**Linguistics**

370 Temple Street, Rm. 204, 203.432.2450  
http://ling.yale.edu  
M.A., M.Phil., Ph.D.  

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**Professors** Claire Bowern, Veneeta Dayal, Robert Frank, Laurence Horn (*Emeritus*), Frank Keil, Zoltán Szabó, Petronella Van Deusen-Scholl (*Adjunct; Center for Language Study*), Douglas Whalen (*Adjunct; Haskins Laboratories*), Raffaella Zanuttini  

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**Assistant Professors** Natalie Weber, Jim Wood  

* A joint appointment with primary affiliation in another department.  

**FIELDS OF STUDY**  
The Department of Linguistics embraces an integrative approach to the study of language, based on the premise that an understanding of the human language faculty arises only through the combination of insights from the development of explicit formal theories with careful descriptive and experimental work. Members of the department offer courses and conduct research in which theoretical inquiry proceeds in partnership with historical and comparative studies, fieldwork, experimental work, cognitive neuroscience, and computational and mathematical modeling. Faculty expertise includes all of the major domains of linguistics (phonetics, phonology, syntax, semantics, pragmatics) and spans a wide range of languages.  

**SPECIAL REQUIREMENTS FOR THE PH.D. DEGREE**  

**Course Work**  
The conception of linguistics embraced by the Yale Ph.D. program requires that students receive training that is both deep in its coverage of areas of linguistic inquiry and broad in the range of methodological approaches. The course work requirements are designed to accomplish these complementary goals. This course work includes a set of courses designed to expose students to core ideas, together with courses equipping students with a range of methodologies in linguistic research.  

During their first two terms, students must take **LING 519**, Perspectives on Grammar. During their first five terms students must complete a minimum of eleven additional term courses at the graduate level. During the initial two years of course work, students must receive at least three grades of H (= Honors). Two or more grades below HP (= High Pass) during the initial two-year period constitute grounds for dismissal from
the Ph.D. program. As per Graduate School general regulations, grades of F cannot be counted toward degree requirements.

**Foundational courses** This requirement ensures that students achieve breadth in several linguistic subfields. Students take six courses in four or more subfields of linguistics. The following courses satisfy this requirement: LING 612, Language Change; LING 636, Articulatory Phonology; LING 631, Neurolinguistics, or LING 617, Language and Mind; LING 635, Phonology II; LING 654, Syntax II; LING 664, Semantics II; LING 680, Morphology; LING 796, Semantic Investigations in an Unfamiliar Language.

Students will decide on their courses, in consultation with the director of graduate studies (DGS) and other faculty, when they arrive on campus. Other sufficiently advanced courses may also satisfy the requirement.

**Methodology courses** For the methodology requirement, students must take three relevant courses. The following courses, which are offered regularly by the department, qualify, but other courses may as well, to be determined in consultation with the adviser and DGS: LING 600, Experimentation in Linguistics; LING 619, The Evolution of Language and Culture; LING 624, Mathematics of Language; LING 627, Language and Computation I; LING 631, Neurolinguistics; LING 636, Articulatory Phonology; LING 641, Field Methods; an advanced course in statistics (e.g., S&DS 538, S&DS 563, S&DS 661, or PSYC 518).

One of the methodology courses must be taken during the first year of the program, and two must be completed by the end of the second year. Courses cannot simultaneously satisfy the foundational and methodology requirements.

**Seminar courses** Graduate students are active participants in department reading groups and seminars. Students should participate in three advanced seminars in which they read the original literature of the field and write a research paper. With permission of their adviser and the DGS, students may enroll in the appropriate 790s-numbered LING course and count active participation in a department reading group, including the submission of a final research paper, as satisfying this requirement.

**Research**

The primary focus of a Ph.D. program is independent research. In the course of our Ph.D. program, students carry out cutting-edge linguistic research, culminating in the completion of a dissertation. To help students in the transition from “consuming” to also “producing” linguistic research, there are a number of structures and requirements in place.

