

LA&S 252 Western Civilization II (3). H The beliefs and values of Western Civilization since the close of the eighteenth century are compared with the ideas central to American Indian cultural traditions. Fulfills the Western Civilization II requirement for CLAS. Taught at Haskell Indian Nations University. LEC

LA&S 290 Approaches to Teaching Science and Mathematics I (1). U Science and Mathematics students explore teaching as a career by teaching lessons in elementary classrooms in order to obtain first hand experience planning and implementing inquiry-based curriculum. This course is open to any student who has completed or is concurrently enrolled in a science or mathematics course at KU. LEC

LA&S 291 Approaches to Teaching Science and Mathematics II (1). U Science and Mathematics students continue to explore secondary teaching as a possible career choice by teaching several lessons in a middle school classroom. The students build upon and practice lesson design skills that were developed in LA&S 290, in which they taught in elementary classrooms. Prerequisite: LA&S 290. LEC

LA&S 292 Topics and Problems on: _____ (1-6). U An interdisciplinary study of different topics. Designed especially for freshmen and sophomores. LEC

LA&S 301 Learning Communities Seminar in: _____ (1-2). U This course is designed to expand student's knowledge of the University community by exploring an academic theme and the connections between courses. Through the study of different topics students will explore the inherent interdisciplinarity of fields of study. Designed especially for juniors and seniors. Enrollment is limited to students participating in designated learning community. Concurrent enrollment in specified learning community courses is required. May be repeated for credit up to 4 hours. LEC

LA&S 340 Computers for the Classroom (1-3). U "The Art and Science of Computer Presentation." An inter-disciplinary course designed to explore current technology in "Computer Presentations" (various equipment and programs), research the field of information processing, and develop applications for interactive multimedia communications. Not open to students who have received credit for LA&S 740. Prerequisite: Consent of instructor. LEC

LA&S 400 Teaching and Tutoring Writing (3). U Students explore theories and strategies of teaching and tutoring writing across academic disciplines. They learn more about themselves as writers as they build a repertoire of writing techniques useful in their studies, in the workplace, and in their personal lives. By observing and consulting in the writing center, they understand how reflection leads to responsible/responsive and engaged practice. LEC

LA&S 450 Topics at Haskell Indian Nations University: _____ (1-6). Special topics at the junior/senior undergraduate level. Taught at Haskell Indian Nations University. Special permission from the Provost's office required. LEC

LA&S 492 Topics and Problems on: _____ (1-6). U An interdisciplinary study of different topics. Designed especially for Juniors and Seniors. LEC

LA&S 700 Writing Center Theory and Administration (1-3).

LA&S 740 Computers for the Classroom (1-3).

LA&S 792 Topics in: _____ (1-3).

Linguistics

Acting Chair: Allard Jongman
Blake Hall, 1541 Lilac Lane, Room 427
Lawrence, KS 66044-3177, www.linguistics.ku.edu, (785) 864-3450
Degrees offered: B.A., B.G.S., M.A., Ph.D.

Why study linguistics? Because language is a window into the mind.

The department offers a broad range of courses that provide a basic understanding of human language and communication. Linguistics courses examine features of language that underlie the human capacity to express concepts and communicate ideas. They address the connections between language, brain, culture, mind, and history. The major gives students a basic understanding of the human capacity to acquire, perceive, and produce language and of language's role in contemporary society.

Linguistics is a superb preparation for careers that require expertise in the use of language as a means of communication, e.g., business, communications, health care, language teaching, personnel administration, and social service. Many majors pursue graduate study in education, languages, law, psychology, and computer science.

Majors

First- and Second-year Preparation. A student who plans to major in linguistics should fulfill the College foreign language requirement by the end of the sophomore year. LING 106 or LING 107, which is required for the major, provides an introductory survey of the field, and also fulfills a general education social sciences: culture and society (SC) principal course requirement. In addition, LING 110, an elective for the major, fulfills a general education social sciences: individual behavior (SI) principal course requirement. These courses prepare students for upper-division courses in the major. Students considering a major in linguistics should discuss their plans with the undergraduate coordinator. See www.linguistics.ku.edu/~ling/undergrad for an example of a four-year plan leading to a B.A. in linguistics.

