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LI 7843 Linguistic Typology (not available)
Hilary Term

Aims:
The module’s main aims are (i) to introduce students to the study of the structural similarities and differences between the languages of the world; (ii) to familiarize students with the principles of research in linguistic typology, including how representative language samples are established; (iii) to give students experience of the practical analysis of cross-linguistic patterns that are found in phonology, morphology and syntax; and (iv) to familiarize students with the tasks of formulating and evaluating typological argumentation.

Syllabus:
The module topics include the genetic classification of languages, phonological inventories, word order, word classes, case marking, classification systems, ergativity, complex predication, and spatial language and lexicalization. The module also covers methodology and sampling. An important element is weekly exercises in the typological description of languages unfamiliar to the students.

Learning outcomes:
On successful completion of this module students should be able to:

- Describe in detail the basic theoretical framework for the systematic analysis of language diversity
- Apply the tools of typological analysis to genetically unrelated languages
- Explain how competing claims about cross-linguistic structural properties may be evaluated
- Analyse how typological analysis relates to historical linguistics, areal linguistics and language contact.

Assessment:
In previous years, students wrote an assignment of 4,000 words.

Suggested readings:


LI 7856 Describing Grammar (Valentina Colasanti)
Michaelmas term

**Aims:**
This module has four principal aims:

- To come to an understanding of the structural underpinnings of how words come together to form sentences.
- To introduce the student to the ways in which linguists approach the observable structural aspects of language.
- To being able to recognise and investigate the combinatory system that forms sentences from phrases and phrases from their subparts.
- To learn how to analyse languages formally, i.e., analytically investigate phrase and sentence structure.

**Working methods:**
The topics of the module are introduced in lectures and explored and developed in workshops and seminars. Exercises and discussion will focus on a range of languages in addition to English. The module assumes no previous knowledge of morphology and syntax.

**Syllabus:**
This course is an introduction to the formal study of syntax in natural language from a cognitive perspective. By ‘syntax’, we mean linguistic structure at the phrase and sentence level. That is, the combination of words into phrases and phrases into sentences. Detailed investigation into sentence structure reveals that sentences are not formed merely by stringing together words. Instead, sentences have properties that imply a complex hierarchical organization that is rule-governed and systematic within and across languages. By ‘formal’, we mean analytically precise investigation that focuses on the form of a linguistic object -here, phrase and sentence structure. We will study syntax from a ‘cognitive perspective’, meaning that the overarching goal of our investigation is to explore and model the human cognitive faculty responsible for building and manipulating complex syntactic structures in the mind.

**Learning outcomes:**
On successful completion of this module students should be able to:

- Demonstrate a knowledge of the basic features of sentence structure: syntactic categories, constituency, and dependency
• Apply the tools of a functional and lexicalist view of grammar to the description of simple sentences in English and one or more other languages
• Explain how cross-linguistic syntactic variation may be described
• Analyse how syntactic rules and processes interface with other levels of linguistic knowledge, in particular with the semantics of verbal argument structure.

Assessment:
In previous years, the module was assessed through two assignments:

• Assessment 1. In-class test on the topics introduced in the module.
• Assessment 2. 2000 words essay on the syntactic description of one or more languages.

Suggested readings:

LI 7857 Language Acquisition (Colin Flynn)
Hilary Term

Aims:
The general aim of this module is to introduce students to the known facts, the principal theoretical issues and the current areas of debate relative to language acquisition. The module will include within its purview child language development involving a single language, the acquisition in childhood of two or more languages, and the learning of additional languages later in life. As well as examining the above acquisitional phenomena themselves, the module will outline the research methodologies deployed in their investigation.

Working methods:
The topics of the module will be presented in lecture form and will be further explored in group discussion. Students will be pointed towards readings dealing with aspects of material covered in class and will be encouraged to link such material to their own experience as language learners and teachers.

Syllabus:
Specific themes addressed in the module will include:

- The major milestones of child language development
- Behaviourist and Nativist perspectives
- Language Acquisition and age
- Input modification and its effects
- The Critical Period Hypothesis
- Bi-/Multilingualism
- Cross-linguistic and developmental aspects of multiple language learning
- Multimodal language

Learning outcomes:
On successful completion of this module students will be able to:

- Discuss language acquisition on the basis of the agreed central facts of monolingual child language development, simultaneous bi-/multilingual acquisition and additional language learning.
- Engage in informed debate about the controversial questions associated with the above and of a range of theoretical perspectives attempting to address such question.
Provide evidence of a critical awareness of the range of research methodologies used by language acquisition researchers.

Assessment:

In previous years, students wrote an assignment of 3-4,000 words on one of the syllabus themes. A precise title will need to be agreed with the course convener by the last week of term.

Suggested readings:
LI 7858 Second Language Curriculum Planning and Implementation
(Bronagh Ćatibušić, Antoin Rodgers)
Michaelmas term

Aims:
This module has three aims: (i) to explore in theory and practice the key pedagogical concepts of learner-centredness and learner autonomy; (ii) to give students a thorough knowledge of learner-centred principles of second language curriculum design and their pedagogical implementation; and (iii) to familiarize students with the Common European Framework of Reference for Languages (CEFR). The module is designed to challenge students to reflect critically on their own experience as language learners and their practice as language teachers.

Syllabus:
Specific themes addressed in the module include: the theoretical underpinnings of learner-centredness and learner autonomy; the theory and practice of needs analysis in language curriculum design and implementation; the CEFR’s action-oriented approach to the description of language use and language learning; how to use the CEFR to design second language curricula; target language use in language teaching and learning; key concepts in sociocultural approaches to language learning; and the development of inclusive language curricula for diverse, multilingual learning contexts.

Learning outcomes:
On successful completion of this module students will be able to:

- Explain the concepts of learner-centredness and learner autonomy
- Analyse the descriptive categories of the Common European Framework of Reference for Languages (CEFR)
- Apply the descriptive categories of the CEFR to the analysis of learners’ needs
- Employ the descriptive categories of the CEFR to design and generate a scaled second language curriculum
- Employ the European Language Portfolio (ELP) to mediate and implement a scaled second language curriculum
- Apply techniques and theories learned in class in order to develop language learners’ capacity to plan, monitor and evaluate their own learning
- Develop and apply practical techniques for developing language learner autonomy
**Working methods:**
The successive topics of the module are presented in lectures and explored in small-group discussion and workshops. Students are expected to contribute to collaborative and reflective activities both in-class and outside class, and to engage fully in the module's project work.

**Assessment:**
In previous years, the module was assessed through two assignments:

1. A group project presentation on curriculum development for a specific target learner group (40%).
2. An essay assignment (2,500-3,000 words) involving theoretical engagement and reflection on the practical implementation of a particular aspect of curriculum design (60%).

**Suggested readings**

**Further reading:**


LI 7859 Language Testing (Bronagh Ćatibušić, Antoin Rodgers)
Hilary term

**Aims:**
This module has two aims: (i) to familiarize students with fundamental principles in language testing, and (ii) to apply those principles to the design of language tests, scoring/rating schemes, and validation procedures. Particular importance is attached to the development of students’ practical ability to design valid and reliable tests and other forms of assessment.

