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 071 American Sign Language I
Introduction to American Sign Language (ASL). Introduces ASL in a contextualized and conversational manner. Course includes receptive and expressive readiness activities, sign vocabulary and grammar, and an introduction to important topics and people within Deaf communities and Deaf culture.
For BA Students: Language Course
One-term course offered either term
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center

LING 072 American Sign Language II
Increased communication skill in American Sign Language (ASL). Expressive and receptive abilities are expanded upon via a contextualized and conversational manner. Important topics to Deaf communities and Deaf culture are continued within online and in-class discussion.
For BA Students: Language Course
One-term course offered either term
Prerequisite: LING 071 or Permission of the Instructor
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center

LING 073 American Sign Language III
American Sign Language (ASL) at the Intermediate I level. Expressive and receptive abilities are expanded upon via a contextualized and conversational manner, including, but not limited to, narrative production. Important topics to Deaf communities and Deaf culture are continued within online and in-class discussion.
For BA Students: Language Course
One-term course offered either term
Prerequisite: LING 072 or permission of instructor
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center
LING 074 American Sign Language IV
American Sign Language (ASL) at the Intermediate II level. Expressive and receptive abilities are expanded upon via a contextualized and conversational manner, including, but not limited to, narrative production. Important topics to Deaf communities and Deaf culture are continued within online and in-class discussion.
For BA Students: Last Language Course
One-term course offered either term
Prerequisite: LING 073 or permission of instructor
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center

LING 075 American Sign Language V
This is an advanced ASL course in which students expand their conversational and narrative range. While receptive readiness activities continue to be an important part of the class, the emphasis moves toward honing expressive sign skills through narrative presentation and ASL-only class discussions. Various aspects of Deaf culture and cultural behavior rules will be incorporated into the course. A large component of the course is a unit on Deaf history in which students read and discuss major events and famous deaf people via readings, film, class lectures and discussions, and other outside resources.
For BA Students: Advanced Language Course
One-term course offered either term
Prerequisite: LING 074 or permission of instructor
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center

LING 076 Deaf Literature, Performance, Art, and Film
This course is an advanced/conversational ASL course that explores several key topics related to Deaf culture and the Deaf experience's influence on literature (both written and signed), theatre, fine and visual arts, and film—both Deaf and hearing directed and acted. Using only ASL in class, students learn about various perspectives and approaches to each of the themes and topics of the course. Some questions to explore and answer in this course will be: What is Deaf Literature? The Deaf Lens: What is it? How is it different from a hearing perspective on film? How is Deafness expressed differently in each of the arts discussed in this course? Analysis and discussion will come from readings as well as viewings of various types of Deaf arts.
For BA Students: Advanced Language Course
Taught by: Draganac-Hawk
Course usually offered in spring term
Prerequisites: Ling 074 and prior language experience or permission from instructor.
Activity: Seminar
1.0 Course Unit

LING 077 ASL/Deaf Studies - ABCS
For this course, students will attend Pennsylvania School for the Deaf on a weekly basis where they will participate in and contribute to the school community via tutoring or other mutually agreeable activities. Students will also have formal class on a weekly basis with discussions and activities centering on reflection of community experiences through linguistic as well as cultural lenses. Additionally, drawing from the required Linguistics and other ASL/Deaf Studies coursework, students will develop an inquiry question and conduct preliminary community-based research to analyze sociolinguistic variations of ASL and Deaf cultural attitudes, behaviors, and norms. Ongoing reflections and discussions-formal and informal-on Deaf cultural/theoretical topics drawing from readings as well as community experiences will be integral to the course experience. LING 078, Topics in Deaf Culture and permission from the instructor, are required for this course.
For BA Students: Advanced Language Course
Taught by: Fisher
Prerequisites: Ling 078 and permission from instructor, Anyone considering taking this course should contact the ASL Program Coordinator early in the semester prior to enrollment (Spring) to ensure adequate time to obtain clearances and appropriate placement.
Activity: Lecture
1.0 Course Unit
Notes: Participation in this class requires students to have in place the mandatory clearances for working in schools before the semester starts. Students should also be in contact with the department during the advanced registration period in order to secure a placement in the community.

LING 078 Deaf Culture
This course is an advanced/conversational ASL course that explores several key topics related to Deaf Culture. Using only ASL in class, students will read and discuss books, articles, and films related to the following topics: Deaf History, Deaf Identity, Deafness as Asset, Communication Issues and Pathological Perspectives on Deafness, Deafness and Education, Deaf/Hearing Family Dynamics. Language growth will stem from direct instruction as well as through the course of class conversation. Students will collaborate with the instructor and our Deaf community liaison to develop and host an event that is accessible to both Deaf and hearing people alike.
For BA Students: Advanced Language Course
Taught by: Fisher
One-term course offered either term
Prerequisite: LING 074 or permission from coordinator
Activity: Seminar
1.0 Course Unit
Notes: Offered through Penn Language Center
LING 079 Disability Rights and Oppression: Experiences within Global Deaf Communities
This course explores the linguistic and social statuses of global Deaf communities with respect to language rights and efforts toward parity with spoken language communities. We will begin by providing some background and context for understanding Deaf communities and people as both linguistic and cultural minorities as well as members of a disability group. We then explore various examples of oppression born by Deaf people throughout history and today, with an emphasis on the Milan Conference of 1880, from which several decrees mandated that sign languages be banned in all instruction of Deaf students worldwide. The impacts of said decrees were catastrophic for the linguistic and social rights of Deaf people; effects of these experiences are pernicious and long lasting. Since then, global Deaf communities have fought to gain the legal rights and social recognition that are typically afforded hearing members of their respective communities. There are some Deaf communities that have attained said rights, where others are still left far behind. We explore the lasting effects of the Milan Congress in global terms, using the United States and North American Deaf communities as a standard for comparative measurement. Do note that this course will include a module on Italian Sign Language (LIS) and will give opportunities to learn and use LIS in and amongst Italian Deaf community members while in Italy.
Taught by: Fisher
Course usually offered in spring term
Prerequisites: Application required through Penn Global: https://global.upenn.edu/pennabroad/pgs
Activity: Seminar
1.0 Course Unit