Requirements for the B.A. or B.G.S. Major. The major requires a minimum of 30 hours. Four courses are required of all majors: LING 106 Introductory Linguistics or LING 107 Introductory Linguistics, Honors LING 305 Phonetics I LING 312 Phonology I LING 325 Syntax I

Students also must take three additional courses from the categories below.

One of the following:

LING 327 Morphology
LING 331 Semantics

One of the following:

LING 415 Second Language Acquisition
LING 425 First Language Acquisition
LING 435 Psycholinguistics
LING 438 Neurolinguistics

One of the following:

LING 370 Introduction to the Languages of Africa
LING 441 Field Methods in Linguistic Description
LING 447 North American Indian Languages
LING 570 The Structure of Japanese
LING 572 The Structure of Chinese
LING 575 The Structure of: _____

The remaining 9 hours required for the major are earned by linguistics course work chosen by the student in consultation with the undergraduate coordinator.

Requirements for the Minor. The minor requires 18 credit hours of linguistics courses. Four courses are required of all minors: LING 106 Introductory Linguistics or LING 107 Introductory Linguistics, Honors LING 305 Phonetics I LING 312 Phonology I LING 325 Syntax I

The remaining 6 hours required for the minor are earned by linguistics course work chosen by the student in consultation with the undergraduate coordinator.

Honors. The honors program allows exceptional students to work closely with faculty members on a research project. To graduate with honors in linguistics, a student must complete all requirements for the linguistics major and LING 496 Honors in Linguistics. Three credit hours of LING 496 (usually taken in the fall semester of the senior year) count toward elective hours. The student must have a grade-point average of at least 3.5 in linguistics and 3.25 in all courses. Consult the undergraduate coordinator or any member of the department for information. Prospective honors candidates are encouraged to select a thesis topic and thesis director at the end of the junior year.



Linguistics courses examine the universal features of language that underlie the human capacity to express concepts and communicate ideas.

Linguistics is a superb preparation for careers that require expertise in the use of language as a means of communication, e.g., business, communications, health care, language teaching, personnel administration, and social service.

■ Linguistics Courses

LING 106 Introductory Linguistics (3). SC S Introduction to the fundamentals of linguistics, with emphasis on the description of the sound system, grammatical structure and semantic structure of languages. The course will include a survey of language in culture and society, language change, computational linguistics and psycholinguistics, and will introduce students to techniques of linguistic analysis in a variety of languages including English. (Same as ANTH 106.) LEC

LING 107 Introductory Linguistics, Honors (3). SC S Introduction to the fundamentals of linguistics, with emphasis on the description of the sound system, grammatical structure, and semantic structure of languages. The course includes a survey of language in culture and society, language change, computational linguistics and psycholinguistics, and introduces students to techniques of linguistic analysis in a variety of languages including English. Open only to students admitted to the University Honors Program or by consent of instructor. (Same as ANTH 107.) LEC

LING 110 Language and Mind (3). SI S A study of the relation between language and the human mind, focusing on what it means to "know" a language, the roots of language knowledge, and the relation between language knowledge and other cognitive systems. Additional topics include what is innate and what is learned during language acquisition, and how language is organized as a system of separate units or modules. LEC

LING 120 The Physics of Speech (4). N An introduction to the acoustic structure of speech intended for nonscience majors. Emphasis will be placed on the methods and standards by which scientists measure and evaluate the physical characteristics of speech. Topics will include: simple harmonic motion, the propagation of sound waves, aerodynamic aspects of vocal fold vibration, resonance, digital speech processing, frequency analysis, and speech synthesis. Three class hours and one laboratory per week. (Same as SPLH 120.) Prerequisite: MATH 101 or 104 or equivalent. LEC

LING 180 Study Abroad Topics in Linguistics: ____ (1-3). U This course is designed for the study of special topics in Linguistics. Course work must be arranged through the Office of KU Study Abroad. May be repeated for credit if content varies. LEC

LING 305 Phonetics I (3). S This course provides a basic introduction to the study of human speech sounds. Topics to be covered include anatomy and physiology of the speech production apparatus, transcription and production of the world's sounds, basic acoustics, computerized methods for speech analysis, acoustic characteristics of speech sounds, stress, and intonation. A hands on laboratory project is part of the course. Prerequisite: An introductory course in Linguistics. LEC