**Research adviser and first-year directed readings** By the end of the first term of the program, students find a department faculty member who acts as their research adviser. This choice should be made on the basis of compatibility of research interests and discussions between the student, faculty member, and DGS. Starting from the spring term of the first year, students will, with the help of their adviser, define a topic of research interest, meeting regularly (minimally once every three weeks) and carrying out a series of readings on this topic. Students should keep a research journal, describing their readings and how they fit in with work in the area, and chronicling the development of their thinking about the research topic. It is the faculty’s expectation
that this exploration will form the foundation for the research reported in the student’s first qualifying paper (on which see below). Note however that the initial choice of research adviser is not binding: students who want to change their choice of topic or adviser for whatever reason may do so. It is the student’s responsibility to find a suitable adviser, and students are expected to have a faculty adviser at all times during their enrollment in the program. Some students have two faculty co-advisers.

**Portfolio** At the conclusion of the first year of the program, students submit to the faculty a portfolio of two research papers, in two distinct areas (as listed above). These papers should demonstrate a student’s mastery of the material in these fields to the level covered in the foundational courses in the area, as well as the ability to identify a significant research question and argue for a possible solution. In short, such papers should be at the level of an excellent term paper, representative of a student’s best work during the first year of course work. The faculty do not expect students to write papers expressly for the portfolio. Rather, the portfolio will typically consist of term papers from courses taken during the first year in the program. The deadline for the submission of these papers is May 10 each year.

**Annotated bibliography/research plan** On the basis of the research journal begun during the first year in the program, students will prepare an annotated bibliography and research plan (ABRP) for their first qualifying paper. The ABRP, which should be approximately twenty pages in length, should lay out the question that the student wants to explore, motivating its importance through a presentation and synthesis of relevant past literature on the topic. The deadline for submission of the ABRP is September 10.

**Qualifying papers** Once the ABRP has been completed, the student will proceed to work on the qualifying papers (QPs). The goal of the QPs is to develop a student’s ability to conduct independent research in linguistics at the level of current scholarship in two different areas of linguistics. The faculty expect a QP to report on the results of a substantial project, which are written up in a manner consistent with the standards of the field, and to be eventually published in an academic journal or working papers. Students are strongly encouraged to identify a target journal early in the project.

The process of writing the first QP is broken into a number of smaller steps with specific deadlines for each (all during the second year of the program). (1) Students discuss their preliminary results in an appropriate venue (lab meeting, reading group, seminar, etc.) by no later than the end of the fall term. (2) Also by the end of the fall term, the student will send a request for a QP reader to the DGS. This request must include a title and brief summary of the project, and may also request specific faculty members to be involved. On the basis of research area and faculty availability, the DGS will identify a faculty member other than the adviser to serve as a QP reader. This reader will be involved in the ultimate evaluation of the QP once it is completed. Because it is useful to get a range of feedback on one’s work, we encourage students to make the best use of their QP reader by meeting with them and keeping them up to date on the progress of the project. (3) Students must submit a first draft of their QP to their adviser and reader no later than February 1. (4) Students present their work to the department at the yearly “QPFest,” shortly before spring recess. This takes the form of a twenty-minute conference talk to members of the department. (5) Students must submit the final version of the paper to their adviser and reader by March 31. Toward
the end of the spring term of the second year, the student should begin to explore possible areas and advisers for the second QP, and must have identified an area and adviser by September 1 of the third year. Students follow the same steps and deadlines listed above for the second QP, this time during the third year.

The second QP should be in a different area of linguistics, with a different adviser, from the first QP. It is particularly important that students make satisfactory progress toward the first QP and complete all work by the relevant deadlines. Failure to do so may result in being asked to leave the program.