**Syllabus:**
Specific themes addressed in the module include: types of language assessments and their purpose; the concept of the criterion in language testing; the testing cycle; the design of test items and test tasks — discrete point vs. integrative tests; the design of scoring and rating procedures; establishing the validity and reliability of language tests; relating tests and assessments to the CEFR’s proficiency levels.

**Learning outcomes:**
On successful completion of this module students should be able to:

- describe in detail fundamental principles in language testing
- apply those principles to the successive stages of language test design, implementation and validation
- devise and design test items and test tasks
- create a scoring scheme for tests of receptive competence
- design and implement a rating scheme for tests of productive competence
- discuss the measures that are used to explore the stability of individual test items and the reliability of raters
- critically evaluate and appraise the literature in the field

**Working methods:**
The class is divided into groups of students and each group is assigned a different language-testing project. Week by week, key topics in language testing and assessment are introduced with close reference to the literature. The topics are then explored by the student groups as they gradually develop their projects. In the final week of the module the groups present their completed projects, explaining how they have taken account of the theoretical issues raised in the course of the module. Students are expected to relate their projects to the
proficiency levels of the Common European Framework of Reference for Languages (CEFR).

Assessment:
In previous years, students prepared and delivered a group presentation as described above. The final presentation contributed towards 40% of students’ final score in the module. The remaining 60% was based on an individual written assignment of 2,500 words. The student designed a language test or assessment tool to measure the proficiency or learning achievement of a particular group of language learners. This test/assessment tool, which could not replicate any of the group projects developed during the module, could focus on one particular skill or on a combination of skills. It was presented in a discursive assignment that briefly described the chosen group of learners and their learning goal, explained the choice of test, justified the test design, described the rating and scoring procedures, and outlined appropriate validation procedures.

Suggested readings:

Further reading:

Li 7860 Technology, Language, and Communication (Breffni O’Rourke)
Hilary term

Aims:
Participants in this module will explore how language and communication are mediated by various technologies, including that of writing. Students will be encouraged to reflect on the relationship between language, communication and technologies on one hand and individual language processing, interactional processes, and the nature of discourse on the other. Lectures, readings and discussions will range over historical, socio-cultural and individual-cognitive levels of analysis as appropriate.

Working methods:
The module will be taught through a combination of lectures and workshop activities.

Syllabus:
Specific themes addressed in the module are likely to include:

- The historical development of writing; the properties of writing systems
- The effects of literacy on our perception of language
- The historical and cultural significance of the printing press
- Audio and video technologies
- Computer-mediated communication
- Mobile-phone text messaging
- Digital literacies

Learning outcomes:
On successful completion of the module, a student should be able to

- Explain the key steps in the historical emergence of writing
- Explain, with examples, how each of the major writing systems represents language structure
- Discuss the social, cognitive and linguistic significance of writing itself and of the printing press
- Explain the linguistic differences between spoken and written language
- Discuss the nature of written language as used in several communication technologies
• Analyse the linguistic and discourse structure of linguistic interaction in a number of different communication technologies

**Assessment:**
In previous years, students wrote an assignment of 3-4,000 words exploring one or more aspects of language and communication as mediated by technologies.

**Suggested Readings:**
LI 7861 Language Variation and Change (not available)
Michaelmas term

Aims:
This module has three main aims: (i) to examine the principles of language change, including both internally- and externally-motivated change, (ii) to understand language change in relation to linguistic variation, and (iii) to explore the insights arising from different methods in studying language variation. Assignments encourage students to gain first-hand experience in the observation of language variation.

Syllabus:
Specific themes addressed in the module include:

- Linguistic structure and language change
- Dialectology: models of linguistic history
- Real- and apparent-time indications of change
- Speaker variables: age, gender, social class, ethnicity
- Social networks and communities of practice
- Standardization as a social process
- Dialect convergence and divergence
- Language contact and language change
- Data sources in the study of language variation and change

Learning outcomes:
On successful completion of the module, students should be able to:

- Understand the relationships between linguistic theory and language variation
- Identify socially-significant variables within languages and to examine these in the light of hypotheses on historical change
- Critically discuss language standardization as a social process
- Critically discuss processes of language contact, creolisation, diffusion, and death

Assessment:
In previous years, students wrote an assignment of 3,000 to 4,000 words that used empirical data to present and analyse a problem in language variation and change. Data could come from any language, and direct observation (whether of spoken, written, or recorded material) was encouraged.
Suggested readings:
LI 7862 Linguistic Pragmatics (TBA)
Hilary term

Aims:
The module’s main aims are (i) to introduce students to inferential theories of pragmatics; (ii) to familiarize students with Relevance Theory in particular; and (iii) to give students experience of the practical description of conversational data.

Working methods:
The topics of the module are introduced in lectures and explored and developed in workshops and seminars. Practical description will focus on English but student speakers of other languages will be encouraged to apply their analyses to their first languages.

Syllabus:
Specific topics included in this module include:

- Grice and conversational maxims
- the principle of Relevance
- conceptual and procedural meaning
- the under-specification of meaning and processes of contextual enrichment
- lexical pragmatics
- coherence relations in discourse
- metaphor, irony and humour
- the functions of discourse connectives

Learning outcomes:
On successful completion of the module, students will be able to:

- demonstrate a theoretically informed awareness of the importance of inference and context to linguistic communication
- demonstrate an understanding of attempts to classify communication types
- explain Relevance Theory
- apply Relevance Theoretical analyses to conversational data

Assessment:
In previous years, students wrote an assignment of 3,000-4,000 words.

Suggested readings:


LI 7864 Corpus Linguistics (Elaine Úi Dhonnchadha)
Michaelmas term

Aims:
Corpora (large bodies of language samples which are held electronically as text, audio and/or video form) can be used to provide evidence for linguistic research (in syntax, morphology, stylistics, pragmatics etc.) They can be used in historical and sociolinguistic studies, and can be used to generate authentic language teaching materials and language testing materials, and they are used in the generation and testing of speech and language processing tools.

This module will introduce students to the principles of corpus creation (i.e. design, collection, and annotation), and students will gain experience of using various types of corpora, corpus query tools, and corpus annotation tools.

Syllabus:
Topics covered in this module may include:

- Corpus design, and collection and preparation of corpus materials
- Various levels of linguistic annotation, e.g. part-of-speech, phrase structure, phonetic, prosodic, gesture etc.
- Manual and automatic annotation, and evaluation/verification methods
- Use of corpora in Theoretical and Applied Linguistic Research, and in Language Teaching/Learning
- In the Lab, various types of corpora and corpus query tools

Learning Outcomes:
On successful completion of the module, students will be able to:

- Identify the benefits and limitations of using corpora in various linguistic domains.
- Analyse the requirements and formulate a corpus creation plan
- Examine the current annotation standards and tools and select/develop appropriate standards and annotation tools for the particular research task
- Use of various types of corpora and corpus query tools.

Assessment:
In previous years, assessment for this module, amounting to approximately 3-4,000 words, consisted of a written assignment on an
aspect of corpus development and/or use, or a report on a practical project carried by the student.

