditions phonological rules and how phonology conditions morphology. Then we will turn to the interaction of syntax and morphology. We will look at some problems raised by inflectional morphology, clitics and compounds. The main requirement for the class will be a series of homework exercises in morphological analysis and a short paper at the end of the semester.

Taught by: Embick

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 405 Morphology Theory II**

This course takes a detailed look at a number of central topics in morphological theory. The material examined in the course consists of primary readings and reviews, covering a number of central topics in the field. These topics include (but are not restricted to) allomorphy, blocking, the interface of phonology and morphology, syncretism, affixation, the syntax-morphology interface, and compounding. The primary requirements for the class involve short assignments that are based on the readings, in the form of both problem sets and critical appraisals of core theoretical positions. In addition to this, students will write a short paper at the end of the semester.

Taught by: Embick

Course not offered every year

Prerequisite: LING 404

Activity: Lecture

1.0 Course Unit

**LING 411 Old English**

The main purpose of this course is to teach students to read Old English ('Anglo-Saxon'), chiefly but not exclusively for research in linguistics. Grammar will be heavily emphasized; there will also be lectures on the immediate prehistory of the language, since the morphology of Old English was made unusually complex by interacting sound changes. In the first eight weeks we will work through Moore and Knott's 'Elements of Grammar' and learn the grammar; the remainder of the term will be devoted to reading texts.

Taught by: Kroch

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 449 Language and Computation**

The computational study of natural language and its implications for linguistic theories. Topics include finite state tools, computational morphology and phonology, grammar and parsing, computational models of language learning in children and machines.

Taught by: Yang

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 455 Experiments in the Study of Meaning**

This course provides an introduction to the experimental study of meaning in natural language. We begin by introducing some basic notions of formal semantics and pragmatics and review relevant technical background. Next we discuss recent developments in studying meaning-related phenomena experimentally, which, in addition to theoretical questions, involve issues in the acquisition and processing of semantic information. In the course of this, we will also introduce the basics of experimental design and relevant psycholinguistic methodology. In addition to readings and homework assignments, students will embark on a small research project (individually or jointly), which will be presented in class at the end of the semester and written up as a term paper.

Taught by: Schwarz

Course not offered every year

Prerequisite: LING 106 OR LING 170 OR LING 250 OR LING 380 OR LING 580 OR LING 550

Activity: Seminar

1.0 Course Unit

**LING 495 Games and Signals**

Game Theory has provided a new way of looking at linguistic meaning, particularly pragmatics (the use of language). This course will survey the use of Game Theory in linguistics as well as develop the techniques for studying signaling behavior. We will look at the formal foundations of signaling with particular attention paid to games of incomplete information (games where even which game is being played is uncertain). This will allow us to extend pragmatics beyond Gricean conversational maxims to areas like deception and polite signaling.

Taught by: Robin Clark

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 496 Agents and Evolution**

The course surveys Evolutionary Game Theory and Agent-Based Models with special reference to language. We will develop systems for modeling various types of language change as well as the dynamics of linguistic micro-variation. Topics include semantic/pragmatic cycles in signaling, the maintenance of conventional meaning, and testing for selection in language change.

Taught by: Clark

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 500 Research Workshop**

This course is intended for advanced graduate students who are interested in developing a research paper. Each student will present his or her topic several times during the semester as the analysis develops, with feedback from the instructor and other students to improve the organization and content of the analysis. The goal is an end product appropriate for delivery at a national conference or submission to a journal.

Course usually offered in fall term

Activity: Seminar

1.0 Course Unit

**LING 502 Linguistic Field Methods**

Instruction and practice in primary linguistic research, producing a grammatical sketch and a lexicon through work with a native-speaker consultant and some reference materials. Consultant work is shared with LING 302. Each student will write a final paper on some aspect of the language.

Taught by: Buckley/Legate

Course not offered every year

Also Offered As: LING 302

Activity: Seminar

1.0 Course Unit

**LING 503 Sound Structure of Language**

An introduction to articulatory and acoustic phonetics; phonetic transcription; basic concepts and methods of phonological analysis.

Taught by: Noyer

Course usually offered in spring term

Also Offered As: LING 230

Activity: Lecture

1.0 Course Unit

**LING 504 Neurolinguistics**

This course is a graduate seminar in neurolinguistics. We will explore language in the brain through readings and discussion.