LING 081 Beginning Irish Gaelic I
Irish Gaelic, spoken primarily on the west coast of Ireland, is rich in oral traditions, song, poetry and literature. Knowledge of this language provides a foundation to understanding Celtic folklore and linguistics and also enhances the study of Anglo-Irish literature and history. The first-year course will include reading, conversation, listening and speaking.
For BA Students: Language Course
Taught by: Blyn-LaDrew
Two terms. student may enter either term.
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center

LING 082 Beginning Irish Gaelic II
Taught by: Blyn-LaDrew
One-term course offered either term
Prerequisite: LING 081 or permission from instructor
Activity: Lecture
1.0 Course Unit
Notes: Offered through Penn Language Center

LING 083 Intermediate Irish Gaelic I
Taught by: Blyn-LaDrew
One-term course offered either term
Prerequisite: LING 082 or equivalent
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center

LING 085 Advanced Irish Gaelic I
Taught by: Blyn-LaDrew
One-term course offered either term
Prerequisite: LING 084 or equivalent
Activity: Lecture
1.0 Course Unit
Notes: Offered through Penn Language Center

LING 086 Advanced Irish Gaelic II
This course will emphasize reading of literary texts, and advanced aspects of grammar, composition, and conversation.
Taught by: Blyn-LaDrew
One-term course offered either term
Prerequisite: LING 085 or equivalent
Activity: Lecture
1.0 Course Unit
Notes: Offered through the Penn Language Center

LING 091 American Sign Language III/IV
Expanded instruction of American Sign Language (ASL) on the Intermediate I and II levels. Includes receptive and expressive readiness activities, sign vocabulary and grammar growth, fingerspelling practice and narrative skills. Topics on Deaf cultural are also included in the course readings and discussions. Increases the emphasis on more abstract and challenging conversational and narrative range.
For BA Students: Last Language Course
Course not offered every year
Prerequisite: LING072 or by permission of instructor
Activity: Lecture
2.0 Course Units
Notes: Offered by Penn Language Center; permit from Penn Language Center required for admission.

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
Cognitive Science is founded on the realization that many problems in the analysis of human and artificial intelligence require an interdisciplinary approach. The course is intended to introduce students to the problems and characteristic concepts of Cognitive Science, drawing on formal and empirical approaches from the parent disciplines of computer science, linguistics, neuroscience, philosophy and psychology. The topics covered include Perception, Action, Learning, Language, Knowledge Representation, and Inference, and the relations and interactions between such modules. 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.
Taught by: Brainard/Ungar
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 is a Formal Reasoning course.

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
Notes: Satisfies Quantitative Data Analysis

LING 120 Introduction to Speech Analysis
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 not offered every year
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
Prerequisites: PSYC 001, COGS 001, LING 105, or PSYC 207
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 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
Prerequisites: One phonetics or phonology course, or Ling 001. Note that this course does NOT count towards sector II, History and Tradition.
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.
Taught by: Noyer
Course usually offered in spring term
Also Offered As: LING 503
Prerequisites: Prerequisite: A prior course in linguistics or permission of instructor.
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.
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 permission of instructor(s)
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: Santorini
Course not offered every year
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.
Taught by: Legate
Course usually offered in fall term
Prerequisites: Senior status or permission of the instructor. Majors only.
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
Prerequisites: 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: 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
Prerequisites: Morphology Theory I or permission of the instructor.
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
Prerequisites: Ling 106, 170, 250, 380/580, 550 or permission by instructor
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
Prerequisites: LING 530 and Ling 550
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
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
Prerequisites: An introductory course in linguistics, or consent of instructor
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 or equivalent
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 or permission of instructor
Activity: Lecture
1.0 Course Unit

LING 555 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 or the equivalent
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 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
Corequisite: 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
Corequisite: Ling 551
Activity: Lecture
1.0 Course Unit

LING 582 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: Tammenga
Course offered fall; odd-numbered years
Prerequisites: LING 560 and either STAT 500 or STAT 501 (or permission of instructor).
Activity: Seminar
1.0 Course Unit

LING 585 Topics in Psycholinguistics
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 530-531
Activity: Seminar
1.0 Course Unit

LING 596 Pragmatics Workshop
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 accomodation; 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 597 Topics in Semantics and Pragmatics
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
Corequisite: Ling 550
Activity: Lecture
1.0 Course Unit

LING 598 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 599 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 accomodation; 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 602 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 530-531
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 530-531
Activity: Seminar
1.0 Course Unit

LING 604 Topics in Psycholinguistics
Topics in Psycholinguistics
Taught by: Schuler
Activity: Seminar
1.0 Course Unit

LING 605 Topic in Psycholinguistics
Topics in Psycholinguistics
Taught by: Schuler
Activity: Seminar
1.0 Course Unit

LING 606 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 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 or permission of instructor
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.
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
Activity: Seminar
1.0 Course Unit

LING 999 Independent Study and Research
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.