**Suggested Readings:**
Relevant papers are handed out each week.

[http://www.ahds.ac.uk/creating/guides/linguistic-corpora/index.htm](http://www.ahds.ac.uk/creating/guides/linguistic-corpora/index.htm)


LI7866 Bilingualism and the maintenance of Irish (not available)
Hilary term

Aims:
On successful completion of this module students should be able to:
- Analyse general issues and concepts in research on individual and societal bilingualism
- Assess research on early bilingual acquisition of language and on bilingualism and thought
- Critically analyse the factors affecting minority and endangered languages, and the circumstances in which language loss and language attrition are likely to occur
- Describe and assess the nature and extent of Irish/English bilingualism
- Examine the history of the Irish language and assess efforts to revitalise it
- Appraise the current position of Irish in comparative minority-language context and evaluate the potential of language planning and maintenance initiatives
- Assess the role of the education system in ensuring intergenerational transmission of the Irish language
- Evaluate theory and research in psycholinguistics, sociolinguistics and education that are relevant to bilingualism and the promotion of Irish.

Note: Students do not need to be able to speak Irish to take this module.
The module uses the Irish language in Ireland as a case study through which to explore bilingualism and the maintenance of minority languages.

This module has four aims: (i) to introduce key concepts and theories in bilingualism (2) to examine bilingualism and language maintenance in Ireland in a historical and a comparative context, making reference to other minority language situations; (3) to critically evaluate successes and failures in national efforts to revitalise Irish; and (4) to assess the contribution of the education system to the intergenerational transmission of the language.

The course is intended as an introduction to sociolinguistic research for students who are considering research either on bilingualism or on the Irish language.

The topics are presented in lectures and explored in class discussions. Each student also presents a mid term paper to the class on either a) an aspect of bilingualism; b) on a particular bilingual or minority language
situation with which the student is familiar; c) on a language planning/maintenance issue with which the student is familiar. Specific themes addressed in the module include:
• General issues and concepts in individual and societal bilingualism
• Bilingual first language acquisition and bilingual processing
• Code-switching, code-mixing and borrowing
• Minority & endangered languages, language loss and language attrition
• The nature and extent of Irish/English bilingualism today
• National efforts to revitalise Irish since the foundation of the state; levels of support for various measures
• Successes and failures in learning Irish at primary level; Long-term trends in attainment
• Classroom learning of Irish; attitudes of teachers, children and parents
• Bilingual education and immersion; Educational models that promote additive bilingualism
• Bilingualism and Identity; the role of minority language proficiency in identity development

Suggested Readings:

Assessment:
In previous years, assessment involved:
Final term 3-4,000 word assignment (70%)
Mid term Paper presentation (30%)
LI 7867 Laboratory Phonetics and Phonology (Maria O’Reilly)
Hilary term

Aims:
This course introduces students to the laboratory investigation of the segmental and prosodic systems of languages. It provides a practical training in specific analytic techniques: although the primary focus is on acoustic analysis methods, students are also introduced to other analysis techniques, which involve articulatory and (time permitting) aerodynamic data.

The course focuses on a series of experimental tasks associated with key aspects of linguistic structure, in order to provide an understanding of (i) the primary phonetic dimensions of speech generation, (ii) how these phonetic dimensions are exploited in the sound systems of different languages, and (iii) the interactions of phonetic and phonological factors in determining the sound systems of languages.

Syllabus:
The course is delivered in terms of a number of topics, each of which explores some aspect of the human speech production capacity. With each topic the student is required to carry out and write up a practical analytic task, which serves to focus on how different languages exploit this dimension in their sound systems. Analysis techniques can include spectrography, pitch extraction, electropalatography and airflow transduction (oral and nasal). The topics which are the basis for analysis are a selection from the following:

- Voice production, including: how voice is generated; how voice is used in spoken communication; a cross-language perspective on phonological voicing contrasts
- Source Filter in speech production
- Vowel systems
- Lingual articulation of consonants: secondary articulation and gestural overlap
- Coarticulation, including cross-language differences in lingual coarticulation and phonological constraints on coarticulation.
- Prosody: phonetic dimensions and their use in linguistic systems

Learning outcomes:
On successful completion of the module students will be able to:
• explain the interplay between the production of speech and the structural characteristics of sound systems
• analyse the cross-language diversity in phonetic/phonological systems
• demonstrate basic skills in empirical analysis of speech data, including the selection of techniques appropriate to analyse particular issues; how the data are recorded; and knowledge of how the data are represented, segmented, and interpreted for linguistic analysis.
• present and write up experimental data

Assessment:
In previous years, assessment was based on a written assignment of 3-4,000 words which expanded on one of the experimental tasks undertaken during the course.

Suggested Readings:
Aims:
This module aims to provide students with (i) a thorough understanding of how speech sounds are produced, (ii) fundamentals in the systematic description, classification and transcription of speech sounds, (iii) an understanding of the principles of phonemic analysis, and (iv) a basic training in phonemic analysis and systematic and impressionistic phonetic transcription.

Illustrative and exercise materials are drawn from a wide variety of languages. Teaching and learning methods include lectures, ear training and transcription practice. As part of self-study, students complete weekly reading and practical tasks using online resources.

Syllabus:
The course covers the following topics:
- Initiation and respiratory aspects of speech production
- Phonation
- The speech organs
- Principles of the IPA
- Consonants: place and manner of articulation
- Cardinal vowel system, the phonetic description of vowels
- Processes in connected speech: coarticulation and assimilation
- Systematic (phonemic, allophonic) and impressionistic transcription
- Phonemic analysis: basic concepts and practice

Learning outcomes:
On successful completion of the module, students should be able to:
- outline the principles of phonetic description of speech sounds;
- appropriately use standard descriptive terminology in phonetic and phonological description;
- identify basic concepts and methods of phonemic analysis;
- analyse and describe the articulation of speech sounds, consonants and vowels, within the framework of the International Phonetic Association;
- identify and discriminate between a wide range of speech sounds occurring in languages of the world;
• transcribe individual sounds and longer speech samples using the International Phonetic Alphabet using both broad and narrow phonetic transcription;
• select and use appropriate type of transcription (systematic, impressionistic) based on the nature of the analysis;
• apply the analytical and transcription skills to the description of sounds from unfamiliar languages;
• analyse phonetically transcribed data sets to perform basic phonological analyses

Assessment:
In previous years, assessment was based on two components, each contributing 50% towards the final module mark:

1. Course work: marked homework exercises carried out during the term
2. A short written project (practical task) submitted by week 12.

Core textbooks:

Other suggested reading is available via the module’s ReadingList link in Blackboard.
LI 7869 Describing Meaning (TBA)
Hilary term

Aims:
The course’s main aims are (i) to introduce students to the basic challenges facing the linguist seeking to analyse meaning communicated through language; (ii) to familiarize students with some leading representational and denotational approaches to semantics; and (iii) to give students experience of the practical description of the semantic structures of languages.

Working methods:
The topics of the course are introduced in lectures and explored and developed in workshops and seminars. Exercises and discussion will focus on a range of languages in addition to English.