**Prospectus** No later than the beginning of the sixth term (that is, the spring term of the third year), students choose a dissertation topic and dissertation director. By the beginning of the fourth year, students will present a dissertation prospectus to the entire faculty. The prospectus should lay out clearly the student’s proposed dissertation topic. It should motivate the importance of the topic, present the core idea of the proposed work together with its promise and viability, and demonstrate how this work fits into past research in the area. The prospectus should also identify a dissertation committee. The committee must include at least three faculty members (including the adviser), two of whom must be ladder faculty in the Linguistics department. The prospectus document should be about fifteen pages in length. After it is submitted, the prospectus is defended orally in front of the faculty. Upon successful completion of the prospectus defense, students advance to Ph.D. candidacy.

**Dissertation** By the end of the seventh term, students must complete a chapter of the dissertation, together with a detailed outline of the dissertation and comprehensive bibliography. When the dissertation committee approves the chapter and dissertation outline, students are eligible for a University Dissertation Fellowship, which will support them in their fifth year of graduate study. Once advanced to candidacy, the student will meet with the entire dissertation committee minimally once each term (but with frequency decided by the committee), to evaluate progress toward the dissertation. During this meeting, the committee will complete the committee meeting form, will provide a copy to the student, and will retain one for the department’s records.

Students are expected to complete their dissertations by the end of the sixth year. At least one month prior to the dissertation filing date, the completed dissertation must be orally defended. This defense will typically involve a public presentation of the main results of the dissertation and oral examination by the members of the dissertation committee. Committee members must be given the completed dissertation no less than two weeks prior to the date of the defense.

**Language Requirement**

Students are expected to exhibit some breadth in their knowledge of the languages of the world beyond those most commonly studied and those most similar in structure to the student’s first language. LING 641, Field Methods, fulfills this requirement; alternatively, with the permission of the DGS, the student may instead take an appropriate language structure course, or one or more courses characterized as L3 or higher at Yale or the equivalent elsewhere. This requirement must be completed before the prospectus defense, when the student advances to Ph.D. candidacy.
Teaching Fellow/Research Assistant Requirements

The faculty regard teaching experience as an integral part of the graduate training program in Linguistics. All students serve as teaching fellows for a minimum of two terms, beginning in the first term of the third year. In addition, students must complete two additional terms of teaching assistantship. These may be either as a teaching fellow, or through participation in externally supported, supervised research as a research fellow. Research assistantships may be provided by the Linguistics faculty and by various Yale and Yale-affiliated units. Before accepting a research assistantship in fulfillment of this requirement, students must receive approval from the DGS. To be approved, a research assistantship must meet the following criteria:

1. It must be supervised by a Linguistics department faculty member or a faculty member from an affiliated unit, such as Haskins Laboratories or the Yale School of Medicine.
2. It must provide research experience that complements the student’s academic plan of study and is related to the student’s dissertation research plans.
3. It must provide at least ten hours of experience per week.

If an approved research assistantship is accepted that does not provide a stipend equal to the standard departmental stipend, a University Fellowship will be provided to augment the stipend so as to bring it up to the departmental standard.

MASTER’S DEGREES

M.Phil. See Degree Requirements under Policies and Regulations.

M.A. Students who withdraw from the Ph.D. program may be eligible to receive the M.A. degree if they have met the requirements and have not already received the M.Phil. degree. For the M.A., students must successfully complete the coursework, examinations, and work samples required by the end of the second year of graduate study (see above).

Program materials are available online at http://ling.yale.edu.

COURSES

LING 500a / ENGL 500a / MDVL 665a, Old English I  Emily Thornbury
The essentials of the language, some prose readings, and close study of several celebrated Old English poems.

LING 510a, Introduction to Linguistics  Jim Wood
The goals and methods of linguistics. Basic concepts in phonology, morphology, syntax, and semantics. Techniques of linguistic analysis and construction of linguistic models. Trends in modern linguistics. The relations of linguistics to psychology, logic, and other disciplines.