LING 307 Phonetics II (3). S This course is a continuation of Phonetics I (LING 305/705) and provides a more detailed survey of acoustic and auditory phonetics. Topics to be covered include vocal tract acoustics, quantal theory, speaker normalization, theories of speech perception, prosody, the phonetics of second language acquisition, and the production and perception of cues to gender, talker, region, and socio-economic status. In addition, a number of laboratory projects are required. Prerequisite: LING 305. LEC

LING 308 Linguistic Analysis (3). H Practice in applying the techniques of phonological, grammatical, and syntactic analysis learned in introductory linguistics to data taken from a variety of languages of different structural types. Prerequisite: An introductory course in linguistics. LEC

LING 312 Phonology I (3). S This course is an introduction to phonological theory. It focuses on crucial phonological concepts such as underlying and surface representations, phoneme and allophone, contrast, alternation, neutralization, distinctive features, and syllable. It provides the basic skill set for phonological analysis, including UR selection, rule notation, rule ordering, and common phonological universals. It also touches on theory-building in phonology, with discussions on the external motivations for phonological grammar, how to lay out the predictions of a theoretical proposal, and how phonological predictions can be empirically tested. Prerequisite: LING 305. LEC

LING 314 Phonology II (3). S This course is a continuation of a survey of phonological theory. The course starts with the discussion of the conspiracy and duplication problems in rule-based phonology and works its way to Optimality Theory. Topics in Optimality Theory (OT) include its conceptual and empirical advantages over rule-based phonology, its potential problems and their possible remedies, issues of learnability and acquisition, the relevance of phonetics in OT constraints, and correspondence theory. Prerequisite: LING 312. LEC

LING 320 Language in Culture and Society (3). SC S Language is an integral part of culture and an essential means by which people carry out their social interactions with the members of their society. The course explores the role of language in everyday life of peoples in various parts of the world and the nature of the relationship between language and culture. Topics include world-view as reflected in language, formal vs. informal language, word taboo, and ethnography of speaking. (Same as ANTH 320.) LEC

LING 321 Language in Culture and Society, Honors (3). SC S An honors section of LING 320 for students with superior academic records. Not open to students who have had ANTH 320 or LING 320. (Same as ANTH 321.) Prerequisite: Membership in the University Honors Program or consent of instructor. LEC

LING 322 Linguistic Typology (3). H Different languages use different linguistic mechanisms to encode meanings. This course surveys grammatical concepts and categories found in the world's languages including tense, aspect, mood, voice, person and number, as well as case relations, such as nominative, accusative, ergative, and absolutive. Basic word order typology and discourse functions such as topic, focus, and cohesion are introduced. Examples will be drawn from a wide variety of languages to illustrate how the same concept may be encoded differently, i.e., morphologically, syntactically, or lexically, in different languages. Prerequisite: An introductory course in linguistics. LEC

LING 325 Syntax I (3). H An introduction to generative syntax with special attention to theory and method. The course covers such topics as phrase structure, the lexicon, transformations and derivation. Prerequisite: An introductory course in linguistics. LEC

LING 326 Syntax II (3). S An advanced course covering one or more current theories of syntax. The course provides in-depth reading and discussion on the major areas of syntactic theory including universal grammar, phrase structure theory;

lexicon and argument structure; binding, control, locality conditions; constraints on representation and derivation; and the relation between syntax and the semantic module. Prerequisite: LING 325. LEC

LING 327 Morphology (3). S An exploration of several topics in word structure and formation. Covers three broad areas: traditional morphology, morpho-phonology, and morpho-syntax. Traditional morphology includes a survey of several kinds of word formation processes, the internal structure of words, morpheme types, inflection, paradigms, derivation, and compounding. Morpho-phonology deals with phonological constraints on morphological processes and prosodic morphology. Morpho-syntax concentrates on the syntactic properties of morphological phenomena and interaction of syntactic processes and morphology. The course has a strong emphasis on cross-linguistic comparative morphology. Prerequisite: Ling 312, Ling 325, or permission of instructor. LEC

LING 331 Semantics (3). S A study of meaning in natural language usage. Emphasis on referential semantics. Set theory, propositional and first-order logic, and intensional and modal logic as they relate to natural language sentences in a formalized language. Prerequisite: A course in syntax. LEC