Syllabus:
Specific topics addressed in this module include:

- theories of reference
- lexical relations and the dictionary
- the logical structure of language
- verbal argument structure
- event structure
- information structure
- metaphor and metonymy

Learning outcomes:
On successful completion of this module students should be able to:

- Apply the arguments for distinguishing the fields of semantics and pragmatics
- Describe the basic aspects of lexical semantics, including the status of lexemes and major lexical relations in English and one or more other languages
- Describe, analyse and apply formal approaches to semantics
- Assess the relationship between context and meaning
- Describe some cognitive accounts of figurative uses of language

Assessment:
In previous years, students wrote an assignment of 3-4,000 words developing themes introduced in the course and applying them to the semantic description of one or more languages.

*Suggested readings:*
LI 7871 Speech Processing 1: Spectral Analysis (Christer Gobl)
Michaelmas term

Aims:
The aim of this module is to provide students with an in-depth knowledge of the basic properties of continuous and discrete signals, and of linear time-invariant (LTI) systems, as the basis for spectral analysis of speech signals. Through the theoretical framework of LTI systems, the source-filter model of speech production is explored as well as different types of speech analysis techniques, including the speech spectrograph. A further aim is to introduce students to key digital signal processing techniques for spectral analysis of speech signals, including the Discrete Fourier Transform, Cepstral analysis and Linear Predictive Coding.

Syllabus:
Specific themes addressed within the module include:

- Continuous and discrete signals
- LTI systems
- The Source-filter model of speech production
- The Fourier Transform
- Digital Signal Processing: A/D, D/A, DFT, the Cepstrum, LPC
- Spectral analysis of speech signals

Learning outcomes:
On successful completion of this module the student will be able to:

- Describe the properties of continuous and discrete signals.
- Classify different types of speech signals and describe their general properties in the time and frequency domains.
- Outline the sampling theorem and explain the digitisation process of continuous-time signals and its implications for discrete-time speech processing.
- Describe the properties of linear time-invariant (LTI) systems.
- Define and explain different spectral analysis techniques based on the discrete Fourier transform (DFT) and on linear predictive coding (LPC).
- Apply spectral analysis techniques to the measurement of acoustic speech parameters.
Assessment:
In previous years, students carried out a series of practical exercises during the course, equivalent to 3-4,000 words. Alternatively, an assignment involving a single, larger task was carried out on a key aspect of the course: in this case, assessment was based on the written report (3-4,000 words) of the assignment.

Suggested readings:
Li 7872 Formal Foundations of Linguistic Theories (Carl Vogel)
Michaelmas term

Aims:
The course is designed to establish competence in foundational mathematical concepts used in contemporary cognitive science and computationally-oriented approaches to linguistic theory. Basic concepts of discrete mathematics are reviewed with attention to their relevance in linguistics: sets, operators, relations, trees, logic, formal language theory. Emphasis is placed on finite recursive specification of infinite formal languages as an idealization of grammar specification for natural languages (each of which is thought to be infinite but managed by finite brains). Natural languages are modelled as uninterpreted sets of grammatical sentences whose internal structural complexity has implications related to constraints on human syntactic processing. Human languages are also modelled via their translation into logical languages supplied with deductive mechanisms supplying representational and denotational semantic analysis. Logical languages within a range of expressivity classes are considered in terms of their syntax, semantics, and inference mechanisms as simulations of human recognition, interpretation, and reasoning with natural language expressions. Thus, the aims of the course are to (i) establish competence with the core concepts and analytical tools, (ii) develop awareness of the range of applicability of the tools and concepts within linguistic theory and cognitive science, (iii) foster confident and fluent use of formal methods in analysing human language and reasoning.

Working methods:
The course relies on lectures and hands-on practice with the formal tools. Self-access practice with the tools is essential. An automated theorem prover is introduced to facilitate specification of formal theories of natural language syntax and semantics within one of the logical languages addressed in the lectures in order to use the theorem prover to test the consequences of theories of language on natural language inputs. Thought-problems designed to test understanding of key concepts will be offered at the end of each session.

Syllabus:
Topics addressed in the module include:
• Sets, characteristic functions, operators, relations
• Languages as sets of sentences
• Propositional logic: syntax, semantics & valid inference
• Deductive inference and human reasoning
• Predicate logic: syntax, semantics & valid inference
• First order logic (FOL): syntax & semantics & valid inference
• Translating natural language utterances into FOL
• Axiomatizing theories in Prolog (Horn Logic).

Learning outcomes:
On successful completion of the module students will be able to:

• Define the basic constructs in discrete mathematics: sets (finite, infinite and impossible), algebraic operations on sets (intersection, union, complement, difference), characteristic functions, relations (e.g. reflexivity, transitivity, symmetry), partial orders, total orders, equivalence classes; properties of trees; propositional logic, predicate logic, first order logic, Horn logic (syntax, semantics, limits and valid inference in each case).
• Demonstrate the relevance to syntax of human languages in idealizing natural languages as infinite sets of grammatical sentences;
• Demonstrate the relevance to syntax of human languages in providing finite recursive definitions for infinite logical languages;
• Demonstrate the relevance to semantics of human languages in providing a compositional denotational semantics (with a syntax-semantics interface) to infinite logical languages;
• Explain how natural language semantics may be represented indirectly using formal logical languages and their model-theoretic semantics;
• Specify clear theories of grammar as axioms in a deductive framework capable of testing theoretical predictions;
• Transfer abstract competence to practical

Assessment:
In previous years, students completed a take-home assignment with a mixture of problems intended to elicit demonstration of mastery of core concepts and ability to reason with those concepts in representing relevant phenomena.

Recommended Readings:
Course handouts and sources in their bibliographies.
LI 7874 Speech Production, Hearing and Perception (Maria O’Reilly)

Michaelmas term

Aims:
This course aims to provide (i) an understanding of the whole process of speech communication, encompassing the speaker and the listener and (ii) an understanding of some of the major models of production, perception and hearing, and (iii) practical, hands-on, experience in conducting production and perception experiments. Central to the course is an understanding of the acoustic theory of speech production, and of the acoustic characteristics of speech sounds. Speech materials are analysed to illustrate the acoustic properties of speech, provide insight into to the underlying mechanisms of speech production, while also providing a basis for speech perception experimentation. The processes of hearing are dealt with along with the auditory transforms of the acoustic signal. Students are introduced to speech synthesis, and through synthesis-based experimentation to the methods that may be used to explore the perceptual correlates of speech sounds.

Syllabus:
Specific themes addressed within the module include:

- Acoustic theory of speech production
- Source filter theory
- Characteristics of the voice source
- Characteristics of the filter: resonance
- Hearing and the auditory system
- Synthesis and its applications in speech perception
- Perception of stops: locus theory
- Categorical perception
- Analysis, synthesis and perception of voice quality

Learning outcomes:
On successful completion of this module, students should be able to:

- explain the process of speech communication
- describe the acoustic theory of speech production and have knowledge of the acoustic properties of speech sounds
- assess some of the competing theories concerning the perception of speech
• conduct speech production or perception experiments
• interpret, present and write up experimental data

Assessment:
In previous years, the assessment was based on the conducting and writing up of experimental work on a key topic of the course, equivalent to 3-4,000 words.

Suggested readings:
LI 7875  Speech Processing 2: Acoustic Modelling (Andy Murphy)
Hilary term

Aims:
The aim of this module is to provide students with an understanding of the acoustics of speech production and with knowledge about the signal analysis and processing techniques required to model the speech production process for the purpose of generating synthetic speech.