LING 512b, Historical Linguistics  Edwin Ko
Introduction to language change and language history. Types of change that a language undergoes over time: sound change, analogy, syntactic and semantic change, borrowing. Techniques for recovering earlier linguistic stages: philology, internal reconstruction, the comparative method. The role of language contact in language change. Evidence from language in prehistory.
LING 515a / SKRT 510a, Introductory Sanskrit I  
Aleksandar Uskokov
An introduction to Sanskrit language and grammar. Focus on learning to read and translate basic Sanskrit sentences in the Indian Devanagari script. No prior background in Sanskrit assumed. Credit only on completion of SKRT 520/LING 525.

LING 519a, Perspectives on Grammar  
Veneeta Dayal
This biweekly, in-person meeting of all first-year students is led by faculty members and TAs. Students are asked to reflect upon the content introduced in the courses they are taking and share their understanding of how these multiple perspectives connect with each other. The goal is to provide a forum where students can synthesize their views on the grammar of natural language and at the same time create a cohort experience for first-year students. ½ Course cr

LING 525b / SKRT 520b, Introductory Sanskrit II  
Aleksandar Uskokov
Continuation of SKRT 510/LING 515. Focus on the basics of Sanskrit grammar; readings from classical Sanskrit texts written in the Indian Devanagari script. Prerequisite: SKRT 510/LING 515.

LING 538a / SKRT 530a, Intermediate Sanskrit I  
Aleksandar Uskokov
The first half of a two-term sequence aimed at helping students develop the skills necessary to read texts written in Sanskrit. Readings include selections from the *Hitopadesa*, *Kathasaritsagara*, *Mahabharata*, and *Bhagavadgita*. Prerequisite: SKRT 520/LING 525 or equivalent.

LING 546b, Language, Sex, and Gender  
Natalie Weber
Sex-based asymmetries in language structure and language use. Role of language in encoding, reflecting, or reinforcing social attitudes and behavior. The “he-man” lexicon: sex-marking, reform, and resistance. Gender and sexual diversity as linguistic variables. Genderlects: differences (real and perceived) between male and female speech, conversational styles, and linguistic communities.

LING 600a, Experimentation in Linguistics  
Maria Pinango
Principles and techniques of experimental design and research in linguistics. Linguistic theory as the basis for framing experimental questions. The development of theoretically informed hypotheses, notions of control and confounds, human subject research, statistical analysis, data reporting, and dissemination.

LING 602b, The Mystery of the Voynich Manuscript  
Claire Bowern
Introduction to basic ideas of linguistics and cryptography through study of the Voynich Manuscript (MS 408), a mysterious medieval manuscript held in the Beinecke Library. Review of major hypotheses about the manuscript, ranging from the fake, to code, to undeciphered language.

LING 612a, Linguistic Change  
Claire Bowern
Principles governing linguistic change in phonology and morphology. Status and independence of proposed mechanisms of change. Relations between the principles of historical change and universals of language. Systematic change as the basis of linguistic comparison; assessment of other attempts at establishing linguistic relatedness. Prerequisites: LING 512, 632, and 653.

LING 617a, Language and Mind  
Maria Pinango
The course is an introduction to language structure and processing as a capacity of the human mind and brain. Its purpose is to bridge traditional domains in linguistics
(phonetics, morphology, syntax) with cognition (developmental psychology, memory systems, inferential reasoning). The main topics covered are morphosyntax and lexical semantics, sentence composition and sentence processing, first- and second-language acquisition, acquisition under unusual circumstances, focal brain lesions, and language breakdown.

**LING 620a, Phonetics I**  
Jason Shaw  
Each spoken language composes words using a relatively small number of speech sounds, a subset of the much larger set of possible human speech sounds. This course introduces tools to describe the complete set of speech sounds found in the world’s spoken languages. It covers the articulatory organs involved in speech production and the acoustic structure of the resulting sounds. Students learn how to transcribe sounds using the International Phonetic Alphabet, including different varieties of English and languages around the world. The course also introduces sociophonetics, how variation in sound patterns can convey social meaning within a community, speech perception, and sound change.