LING 340 Sociolinguistics (3). S The formal features of language reflect a broad range of social factors, including age, context, culture, occupation, sex and social class. This course will introduce students to the ways social variables affect the forms of spoken and written language. Prerequisite: An introductory linguistics course or consent of instructor. LEC

LING 345 Language and Gender (3). S This course explores the relationship between language use and gender. The course will specifically focus on how gender affects the ways we use spoken language as well as how we interpret the speech of others. Topics to be discussed will include the function of language in social relationships and language variation in different social contexts. LEC

LING 350 Comparative and Historical Linguistics (3). S Human language may be characterized as possessing flexibility, which causes languages to be different from one another in different degrees. This course explores the way languages undergo change in time (historical linguistics), and the ways two or more languages are similar or different (comparative linguistics). The course teaches students how to establish whether languages are genetically related or belong to totally different language families. Prerequisite: An introductory course in linguistics. LEC

LING 370 Introduction to the Languages of Africa (3). NW H/W A survey of the indigenous languages of Africa from a linguistic perspective, covering the main language families and their geographic distribution, and focusing on the features and structure of the more widely spoken and representative languages in each family (e.g. Fula, Hausa, Maninka, Swahili, Yoruba). (Same as AAAS 370.) LEC

LING 415 Second Language Acquisition (3). H Introduction to the study of second language acquisition: The application of theoretical linguistics to the description of the language that a learner acquires, and to the process of acquisition. Prerequisite: An introductory course in linguistics. LEC

LING 416 Second Language Acquisition II (3). S This advanced course provides in-depth reading and discussion of several current topics including second language acquisition within a generative framework, processing approaches to second language acquisition, and the role of input and learnability principles in second language acquisition. Both theoretical and methodological issues are discussed. Prerequisite: LING 415 and LING 325; or permission of instructor. LEC

LING 418 Introduction to Cognitive Science (3). S Examines the data and methodologies of the disciplines that comprise Cognitive Science, an interdisciplinary approach to studying the mind and brain. Topics may include: consciousness, artificial intelligence, linguistics, education and instruction, neural networks, philosophy, psychology, anthropology, evolutionary theory, cognitive neuroscience, human-computer interaction, and robotics. (Same as PHIL 418, PSYC 418, and SPLH 418.) Prerequisite: Consent of instructor. LEC

LING 420 Research Methods in Linguistics (3). S This course provides a foundation for designing, conducting, and critically evaluating quantitative and qualitative research in the language sciences. Topics include formulating a research hypothesis, participant selection, ethical considerations, the scientific method, validity, reliability, data collection, dependent and independent variables, descriptive and inferential statistics. This course serves students who are interested in the basics of research design and statistics for the study of language. Prerequisite: An introductory course in Linguistics. LEC

LING 425 First Language Acquisition (3). S An introductory course in the acquisition of child language. The course will cover relevant historical studies of child language but will focus primarily on recent psycholinguistic approaches toward the description of the process by which a child acquires his native language. Phonological, syntactic, semantic, cognitive, pragmatic, sociolinguistic, and anthropological aspects of the acquisition process are covered. Prerequisite: An introductory course in linguistics. LEC

LING 427 Generative Study of Second Language Acquisition (3). S An introduction to second language acquisition within a generative framework. Topics to be covered include functional categories, movement constraints, binding principles, and metrical parameters. Prerequisite: LING 325, which may be taken concurrently. LEC

LING 430 Linguistics in Anthropology (3). S The study of language as a symbolic system. Exploration into the interrelatedness of linguistic systems, of nonlinguistic communicative systems, and of other cultural systems. (Same as ANTH 430.) LEC

LING 435 Psycholinguistics (3). S A detailed examination of issues in the processing of language. The course provides a survey of research and theory in psycholinguistics, reflecting the influence of linguistic theory and experimental psychology. Spoken and written language comprehension and language production processes are examined. Prerequisite: An introductory course in linguistics or permission of instructor. LEC

LING 437 Topics in Psycholinguistics (3). S An in-depth examination of selected topics in psycholinguistics. Topics may include spoken language processing, written language processing, neurolinguistics, prosody, and syntactic processing. Prerequisite: LING 435 or consent of instructor. LEC