Syllabus:
A theoretical framework is developed whereby students are introduced to the Laplace transform and the s-plane, the z transform and the z-plane, as well as techniques for the design of digital filters. A further aim is to introduce students to different speech synthesis methodologies which may be used in text-to-speech systems, including parametric, concatenative, and articulatory approaches.

Specific themes addressed within the module include:
- Speech acoustics
- The Source-Filter model of speech production
- The Laplace transform / The z-transform / Impulse invariant transformation
- First and second order filters
- Parametric, concatenative and articulatory methods for speech synthesis and methods for text-to-speech conversion
- Cascade and parallel formant synthesis

Learning outcomes:
On successful completion of this module, students will be able to:
- Explain the fundamentals of speech acoustics.
- Demonstrate how the speech signal can be modelled in terms of source and filter.
- Design and use discrete-time filters for modelling the acoustics of the vocal tract, by applying techniques involving the Laplace, z- and filter transforms.
- Perform time and frequency domain analysis of cascade and parallel vocal tract models.
- Develop a basic formant synthesiser

Assessment:
In previous years, students carried out an assignment involving the design and implementation of acoustic models of speech production. Students were assessed on their implementations and written report of the assignment.

*Suggested readings:*
Aims:
This module is concerned with the nature and development of L2 grammar, and with grammar as pedagogical content, with specific reference to English. The principal aims are to foster in students a critical awareness of a range of factors affecting the acquisition of L2 grammar, and to provide them with a basis for critically assessing a range of approaches to the teaching of grammar.

Working methods:
The module will be taught through a combination of lecture, workshop activities based on English grammar points and ELT materials, and student-led discussion.

Syllabus:
Specific themes addressed in the module include:

- the nature of grammatical rules
- declarative and procedural knowledge
- the roles of conscious and unconscious grammatical knowledge in learning a second or foreign language
- the relationship between grammar and lexis
- the role of output and practice in grammar acquisition
- the role of feedback in grammar acquisition

Learning outcomes:
On successful completion of the module, students will be able to

- critically discuss a range of conceptions of “grammar” in relation to the enterprise of language learning and teaching
- critically discuss a range of factors affecting the acquisition of L2 grammar
- compare and evaluate a range of approaches to the teaching of grammar
- summarise and critically engage with the current research literature on the acquisition and pedagogy of L2 grammar
- evaluate the challenges posed by specific features of English grammar for the learner of English
- apply the theoretical insights gained to the teaching of English grammar
• evaluate pedagogical tasks and materials for English teaching

Assessment:
In previous years, students wrote an assignment of 3-4,000 words exploring one aspect of the theory of grammar pedagogy, underpinned by an understanding of language acquisition. The essay could draw on one or more topics in English grammar by way of illustration and propose a systematic approach to its teaching in a stated context.

Suggested readings:
LI 7878 Describing English Grammar (TBA)
Michaelmas term

Aims:
This module has four principal aims: (i) to examine the major morpho-syntactic features of English, using insights from modern generative linguistic theory (ii) to understand the principles that account for morpho-syntactic variation across different English dialects, (e.g. Irish English, British English, American English, etc.) (iii) to develop a critical perspective on the question of what constitutes English grammar from the perspective of modern linguistic theory, and (iv) to understand how to compare English with other languages using formal tools.

Syllabus:
This module focuses on the concept of ‘grammar’ as a type of knowledge, setting aside questions of its usage. Focusing on major morpho-syntactic features, we will examine English grammar from the scientific perspective of modern generative linguistic theory. This approach to grammar as an innate human endowment will prove essential for analysing the structure of English, allowing us to compare the morpho-syntax of different English varieties with other languages in the tradition of comparative linguistics.

Spoiler alert: this module in not a course on prescriptive English grammar.

Learning outcomes:
On successful completion of this module, a student should be able to:

- Analyse the morpho-syntax of English sentences using insights from modern linguistic theory
- Compare and contrast language variation in English
- Evaluate critically the concept of English grammar through insights from modern generative linguistic theory
- Compare the grammars of different English dialects with the grammars of other languages

Assessment:
In previous years, assessment comprised the following:
- Syntax Exercise (Pass/Fail)
Marked on a pass/fail basis. Students who were unsuccessful on the syntax exercise were required to submit a supplemental exercise.

- Argumentative Essay (100%)
  Students were assessed on the basis of one 3,500 word argumentative essay. Details on the essay guidelines were provided by Teaching week 5.

Suggested readings:

(Complete Reading List available on Blackboard)
LI 7879 Research methodology (Colin Flynn)
Michaelmas Term

**Aims:**
This tutorial series is an obligatory part of the preparation for the dissertation and has three principal aims: (i) to equip students with the knowledge and skills necessary to critically evaluate published research and to explore different ways of translating research questions in quantitative or qualitative studies; (ii) to introduce the basic concepts, experimental designs and statistical procedures needed to execute research; and (iii) to provide hands-on experience in using the statistical package SPSS to carry out data analysis in linguistics, ELT, applied linguistics and speech and language processing. Training in SPSS will include data entry, presentation of results and the use of the package to conduct statistical tests to check for relationships among groups. Among the statistical tests introduced are Chi-square, Pearson correlation and t-tests (paired and independent).

**Working methods:**
The topics in the part of the series on research methods and experimental design are presented in lectures and explored and discussed in class. The statistics sessions are composed of a lecture followed by a lab session in which there will be an opportunity for students to implement what they have learned about statistics and SPSS.

**Syllabus:**
Specific themes addressed in the tutorials include:

- Qualitative versus quantitative approaches to research
- Descriptive and exploratory research
- Design and analysis of surveys
- Research ethics
- Questionnaire design
- Advantages of a mixed-method approach to data collection interviews and focus groups
- Observation and field research
- Talk-aloud, retrospective and stimulated recall tasks
- Sampling issues in qualitative research/case studies
- Qualitative data analysis (coding and data reduction)
- Descriptive and inferential statistics
• Levels of measurement
• Measures of central tendency and dispersion
• Frequency distributions, the null hypothesis and error types
• Confidence intervals/statistical significance
• Parametric and non-parametric tests to check for a) relationships and b) differences between groups/variables

When students have completed this tutorial series, it is expected that they will:

• Have a thorough understanding of the different qualitative and quantitative approaches to research and to the design of experiments in linguistics and applied linguistics
• Be familiar with topics such as quasi-experimental research, the structure and content of a typical research article and programme evaluation
• Be familiar with the basis concepts of sampling and statistics and understand how to interpret the more common parametric and non-parametric tests
• Be able to enter, modify, analyse, present and interpret data output and results from SPSS
• Be able to use SPSS to present data summaries in visual form.
• Be able to communicate findings and present results from experimental studies
• Be able to interpret and critically evaluate published research findings.