**LING 624a, Mathematics of Language**  
Robert Frank  
Study of formal systems that play an important role in the scientific study of language. Exploration of a range of mathematical structures and techniques; demonstrations of their application in theories of grammatical competence and performance including set theory, graphs and discrete structures, algebras, formal language, and automata theory. Evaluation of strengths and weaknesses of existing formal theories of linguistic knowledge.

**LING 627b, Language and Computation I**  
Staff  
Design and analysis of computational models of language. Topics include finite state tools, computational morphology and phonology, grammar and parsing, lexical semantics, and the use of linguistic models in applied problems. Prerequisite: prior programming experience or permission of the instructor.

**LING 632b, Phonology I**  
Jason Shaw  

**LING 634a, Quantitative Linguistics**  
Claire Bowern  
This course introduces quantitative methods in linguistics, which are an increasingly integral part of linguistic research. The course provides students with the skills necessary to organize, analyze, and visualize linguistic data using R, and explains the concepts underlying these methods, which set a foundation that positions students to also identify and apply new quantitative methods, beyond the ones covered in this course, in their future projects. Course concepts are framed around existing linguistic research, to help students use these methods when designing research projects and critically evaluating quantitative methods in the academic literature. Assignments and in-class activities are a combination of hands-on practice with quantitative tools and discussion of analyses used in published academic work. Prerequisite: one entry-level linguistics course (e.g., phonetics, phonology, syntax, and psycholinguistics) or permission of the instructor.
LING 635a, Phonology II  Natalie Weber
Topics in the architecture of a theory of sound structure. Motivations for replacing a system of ordered rules with a system of ranked constraints. Optimality theory: universals, violability, constraint types, and their interactions. Interaction of phonology and morphology, as well as relationship of phonological theory to language acquisition and learnability. Opacity, lexical phonology, and serial versions of optimality theory. Prerequisite: LING 632 or permission of the instructor.

LING 636a, Articulatory Phonology  Jason Shaw
Introduction to phonology as a system for combining units of speech (constriction gestures of the vocal organs) into larger structures. Analysis of articulatory movement data; modeling using techniques of dynamical systems. Emphasis on universal vs. language-particular aspects of gestural combination and coordination. Prerequisite: LING 520 or permission of the instructor.

LING 639b, Phonetics II: Speech Production and Perception  Jason Shaw
This course introduces theoretical tools for explaining physical aspects of speech, including speech articulation, acoustics, audition, and perception. Acoustic properties of speech sounds are derived from first principles, following acoustic theories of speech production. The course covers articulatory kinematics alongside contemporary theories of motor coordination and speech planning. Audition and speech perception are introduced in the context of signal processing and statistical tools for mapping the continuous phonetic signal to phonological representations. These topics are pursued in the context of speech examples from a wide range of natural languages, preparing students to engage with primary literature in the field of phonetics.

LING 641b, Field Methods  Edwin Ko
Principles of phonetics, phonology, morphology, syntax, and semantics applied to the collection and interpretation of novel linguistic data. Data are collected and analyzed by the class as a group, working directly with a speaker of a relatively undocumented language.

LING 653a, Syntax I  Raffaella Zanuttini
An introduction to the syntax (sentence structure) of natural language. Introduction to generative syntactic theory and key theoretical concepts. Syntactic description and argumentation. Topics include phrase structure, transformations, and the role of the lexicon.

LING 654b, Syntax II  Jim Wood
Recent developments in syntactic theory: government and binding, principles and parameters, and minimalist frameworks. In-depth examination of the basic modules of grammar (lexicon, X-bar theory, theta-theory, case theory, movement theory). Comparison and critical evaluation of specific syntactic analyses. Prerequisite: LING 653.