Taught by: Schuler

Course usually offered in fall term

Also Offered As: LING 304

Activity: Seminar

1.0 Course Unit

**LING 510 Historical and Comparative Linguistics**

Synchronic and diachronic systems. Analogic processes. Semantic change. Effects of contact. Internal reconstruction. Comparative method and reconstruction.

Taught by: Ringe

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 511 Language Variation & Change**

Speech communities as a focus for the understanding of language evolution and change: language variation in time and space. The relationship between language structure and language use; between language change and social change. Populations as differentiated by age, sex, social class, race, and ethnicity, and the relationship of these factors to linguistic differentiation.

Taught by: Tamminga

Course usually offered in spring term

Activity: Lecture

1.0 Course Unit

**LING 515 Dynamics of Language**

This course introduces the tools, techniques, as well as current research on the approach to language as a dynamical system, which seeks to fruitfully integrate linguistic theory, psycholinguistics, corpus linguistics, and historical linguistics through the means of mathematical modeling. Topics include: string processing, dynamical systems and stability, stochastic processes, mathematical models of population dynamics, and dynamical models of language learning, processing, and change.

Taught by: Yang

One-term course offered either term

Prerequisite: LING 510

Activity: Seminar

1.0 Course Unit

**LING 520 Phonetics I**

Speech: its linguistic transcription, its quantitative physical description, and its relationship to the categories and dimensions of language structure and use. The physical basis of speech: acoustics, vocal tract anatomy and physiology, hearing and speech perception, articulation and motor control. Phonetic variation and change. Prosody: stress, intonation, phrasing speech rate. Phonetic instrumentation, the design and interpretation of phonetic experiments, and the use of phonetic evidence in linguistic research, with emphasis on computer techniques. Introduction to speech signal processing. Speech technology: introduction to speech recognition, text-to-speech synthesis, speech coding. This course will emphasize the phonetics of natural speech, and its connections to issues in other areas of linguistics and cognitive science.

Taught by: Liberman/Kuang

Course usually offered in fall term

Also Offered As: LING 220

Prerequisite: LING 001

Activity: Lecture

1.0 Course Unit

**LING 521 Phonetics II**

This is a methodology course, which focuses on how to conduct phonetics research using very large speech corpora. Topics include scripting and statistical techniques, automatic phonetic analysis, integration of speech technology in phonetics studies, variation and invariability in large speech corpora, and revisiting classic phonetic and phonological problems from the perspective of corpus phonetics.

Taught by: Kuang/Liberman

Course usually offered in spring term

Prerequisite: LING 520

Activity: Lecture

1.0 Course Unit

**LING 525 Computer Analysis and Modeling of Biological Signals and Systems**

A hands-on signal and image processing course for non-EE graduate students needing these skills. We will go through all the fundamentals of signal and image processing using computer exercises developed in MATLAB. Examples will be drawn from speech analysis and synthesis, computer vision, and biological modeling.

Taught by: Liberman

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 530 Phonology I**

First half of a year-long introduction to the formal study of phonology. Basic concepts in articulatory phonetics; the distribution of sounds (phonemes and allophones); underlying and surface forms, and how to relate them using both ordered-rule and surface-constraint approaches. The survey of theoretical topics in this term includes distinctive features (context, organization, underspecification); the autosegmental representation of tone; and the theory of phonological domains and their interaction with morphological and syntactic constituency. Emphasizes hands-on analysis of a wide range of data.

Taught by: Noyer

Course usually offered in fall term

Prerequisite: LING 503

Activity: Lecture

1.0 Course Unit

**LING 531 Phonology II**

Second half of a year-long introduction; continues LING 530. Topics to be surveyed include syllable structure and moraic theory; the prosodic hierarchy; the properties and representation of geminates; templatic and prosodic morphology; reduplication and emergence of the unmarked; and metrical phonology (properties of stress, foot typology, and issues of constituency). Emphasizes hands-on analysis of a wide range of data.

Taught by: Buckley

Course usually offered in spring term

Prerequisite: LING 530

Activity: Lecture

1.0 Course Unit

**LING 550 Syntax I**

A general introduction at the graduate level to the analysis of sentence structure. The approach taken is that of contemporary generative-transformational grammar.

Taught by: Kroch

Course usually offered in fall term

Activity: Lecture

1.0 Course Unit

**LING 551 Syntax II**

The second half of a year-long introduction to the formal study of natural language syntax. Topics to be covered include grammatical architecture; derivational versus representational statement of syntactic principles; movement and locality; the interface of syntax and semantics; argument structure; and other topics. The emphasis is on reading primary literature and discussing theoretical approaches, along with detailed case-studies of specific syntactic phenomena in different languages.