Suggested Readings:
Research ethics documents on the CLCS School website

Key Textbooks:
Data files at http://www.routledgetextbooks.com/textbooks/9781138024571/spss_data.php

Recommended Textbooks:


Other useful sources:


Open Access

https://opentextbc.ca/researchmethods/
LI 7883 Multilingualism (Colin Flynn)
Michaelmas term

Aims:
The goal of this module is to introduce students to ideas and concepts of multilingualism, and to examine situations where three or more languages are present in an individual’s language repertoire or speech community. This module takes as its point of departure multilingual individuals (children and adults) and their social context. It has three key themes: (1) to explore concepts and theories in multilingual individuals, communities and societies, (2) to introduce cognitive and acquisitional aspects of multilingualism; and (3) to assess critically successes and failures in policies to encourage multilingual language learning and use, particularly in education. The module is intended as an introduction to research for students who are considering research on multilingualism in individuals and societies. Whilst drawing on examples from across the world, the module nevertheless has a strong European flavour, with references to the work of the European Union and Council of Europe in language education policy, and case studies drawn from multilingualism in Europe.

Syllabus:
Specific aspects addressed in the module include:

- General issues and concepts in individual and societal multilingualism
- Multilingual language acquisition, the role of prior native and non-native language knowledge in the language acquisition process, multilingualism and cognitive development, crosslinguistic influence
- Multilingual education programmes, tools to encourage multilingual language use and learning, and evaluation/assessment
- Language policy and language education policy in multilingual contexts

Learning outcomes:
On successful completion of this module, students should be able to:

- Analyse general issues and concepts in research on individual and societal multilingualism
- Critically evaluate theory and research relevant to multilingual practices and policies.
- Assess research on acquisitional and cognitive aspects of multilingual language acquisition
- Examine the impact of official language policies on multilingualism
- Critically assess the role of different types of educational systems and policies in affording opportunities for multilingual language learning and use
- Conduct research on multilingualism in the individual and society

Assessment:
In previous years, the module involved a site visit to a local example of multilingualism in practice. After this visit, students wrote and submitted a reaction paper (1000-1500 words) which was weighted at 40% towards the mark for the module. At the end of the module each student submitted a research paper (2000-2500 words) weighted at 60% of the final mark.

Suggested readings:
Aims:
This module has four aims: (i) to explore the practical implications of language learning theory in classroom practices today; (ii) to deepen students’ understanding of the pedagogical implementation of second language curricula in existing classrooms; (iii) to provide students with the opportunity to observe and reflect on real teaching practices, lesson plans, teaching materials, and assessment methods; and (iv) to provide students with a supported opportunity to teach in a language classroom. The module is designed to have students both observe teaching practices, and reflect critically on these observations. The module aims to provide a solid foundation of knowledge and skills necessary to engage in future language teaching.

Working methods:
The topics of the module are presented using a range of teaching methods. Theory will be usually be delivered through lectures, and then explored in greater depth through small-group, and whole-class discussion. Students will also be engaged in practical micro-teaching (small-scale teaching) demonstrations and evaluation.

Syllabus:
Specific themes addressed in the module include: teaching methods; curriculum implementation; using pre-existing teaching and learning materials in the classroom; creating lessons plans from syllabi; evaluation of TESOL materials, and student-centred teaching.

Learning outcomes:
On successful completion of this module students should be able to:

- Evaluate observed teaching practices for their strengths and weaknesses, based on teaching and learning theory
- Evaluate teaching and learning materials in order to select optimal materials to match student needs
- Evaluate the effectiveness of observed classroom-based tasks for student-centredness
- Create a lesson plan from an existing language syllabus
- Reflect on their own teaching practices
Assessment:
In previous years, students submitted a portfolio (2000 words, 50%) of reflections on classroom observations, which critically evaluated multiple facets of their classroom experience. They were also evaluated on a practical assignment (50%) where they demonstrated the teaching of a small classroom task, accompanied by a self-evaluation and reflection paper (1500 words), which drew on teaching and learning theory in relation to their own teaching experience.

Suggested readings:


LI 7885 English Language Teaching Practice 2 (Antoin Rodgers)  
Hilary term

**Aims:**
This module has four aims: (i) to explore the practical implications of language learning theory in classroom practices today; (ii) to deepen students’ understanding of the pedagogical implementation of second language curricula in existing classrooms; (iii) to provide students with the opportunity to observe and reflect on real teaching practices, lesson plans, teaching materials, and assessment methods; and (iv) to provide students with a supported opportunity to teach in a language classroom. The module is designed to have students both observe teaching practices, and reflect critically on these observations. The module aims to provide a solid foundation of knowledge and skills necessary to engage in future language teaching.

**Working methods:**
The topics of the module are presented using a range of teaching methods. Theory will be usually be delivered through lectures, and then explored in greater depth through small-group, and whole-class discussion. Students will also be engaged in practical micro-teaching (small-scale teaching) demonstrations and evaluation.

**Syllabus:**
Specific themes addressed in the module include: teaching methods; curriculum implementation; using pre-existing teaching and learning materials in the classroom; creating lessons plans from syllabi; evaluation of TESOL materials, and student-centred teaching.

**Learning outcomes:**
On successful completion of this module students should be able to:

- Evaluate observed teaching practices for their strengths and weaknesses, based on teaching and learning theory
- Evaluate teaching and learning materials in order to select optimal materials to match student needs
- Evaluate the effectiveness of observed classroom-based tasks for student-centredness
- Create a lesson plan from an existing language syllabus
- Reflect on their own teaching practices
Assessment:
In previous years, students submitted a portfolio (2000 words, 50%) of reflections on classroom observations, which critically evaluated multiple facets of their classroom experience. They were also evaluated on a practical assignment (50%) where they demonstrated the teaching of a small classroom task, accompanied by a self-evaluation and reflection paper (1500 words), which drew on teaching and learning theory in relation to their own teaching experience.

Suggested readings:


Aims:
This module, which is delivered through the medium of Irish, has three key aims: (i) to enable students to communicate in their subject area through the medium of Irish in a classroom or other context. This will be achieved through autonomous language learning where students reflect upon their own language use; through their planning for situations in which Irish will be used; through monitoring and assessing their own Irish-language proficiency and being pro-active in their language learning; (ii) to familiarise students with resources and technology that can be used for the implementation of subject specific Irish-medium instruction and (iii) to explore in theory and practice the key pedagogical concepts related to target language use, language immersion, and Content and Language Integrated Learning (CLIL).

The module runs over two semesters to facilitate language learning aims. All lectures take place in the first semester. Content for the second semester is available online via Blackboard.

Students taking this module will be required to take an Irish language test (spoken and written) in the week prior to the start of term, to establish their baseline proficiency in order to facilitate the setting of personal language goals. Students will be tested again at the end of the second semester. Please note that assessment of this module focusses on the achievement of personal learning goals rather than on the level of proficiency achieved, i.e. the aim is to instill the need for personal responsibility in language learning and to encourage autonomous and continuous language learning.

Syllabus:
The module An Ghaeilge mar Mheán Teagaisc (Irish as a Medium of Instruction), will facilitate students in refining and adapting their language competence to communicate effectively through Irish in a classroom context. It will enable them to acquire and master the relevant and appropriate classroom discourse in Irish, and to become familiar with the theory and practice of pedagogical concepts and educational instruments related to target language use, language immersion, and CLIL.
Specific themes addressed in the module include: ‘CLIL’ content and language integrated learning (and relating the theory with practice); the theory of teaching through a second language - the Irish context; theories of second language acquisition - how people learn languages & practical implications for a classroom; the concept of language scaffolding, i.e. building on target language competence by focusing on relevant vocabulary; the use of technology in language acquisition; the concept of autonomous language learning; the concept of reflective practice; the use of self, peer and instructor feedback in setting goals, designing curricular components for targeted subjects through Irish, implementing and delivering same; the theory and practice of needs analysis in language learning and curricular design and implementation.