LING 438 Neurolinguistics (3). S The course explores how language is represented and processed in the human brain. This includes a critical survey of the foundations and the current research in the cognitive neuroscience of language, focusing on the techniques of functional brain imaging (fMRI, PET, EEG, MEG, and related methods), and research on aphasia and other language disorders. This course also includes a component providing laboratory experience with brain imaging research on language. Prerequisite: At least one course in linguistics or permission of instructor. LEC

LING 440 Linguistic Data Processing (3). H This course introduces the tools and techniques necessary to analyze fieldwork data, including research design, recording and elicitation techniques, computational data processing and analysis, and field ethics. The course also covers field recording and data analysis technology, along with methods of phonetic transcription, grammatical annotation and analysis of language context. Practice of techniques is provided via short studies of at least one language. Prerequisite: LING 305 or permission of instructor. LEC

LING 441 Field Methods in Linguistic Description (3). H The elicitation and analysis of phonological, grammatical, and discourse data from a language consultant. In-depth research on one language. Techniques of research design, methods of phonetic transcription, grammatical annotation, and analysis of language context. Prerequisite: LING 305, LING 312, and LING 325 or permission of instructor. LEC

LING 447 North American Indian Languages (3). S Introduction to the nature and distribution of North American Indian languages. Not open to students with credit in LING 747. Students taking this course at the 700 level will have different course requirements. Prerequisite: An introductory course in linguistics. LEC

LING 453 The Indo-European Language Family (3). S A survey of the Indo-European language family: its members, divisions, and history; with an introduction to comparative grammar and a history of scholarship in the field. Not open to students with credit in LING 753. Students taking this course at the 700 level will have different course requirements. Prerequisite: An introductory course in linguistics. LEC

LING 470 Language and Society in Africa (3). NW H/W Examines issues and problems associated with language use in sub-Saharan Africa from a sociological perspective. Topics covered include an overview of the types of languages spoken on the continent: indigenous languages, colonial languages, pidgins and creoles, and Arabic as a religious language; problems associated with the politics of literacy and language planning; writing and standardization of indigenous languages; and the cultural and ideological dilemmas of language choice. (Same as AAAS 470.) Prerequisite: AAAS 103, AAAS 305, or LING 106; or consent of instructor. LEC

LING 483 Computational Linguistics (3). S A survey of computer-based approaches to the study of morphology and syntax. In addition to its relevance for basic linguistic research, computer-based syntactic analysis in the form of parsers and syntactic/string generators, provide model testers for the linguistic and analytical tools for the computer scientist concerned with language applications. When taught with LING 783, students at the 700 level will have different course requirements. Prerequisite: An introductory course in linguistics. LEC

LING 490 Independent Study (1-3). U A special research project or directed readings in an area of linguistics not covered in other courses. No more than 3 hours of LING 490 may be applied toward the requirements for the major. Prerequisite: Consent of instructor. IND

LING 491 Topics in Linguistics: _____ (1-3). H The content, prerequisites, and credits of this course will vary. May be repeated. IND

LING 492 Topics in Linguistics: _____ (1-3). S The content, prerequisites, and credits of this course will vary. May be repeated. (Distribution credit given for two or three hours only.) Prerequisite: Consent of instructor. IND

LING 496 Honors Essay in Linguistics (1-3). H Individual directed research and preparation of an essay on a linguistic topic. Prerequisite: A grade-point average of 3.5 in linguistics and 3.25 in all courses, and consent of the major adviser. IND

LING 539 The Acquisition of Morphosyntax (3). A second semester course in child language that explores the acquisition of morphology, syntax, and the ways in which morphology and syntax interact in linguistic theory and language development. Topics covered in the course include agreement, case, null subjects, question formation, pronoun binding, quantification, and control. Prerequisite: LING 325 or LING 425 or consent of instructor. LEC

LING 543 Language and Culture in Arabic-speaking Communities (3). NW H The course examines the links between structure, patterns of use, language choice, and language attitudes in the diglossic and bi-lingual Arabic-speaking communities. It also explores language as a reflector and creator of Arab culture (e.g. linguistic encoding of politeness, the Quranic text as the spoken and written word, the role of tropes in Arabic rhetoric). The topics for discussion range from the micro-level language choice to the macro-level issues of national language policies and planning within the domain of government and education across the Arab world. (Same as AAAS 543) LEC