LING 663a, Semantics I  Claire Bowern
Introduction to truth-conditional compositional semantics. Set theory, first- and higher-order logic, and the lambda calculus as they relate to the study of natural language meaning. Some attention to analyzing the meanings of tense/aspect markers, adverbs, and modals.
LING 664b, Semantics II  Jim Wood
The model-theoretic approach to semantics and its treatment of core linguistic phenomena. Topics include quantification, tense/aspect/modality, context and interpretation, and the semantics-pragmatics interface. Prerequisite: LING 663 or permission of the instructor.

LING 675b / PHIL 669b, Pragmatics  Laurence Horn
Context-dependent aspects of meaning and inference. Speech act theory, presupposition, implicature. Role of pragmatics in the lexicon and in meaning change. The semantics-pragmatics distinction from different perspectives; the position of pragmatics in linguistic theory.

LING 685a, Topics in Computational Linguistics: Language Models and Linguistic Theory  Robert Frank
A linguistically-guided exploration of the strengths and weaknesses of large language models (such as GPT-4 and its brethren), which form the foundation of current AI systems. What is the structure of these models, and how are they trained? What do they know about language, and how can we assess it? To what degree is the existence of these models cause for a re-evaluation of existing theories of linguistic structure? Prerequisites: at least one course covering the foundations of deep learning (CPSC 452, CPSC 477, EENG 439, LING 680, S&DS 565) and at least one course on linguistic theory (LING 632, LING 653, LING 663).

LING 724a, Sound Change  Claire Bowern
Topics in the foundations of sound change. Perception, production, and social factors. Seeds of sound change, mechanisms, and means of study. Overview of sound change research, including experimental, computational, simulation, and comparative methods. Prerequisite: LING 612 or permission of the instructor.

LING 791a, The Syntax of Coordination  Jim Wood
We discuss the syntax of coordination itself, along with a sample of the myriad constructions that coordination gives rise to, such as across-the-board dependencies, right-node raising, coordinate object drop, conjunction reduction and others. We discuss the special licensing of null arguments in coordinate structures, and whether heads can be coordinated, at or below the word level.

LING 794b, Asserting, Asking, Answering  Veneeta Dayal and Zoltan Szabo
This course introduces students to some of the current debates in the literature on questions. It articulates the relationship between declarative/interrogative structures and the speech acts of asserting and asking. It also probes the status of an assertion as an answer to a question. Some of the main approaches to the semantics of questions are introduced, with special attention to linguistic phenomena. These include pair-list answers, quantificational variability effects, scope marking, alternative questions, and polar question particles. The left periphery of interrogative clauses is explored by studying the behavior of interrogatives under different embedding predicates, and by locating the points at which direct question intonation and pragmatic bias in questioning can enter the derivation. Prerequisite: LING 663 or permission of the instructor.

LING 798a, Plurality, Optional Plurality, Pluractionality  Veneeta Dayal
The concept of singularity vs. plurality is arguably universal, yet its morphosyntactic expression is subject to a great deal of cross-linguistic variation. Many
languages have one form for singular reference and another for plural. English, for example, canonically uses the unmarked form of a noun for singular reference and a plural marked form for plural reference, at least with count nouns: *dog vs. dog+s*. In many languages, the base form itself can be used to refer to a plurality but there is nevertheless a form that can be added to ensure plurality. Mandarin, for example, uses the base form itself to refer to singularities as well as pluralities but the addition of the plural marker rules out the possibility of singular reference: *gou “the dog/the dogs” vs. gou-men “the dogs”*. Finally, there are languages, such as Cuzco Quechua, in which the verb has a singular and a plural form, such that the singular form refers to a single event while the plural form refers to a plurality of events. In this course we discuss the semantic underpinnings of these three types of plural morphology, plural marking as in English -s, optional plurality as in Mandarin -men, and pluractionality as in Quechua plural marked verbs. Prerequisite: LING 263/LING 663 or permission of the instructor.