**Learning outcomes:**
On successful completion of this module students will be able to:

- Apply techniques and theories learned in class in order to design, develop and deliver subject specific content through the medium of Irish
- Develop and apply practical techniques for developing language learner autonomy
- Engage in language needs analysis for specific cohorts and targeted learning goals
- Draw from and synthesise theories of second language acquisition during lesson preparation and delivery
- Exploit available Irish language resources and technology for both content and language learning
- Show increased proficiency and confidence in using Irish as a medium of instruction

**Assessment:**
In previous years, assessment comprised the following:

- Class presentation (30%)
- Mid-term written reflective assignment (1000 words) (20%)
- End-of-term written assignment (1500-2000 words) (50%)

**Suggested readings**


Harris, J. & Ó Duibhir (2011) Múineadh éifeachtach teangacha: Sintéis ar thaighde, BÁC: NCCA.


Aims:
This module combines both theory and practice and sets out to equip students with practical experience and skills as well as a theoretical understanding of how to design, implement and evaluate Computer-Assisted Language Learning applications. The emphasis throughout is on encouraging interdisciplinary collaboration among the students and on project-based group learning. The principal focus is on CALL development for Irish language instruction but content development for other languages is also possible. Specific aims are to: (i) enable students from different (technical, pedagogical and linguistic) backgrounds to develop their skills as well as a broad understanding of CALL as an interdisciplinary field, (ii) to familiarise students with some pedagogical considerations and second language acquisition theory that should ideally guide the development of CALL, (iii) familiarise students with a range of speech and language technologies that can be deployed in CALL (iv) provide students with practical skills in the design/development of CALL content, (v) provide students with practical skills in the implementation of CALL content, (vi) provide students with practical skills in the evaluation of CALL content and (vii) give students, where possible, hands on experience of working as part of a multidisciplinary team in order to create their own prototype digital materials.

Syllabus:
This module introduces students to current Computer-Assisted Language Learning (CALL) resources and presents an overview of current major trends in CALL research. In this context, ongoing CALL research on Irish in the School is presented. A brief overview of essential theoretical considerations is presented and discussion includes the fundamental place of second language acquisition and pedagogical theory in the design of CALL content. The specific language context and the sociocultural context of the language learner is another fundamental consideration that is here briefly reviewed along with the need to identify clear linguistic goals in CALL design.

The implementation of CALL design in terms of specific linguistic content or of a platform design, etc. is undertaken as group work and
the emphasis throughout is on maximising the interdisciplinary collaboration of students with different backgrounds and skills. Attention is also directed at how CALL materials can be evaluated. The module will encourage students to develop interactive and innovative CALL platforms which may make a significant contribution to the use of new language teaching methodologies in which technology can play a very significant role. The impact of the module may be significant in disseminating interactive CALL materials into schools.

Learning outcomes:
On successful completion of this module students will be able to:

1) explore how language structure as well as language acquisition and pedagogical theory should ideally be used as a foundation for CALL design;
2) describe how concepts, models and resources from speech and language sciences can be exploited to design powerful learning environments for CALL;
3) engage in implementation of CALL resources/materials that exploit speech and language models and technologies;
4) discuss suitable evaluation frameworks for speech and language-based CALL applications;
5) undertake research in either design or implementation of digital materials for CALL;
6) communicate the results of this research through presentation and through a written account. This should, where appropriate, include supplementary materials/content developed.

Assessment:
In previous years, assessment involved a 3-4,000 word essay.

Suggested readings:
Materials are developed and tailored specifically for the course. Relevant material will be provided in and through Blackboard: e-books, e-journal articles and online materials are typically used in combination with lectures.

The indicative reading list for this module includes:


LI7897 Speech and Language Technology in Education (Neasa Ní Chiaráin)
Michaelmas Term

Aims:
The aim of this module is to introduce students to how speech and language technology, as well as computational models of speech and language can be used in the teaching/learning of language. There will be a specific focus throughout on the Irish language and its particular context, but an in depth knowledge of the Irish language is unnecessary for participation. The focus is both theoretical and practical and the course emphasizes the multidisciplinary perspectives that are required for effective deployment of technology in education. Students are introduced to a range of speech and language technologies, some of which are currently in use for language instruction, and some of which, though ripe for educational deployment, are not yet in use. Learning theories and pedagogical methods are explored in terms of their implications for the development of technological applications in language teaching. The sociolinguistic context is a further major factor which is considered. The broader question of differences in the deployment of the technology in minority and major world languages are discussed.

The module will be innovative in encouraging students from technical, pedagogic and linguistic backgrounds to explore the interdependence of these areas for the production of materials which are interdisciplinary by nature. Upon completion of the module, it is expected that students will have acquired specialised knowledge, skills and a theoretical framework for developing educational technology for language instruction.

Syllabus:
The module will equip students with a multidisciplinary theoretical framework as a background for the research and development of educational applications of technology. Speech and language technology is explored in detail and its potential for transforming the educational process is discussed. The need for a firm theoretical foundation in language acquisition and pedagogical theory as a precursor to educational content development is a major theme. Furthermore, attention is given the linguistic structure of the target language, the specific linguistic goals for particular learner cohorts are central considerations. Students also consider the sociocultural context in which the educational technology is being deployed. In this module
there is ongoing reference to Irish speech and language technology and
the implications of technology for minority and endangered languages
in comparison to major world languages are considered. While the
module does not require students to have knowledge of the Irish
language, illustrations with a specific reference to Irish will be used
throughout.

*Learning outcomes:*

1: Articulate why linguistic analysis / theories of language acquisition
are fundamental to the development of content in educational
technology

2: Debate how speech analysis, speech models and speech technologies
are currently used for language instruction. Articulate how the current
state-of-the-art in these areas offers potential new avenues for future
development

3: Debate how computational analysis and models of language, and
language technologies are currently used for language instruction and
the directions in which future developments are envisaged

4: Discuss how the specific language context and the socio-cultural
setting (e.g., lesser-spoken vs. major world languages) impacts on the
provision and use of speech and language technologies

5: Undertake research in one specific aspect of technology-based
language instruction

6: Communicate the results of this research through written papers
and/or presentations

*Assessment:*

In previous years, Assessment was in the form of a written assignment.

*Suggested readings:*

Beatty, K. (2003). *Teaching and researching computer-assisted


LIP12002 Language and Gesture (not available)
Hilary Term

**Aims:**
This module has following key aims:

1. To examine current key theories of the role of gesture in language use
2. To review relevant historical perspectives on gesture and language
3. To compare the roles that gestures play in signed and spoken language
4. To present an overall view of language as a multimodal, embodied, and experiential activity

There is growing interest in the roles that gesture plays in human language systems. While it was once thought that gestures were more or less peripheral to language and were used in largely non-principled ways, current studies continue to build evidence that gesture is central to meaning construction. Co-speech gestures contribute meaning to constructions not supplied by words and grammar. Sometimes gestures even replace lexical meaning in a sentence. There is evidence that many aspects of signed language lexicon and grammar have gestural sources, and that gestures contribute to meaning in signed constructions in some similar ways as co-speech gestures do in spoken language. This course looks at current thought and theory regarding the role of gesture from an evolutionary perspective, as pragmatic, semantic and grammatical units, as co-speech elements, and in signed language, and presents a view of language as multimodal, embodied, and as a perspectivized, experiential activity.