Taught by: Legate

Course usually offered in spring term

Prerequisite: LING 550

Activity: Lecture

1.0 Course Unit

**LING 556 Historical Syntax**

Introduction to the study of the syntax of languages attested only in historical corpora. The course will cover methods and results in the grammatical description of such languages and in the diachronic study of syntactic change.

Taught by: Kroch

Course not offered every year

Prerequisite: LING 551

Activity: Seminar

1.0 Course Unit

**LING 560 The Study of the Speech Community: Field Methods**

For students who plan to carry out research in the speech community. Techniques and theory derived from sociolinguistic studies will be used to define neighborhoods, enter the community, analyze social networks, and obtain tape-recorded data from face-to-face interviews. Students will work in groups and study a single city block.

One-term course offered either term

Activity: Seminar

1.0 Course Unit

**LING 562 Quantitative Study of Linguistic Variation**

This course provides students with the opportunity to hone their statistical, computational, and organizational skillsets while conducting original linguistic research on data gathered in continuing fieldwork in the speech community. Topics include forced alignment and vowel extraction, auditory and automated variable coding, the application of linear and logistic regression, and techniques for effective data visualization.

Taught by: Tamminga

Course offered fall; odd-numbered years

Prerequisite: LING 560 OR STAT 500 OR STAT 501

Activity: Seminar

1.0 Course Unit

**LING 570 Developmental Psycholinguistics**

The generative literature on language acquisition has produced many accurate and insightful descriptions of child language, but relatively few explicit accounts of learning that incorporate the role of individual experience into the knowledge of specific languages. Likewise, the experimental approach to language development has identified processes that could provide the bridge between the data and the grammar, but questions remain whether laboratory findings can sufficiently generalize to the full range of linguistic complexity. This course is an overview of research in language acquisition with particular focus on the important connection between what children know and how they come to know it.

Taught by: Yang

Course usually offered in spring term

Activity: Seminar

1.0 Course Unit

**LING 571 The Acquisition of Meaning**

This is a seminar on the acquisition of a first language by children. We will discuss the acquisition of the meanings of words and sentences, and the pragmatic and social interpretation of sentences in context. We will also consider how language relates to other cognitive systems and to human social reasoning. Particular emphasis will be placed on discovering the mechanisms children possess that enable them to learn and use language.

Taught by: Papafragou

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 575 Mental Lexicon**

An investigation of the psychological representations and processing of words. Topics include: the extraction of words from speech; lexical access and production; the induction of morphological and phonological regularities in word learning; decomposition of morphologically complex words; frequency effects in morphological processing; storage vs. computation in the lexicon; the past tense debate; morphological change. This course makes extensive use of linguistic corpora. Students will also be familiarized with experimental design issues in the psycholinguistic study of the lexicon.

Taught by: Yang

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 580 Semantics I**

This course provides an introduction to formal semantics for natural language. The main aim is to develop a semantic system that provides a compositional interpretation of natural language sentences. We discuss various of the aspects central to meaning composition, including function application, modification, quantification, and binding, as well as issues in the syntax-semantics interface. The basic formal tools relevant for semantic analysis, including set theory, propositional logic, and predicate logic are also introduced.

Taught by: Schwarz

Course usually offered in fall term

Also Offered As: LING 380

Prerequisite: LING 550

Activity: Lecture

1.0 Course Unit

**LING 581 Semantics II**

The first part of the course expands the system from LING 580 to include intensional contexts. In particular, we discuss analyses of modals, attitude verbs, and conditionals, as well as the scope of noun phrases in modal environments. The second part of the course discusses a selection of topics from current work in semantics, such as the semantics of questions, tense and aspect, donkey anaphora, indefinites, genericity, degree constructions, events and situations, domain restriction, plurality and focus.

Taught by: Schwarz

Course usually offered in spring term

Prerequisite: LING 551

Activity: Lecture

1.0 Course Unit

**LING 595 Game Theoretic Pragmatics**

A great deal of linguistic meaning can be explained if we conceive of language as being a signaling system used by rational agents. Game theory provides an explicit mathematical account of rational, strategic interaction. This course will lay out the fundamentals of game theory, evolutionary game theory and multi-agent systems necessary to develop a theory of 'radical pragmatics.' We will discuss game theoretic models of implicature; presupposition and accommodation; reference tracking; scalar implicature as well as a number of other phenomena.