LING 565 Native Mesoamerican Writing (3). H An introduction to the Indigenous writing of Mesoamerica, primarily Epi-Olmec and Mayan hieroglyphic writing. The course will survey the languages of the cultures that originated writing in the New World, and demonstrate the methods being used to decipher Mesoamerican hieroglyphic writing. The connections between language, culture, and writing will be highlighted. Prerequisite: An introductory linguistics course. LEC

LING 570 The Structure of Japanese (3). H A detailed study of the phonological and grammatical structure of Japanese and the use of the language in social/cultural contexts. Primarily for students who want a linguistic knowledge of the language rather than a practical command of it. (Same as EALC 570.) LEC

LING 572 The Structure of Chinese (3). H A detailed study of the phonological and grammatical structure of Chinese and the interactions between language and culture. Depending on student interests, a unit on the pedagogy of teaching Chinese as a foreign language may also be included. Primarily for students who want a linguistic knowledge of the language rather than a practical command of it. (Same as EALC 572.) LEC

LING 575 The Structure of: _____ (3). S A detailed study of a language, including its phonological, morphological, syntactic and semantic characteristics. The course provides students with a linguistic knowledge of the language rather than a practical command of it. Prerequisite: A course in linguistics. LEC

LING 700 Introduction to Linguistic Science (3).

LING 705 Phonetics I (3).

LING 707 Phonetics II (3).

LING 708 Problems in Linguistic Analysis (3).

LING 709 First Language Acquisition (3).

LING 712 Phonology I (3).

LING 714 Phonology II (3).

LING 715 Linguistics and Second Language Acquisition (3).

LING 716 Second Language Acquisition (3).

LING 720 Research Methods in Linguistics (3).

LING 722 Linguistic Typology (3).

LING 725 Syntax I (3).

LING 726 Syntax II (3).

LING 727 Morphology (3).

LING 730 Linguistics in Anthropology (3).

LING 731 Semantics (3).

LING 735 Psycholinguistics (3).

LING 737 Psycholinguistics II (3).

LING 738 Neurolinguistics (3).

LING 739 The Acquisition of Morphosyntax (3).

LING 740 Linguistic Data Processing (3).

LING 741 Field Methods in Linguistic Description (3).

LING 747 North American Indian Languages (3).

LING 748 Language Contact (3).

LING 749 Linguistics and Ethnolinguistics of China and Central Asia: _____ (3).

LING 750 Comparative and Historical Linguistics (3).

LING 753 The Indo-European Language Family (3).

LING 782 Research Methods in Child Language (3).

LING 783 Computational Linguistics (3).

LING 791 Topics in Linguistics: _____ (1-3).

LING 794 Proseminar (3).

LING 799 Proseminar in Child Language (2).

Literature, Language, and Writing

The B.A. and B.G.S. degrees in literature, language, and writing offered on the KU Edwards Campus are described under English in this chapter of the catalog.

Mathematics

Chair: Jack Porter

Snow Hall, 1460 Jayhawk Blvd., Room 405

Lawrence, KS 66045-7523, www.math.ku.edu, (785) 864-3651

Degrees offered: B.A., B.S., M.A., Ph.D.

Why study mathematics? Because mathematics is a framework upon which humanity builds an understanding of the world.

Courses for Nonmajors

Students interested in mathematics as part of a background in the liberal arts should enroll in MATH 115, MATH 121, MATH 105, MATH 106, or MATH 365, and other courses according to their interests. Students preparing to use mathematics as a tool in another field should consult recommendations and requirements of their schools or departments. Prospective secondary school mathematics teachers should complete the calculus sequence (MATH 223 and MATH 290 or MATH 243 and MATH 291) and see the School of Education chapter of this catalog for requirements.

MATH 002 is considered a developmental course by all KU schools and is not counted in the minimum number of hours required for graduation. The College of Liberal Arts and Sciences and the Schools of Business, Education, Engineering, Fine Arts, Journalism and Mass Communications, and Social Welfare count the course as credit earned but increase the minimum number of hours for graduation by 3 hours if a student completes it. The Schools