**Learning Outcomes:**

By the end of this module, students are expected to:

- Demonstrate an understanding of key theoretical advances in gesture research by participating in class discussions
- Use terminology appropriately specific to language as multimodal, embodied, perspectivized, and experiential
- Apply key concepts in language and gesture to analyse discourse examples of multimodal constructions
- Locate specific research articles and demonstrate their applicability to a chosen research topic
- Carry out a research project based on key concepts discussed in the module, and successfully write a research-based paper outlining findings

**Assessment:**

In previous years, assessment involved an annotated bibliography (20%); a Research topic abstract and paper outline (20%); and a Research paper (60%).

**Indicative Reading List:**


LIP12003 Experimental Analysis of Sound Systems (Maria O’Reilly)
Hilary term

Aims:
This module builds on the Michaelmas Term module The Sounds of Languages, and aims to:

- introduce students to experimental, laboratory-based approaches to the analysis of sound systems
- develop an understanding of the acoustic theory of speech production
- develop practical skills in the use of specific techniques, to include: basic principles of experimental design, skills in data segmentation and measurement, and experience in interpreting data and relating results to theoretical concerns
- through a series of laboratory analytic tasks, the module aims to provide insight into the interface of phonetics and phonology, looking at the acoustic-perceptual dimensions on which sound systems are built, at how languages vary in exploiting these dimensions, and how production/perception constraints may shape phonological structure and trigger sound change

Module Content:
This laboratory-based module introduces students to the empirical analysis of spoken language, attending to the theoretical aspects while developing practical analytic skills. It is organised in terms of a series of topics, illuminating specific dimensions of the sound structures of languages. For each topic introduced, analytic tasks are undertaken that allow students to explore the phonetic realisation of phonological contrast. Throughout, consideration is given to languages’ diversity in exploiting the dimensions of potential contrast, and to the production/perception constraints that shape sound systems and tend to trigger sound change. The module deals primarily with the segmental structure of languages, though essential aspects of prosodic structure are dealt with briefly.

Acoustic analysis is central to the module, as are basic skills in reading broad and narrow-band spectrograms. An introduction to the basic acoustic theory of speech production is provided, and students are shown the steps involved in experimental research: basic
considerations in experimental design; segmentation and annotation of data; measurement and presentation of results; interpretation and theoretical implications of results.

Non-acoustic techniques are more briefly introduced, such as the articulatory technique, electropalatography, and, time permitting, aerodynamic techniques, to illustrate how these can illuminate of particular aspects of sound structure.

Students are shown how empirical data is presented and written up, following the conventions of scientific writing in the field.

**Learning Outcomes:**
On successful completion of this module, students should be able to:

- Engage in laboratory-based empirical description and analysis of aspects of the sound structure of languages.
- Demonstrate an understanding of basic acoustic theory and of key techniques that are used for quantitative analysis.
- Discuss how experimental data illuminates (i) the phonetic-phonological structure of a language, and (ii) how the human sound-producing capacity is exploited differently across languages for the communication of meaning.
- Carry out an empirical research task, demonstrating an understanding of experimental design, data segmentation, annotation and measurement and of how experimental data is interpreted.
- Present the results of the research task, following the conventions for scientific publications in the field.

**Assessment:**
In previous years, assessment involved a laboratory-based experimental task, to be presented according to the conventions of scientific publication in the field.

**Recommended Reading List:**
LIP12005 Corpora in Speech and Language Processing (Elaine Úi Dhonnchadha)
Hilary term

Aims:
This module aims to:
• introduce students to corpus design, pre-processing and annotation, and the role of language data in speech and language processing
• enable students to gain experience of using various types of corpora, various corpus analysis and query tools, and corpus processing software
• familiarise students with the research literature in the field

Learning Outcomes:
On successful completion of this module students should be able to:
• Identify the benefits and challenges of using corpora in various linguistic domains
• Analyse requirements and formulate a corpus creation plan
• Differentiate between current machine-learning algorithms and their applications
• Present a synopsis of literature in the field
• Use various types of corpora and corpus processing interfaces and tools

Module Content:
Corpora are used in machine learning, in the development and testing of speech and language processing tools, and the development of linguistic knowledge bases.

Topics covered in this module may include:
• corpus design and pre-processing
• types of annotation, e.g. parts-of-speech, phrase structure, semantic categories etc. and manual and automatic methods of annotation, and evaluation
• the exploitation of corpora in a variety of natural language processing/generation applications, using a variety of software tools and methodologies

Assessment:
In previous years, assessment involved an assignment of 3,000-4,000 words.
**Recommended Reading:**

Relevant papers are assigned each week for class discussion.


Journals and Conference Proceedings:

- Association of Computational Linguistic Proceedings
- Language Resources and Evaluation Journal
- Natural Language Engineering
- Digital Humanities Scholarship
- International Journal of Corpus Linguistics
- [https://arxiv.org/search/cs](https://arxiv.org/search/cs)
LIP12008 Psychology of Language Learning and Teaching (TBA)
Hilary term

Aims:
This module has four main aims:
(i) to introduce key concepts and theories in the psychology of language learning;
(2) to examine that factors that contribute to positive psychology in the classroom;
(3) to critically examine research methodologies deployed within this discipline; and
(4) encourage students to critically reflect on their own teaching / learning experiences.

Learning outcomes:
Upon successful completion of the module, students should be able to:

- Analyse general issues and concepts in research on language learning psychology
- Engage in informed discussions on matters relating to learner and teacher wellbeing.
- Provide evidence of a critical awareness of the range of research methodologies used by language learning psychology researchers, and reflect on the appropriateness of methods in different contexts.
- Examine current research directions and demonstrate an awareness of areas which require further investigation.
- Identify factors affecting positive psychology in the classroom and present innovative ways to foster positive emotions amongst learners

Module content:
This module explores factors that enable language learners and teachers to thrive individually and in their communities. Focus is placed on three distinct areas; theoretical considerations, empirical investigations and applied solutions. Key concepts and theories will be introduced relating to the psychology of language learning. Empirical data will highlight the challenges emerging from these contexts, and the applied element considers innovative ways to implement positive psychology in the classroom.
The topics of the module will be presented in lecture form and will be further explored in group discussion. Readings will be regularly assigned and students will be encouraged to reflect on this knowledge and how it relates, or not, to their own teaching / learning experiences.

- Specific topics addressed in the module include:
  - Language teacher / learner motivation
  - Language learning anxiety
  - Emotional complexity of language learning
  - Emotional complexity of language teaching
  - Learning strategies and self-regulation
  - Positive psychology in the classroom
  - Teacher & learner wellbeing

**Assessment:**
In previous years, assessment involved a midterm group presentation (20%) and a final 3,000-word assignment (80%).

**Recommended Reading:**


Additional readings will be suggested on a weekly basis.