Taught by: Clark

Course not offered every year

Activity: Lecture

1.0 Course Unit

**LING 596 Pragmatics Workshop**

Pragmatics Workshop

Taught by: Clark

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 603 Topics in Phonology**

Topics are chosen from such areas as featural representations; syllable theory; metrical structure; tonal phonology; prosodic morphology; interaction of phonology with syntax and morphology.

Taught by: Buckley/Noyer

Course not offered every year

Prerequisite: LING 530 OR LING 531

Activity: Seminar

1.0 Course Unit



**LING 607 Topics in Psycholinguistics**

Topics in Psycholinguistics

Taught by: Schuler

Activity: Seminar

1.0 Course Unit

**LING 608 Topics in Semantics and Pragmatics**

Topics in Semantics & Pragmatics

Taught by: Clark/Schwarz

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 610 Seminar in Historical and Comparative Linguistics**

Selected topics either in Indo-European comparative linguistics or in historical and comparative method.

Taught by: Ringe

One-term course offered either term

Activity: Seminar

1.0 Course Unit

**LING 615 Comparative Indo-European Grammar**

A survey of phonology and grammar of major ancient Indo-European languages and the reconstruction of Proto-Indo-European. A knowledge of at least one ancient Indo-European language is required.

Taught by: Ringe

Two terms. student must enter first term.

Activity: Seminar

1.0 Course Unit

**LING 616 Comparative Indo-European Grammar II**

A survey of phonology and grammar of major ancient Indo-European languages and the reconstruction of Proto-Indo-European. A knowledge of at least one ancient Indo-European language is required.

Taught by: Ringe

One-term course offered either term

Activity: Seminar

1.0 Course Unit

**LING 620 Topics in Phonetics**

Topics in Phonetics

Taught by: Liberman/Kuang

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 630 Seminar in Morphology**

Readings in modern morphological theory and evaluation of hypotheses in the light of synchronic and diachronic evidence from various languages.

Taught by: Noyer/Embick

Course not offered every year

Prerequisite: LING 530

Activity: Seminar

1.0 Course Unit

**LING 650 Topics in Natural-Language Syntax**

Detailed study of topics in syntax and semantics, e.g., pronominalization, negation, complementation. Topics vary from term to term.

Taught by: Kroch/Legate

One-term course offered either term

Prerequisite: LING 551

Activity: Seminar

1.0 Course Unit

**LING 653 Topics in the Syntax-Semantics Interface**

Topics in the Syntax-Semantics Interface

Taught by: Kroch

Course usually offered in fall term

Activity: Seminar

1.0 Course Unit

**LING 660 Research Seminar in Sociolinguistics**

Students approaching the dissertation level will explore with faculty frontier areas of research on linguistic change and variation. Topics addressed in recent years include: experimental investigation of the reliability of syntactic judgments; the development of TMA systems in creoles; transmission of linguistic change across generations. The course may be audited by those who have finished their course work or taken for credit in more than one year. This course will have different topics each term.

Course not offered every year

Activity: Seminar

1.0 Course Unit

Notes: This course will have different topics each term.

**LING 662 Topics in Experimental Sociolinguistics**

Topics in Experimental Sociolinguistics

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 670 Topics in the Cultural Evolution of Language**

Readings in the cultural evolution of language. This encompasses research on the contribution of processes of cultural change to the emergence of language in the human species, the emergence of new languages, and language change viewed as a cultural-evolutionary process. There will be an emphasis on research employing empirical methods, particularly experimentation. Otherwise focus varies from term to term.

Course not offered every year

Activity: Seminar

1.0 Course Unit

**LING 675 Language and Cognition**

This is a seminar on how language relates to perception and cognition. The seminar pays particular attention to the question of whether and how language might affect (and be affected by) other mental processes, how different languages represent the mental and physical world, and how children acquire language-general and language-specific ways of encoding human experience. The course incorporates cross-linguistic, cognitive and developmental perspectives on a new and rapidly changing research area.

Taught by: Papafragou, Trueswell

Course usually offered in spring term

Also Offered As: PSYC 675

Activity: Seminar

1.0 Course Unit

**LING 999 Independent Study and Research**

Prerequisite: Student must submit brief proposal for approval. May be repeated for credit.

One-term course offered either term

Activity: Independent Study

1.0 Course Unit

Notes: Student must submit brief proposal for approval. May be repeated for credit.