

MA Computational Linguistics Semester II - Course Descriptions (2 January – 11 April 2026)

Course Title	Basic Issues in Phonology
Category (Mention the appropriate category (a/b/c) in the course description)	a. Existing course with more focus on Indian languages
Course Code	MACLINGC 421
Semester	II
No. of Credits	4
Maximum intake	30 (on first-come-first-served-basis)
Day/ Time	Wednesday & Friday: 11.00 am – 1.00 pm
Name of the teacher/s	Prof. Hemalatha Nagarajan
Course Description:	<p>i. The course presents an overview of the difference between phonetics and phonology, the development of phonological theory within a Generative framework, especially the use of distinctive features (binary vs monovalent representations), phonological processes, and the notion of underlying representation and surface representation.</p> <p>ii. Learning outcomes— By the end of the programme, the students will have: PO1: obtained a sound knowledge of various branches of language sciences: theoretical and applied PO2: acquired skills to analyse various aspects of a language/ languages PO3: applied theories to analyse data from Indian and other languages PO4: understood how theories are built with evidence/data from languages PO5: obtained theoretical and functional understanding of phonetics with special reference to English PO6: carried out empirical studies in languages PO7: learnt to apply knowledge of linguistics to other disciplines such as Artificial Intelligence, Cognitive Psychology, Forensic and Clinical Sciences PO8: learnt to address language-related societal needs and issues: language planning, language maintenance, language standardization, language variation and language and gender PO9: learned to describe and document lesser studied and endangered languages PO10: learned to use relevant tools to analyse phonetic and linguistic data</p> <p>a) domain-specific outcomes: Upon successful completion, students will have the knowledge and skills to CO1: identify phonemic inventories of different languages, phonological processes and natural classes, the nature of phonological explanations, the structure of phonological theory, the shape of phonological representations(features vs.</p>

	<p>elements), and a comparison between different theories of phonological processes.</p> <p>CO2: identify theoretical approaches to phonological analysis, produce evidence of analytical ability and determine phonological processes evident in a wide-range of the World's languages, with special reference to Indian languages; understand how phonological rules apply and are ordered</p> <p>CO3: observe and identify phonological variations in new linguistic contexts</p> <p>CO4: apply the principles of phonological variation to the structures of their languages</p> <p>CO5: plan fieldwork for collection of data pertaining to speech sounds- segmental and supra-segmental.</p> <p>b) value addition: The course 'Basic Issues in Phonology' develops an awareness of the phonology or sound systems of languages belonging to different language families, with special emphasis on Indian languages. It makes them aware of the linguistic diversity of the world.</p> <p>c) skill-enhancement: Student-centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences (a.)</p> <p>d) employability quotient: During the last 3 years, inputs from latest research are fed into curriculum renewal and revision (a.)</p>
Course Delivery	Lecture and Experiential learning for all modules
Evaluation Scheme	<p>Internal (modes of evaluation): assignment (10%), written tests (30%)</p> <p>End-semester (mode of evaluation): written exam (60%)</p>
Reading List	<p>Essential reading:</p> <p>Handouts will be provided on all topics. These handouts would be based primarily on content from the following texts:</p> <p>Gussenhoven, C., & Jacobs, H. (2017). <i>Understanding phonology</i>. Routledge.</p> <p>Hayes, B. (2008). <i>Introductory phonology</i> (Vol. 7). John Wiley & Sons.</p> <p>Odden, D. (2005). <i>Introducing phonology</i>. Cambridge university press.</p> <p>Carr, P. (2019). <i>English phonetics and phonology: An introduction</i>. John Wiley & Sons.</p> <p>Cowan, W. (Ed.). (1998). <i>Source book for linguistics</i>. John Benjamins Publishing.</p> <p>Nagarajan, H. (2022). <i>The Routledge Companion to Linguistics in India</i>. Taylor & Francis.</p>

Course Title	Basic Issues in Semantics
Category (Mention the appropriate category (a/b/c) in the course description)	Existing course without changes
Course Code	MACLINGC 451
Semester	II
No. of Credits	4
Maximum intake	30 (on first-come-first-served-basis)
Day/ Time	Tuesday & Thursday: 4.00 pm – 6.00 pm
Name of the teacher/s	Dr. Utpal Lahiri
Course Description:	<p>This course is an introduction to basic semantics. At least one introductory syntax class, though not required, will be very useful. Some knowledge of basic mathematical notions from set theory and logic will be assumed, but much of it will be introduced as we move along in the class, so students without the background should not have problems. We attempt to answer questions like: what is meaning? How do meanings combine? We approach semantic theory in the context of modern generative grammar. Topics include reference and truth, proper names, predication, quantification, logical form in philosophy and linguistics, rules of semantic composition.</p> <p>i. Learning outcomes—</p> <p>By the end of the programme, the students will have:</p> <p>PO1: obtained a sound knowledge of various branches of language sciences: theoretical and applied</p> <p>PO2: acquired skills to analyse various aspects of a language/ languages</p> <p>PO3: applied theories to analyse data from Indian and other languages</p> <p>PO4: understood how theories are built with evidence/data from languages</p> <p>PO5: obtained theoretical and functional understanding of phonetics with special reference to English</p> <p>PO6: carried out empirical studies in languages</p> <p>PO7: learnt to apply knowledge of linguistics to other disciplines such as Artificial Intelligence, Cognitive Psychology, Forensic and Clinical Sciences</p> <p>PO8: learnt to address language-related societal needs and issues: language planning, language maintenance, language standardization, language variation and language and gender</p> <p>PO9: learned to describe and document lesser studied and endangered languages</p> <p>PO10: learned to use relevant tools to analyse phonetic and linguistic data</p> <p>a) domain-specific outcomes: Upon successful completion, students will have the knowledge and skills to</p>

	<p>CO1: understand the basic notions of Syntax and Semantics, Semantic rules and Grammar, Truth Conditions, Entailment and Synonymy, Set theory, Lexicons. (Chapter 1 of the Altshuler et al.).</p> <p>CO2: explain meaning relations like Entailment, Implicature, Presuppositions, Synonymy, Appropriateness, Anaphoric Relations. (Chapter 1 of Chierchia and McConnell-Ginet)</p> <p>CO3: apply symbolic logic to understand Atomic Sentences and their parts, Connectives, Quantifiers, Predicate Conjunction, Rules of SL. Truth values, truth Conditions, Extensions, Languages, Grammars. (Chapter 2 of Altshuler et al.)</p> <p>CO4: apply the principles to analyse and understand <u>Sentences and Determiner Phrases</u>. Syntax, Direct and Indirect Interpretation, Quantificational DPs. (Chapter 3 of Altshuler et al.), a very basic introduction to Generalized Quantifier Theory.</p> <p>b) value addition: The course ‘Basic Issues in Semantics’ links logic to language and makes them aware of the elements of language that convey meaning.</p> <p>c) skill-enhancement: Student-centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences (a.)</p> <p>d) employability quotient: During the last 3 years, inputs from latest research and industry are fed into curriculum renewal and revision (a.)</p>
Course Delivery	Lecture and Experiential learning for all modules
Evaluation Scheme	<p>Internal (modes of evaluation): assignment (10%), quizzes and written exam (30%)</p> <p>End-semester (mode of evaluation): written exam (60%)</p>
Reading List	<p>Essential reading:</p> <p>Primary: <i>A Course in Semantics</i>, by Altshuler, D., Terence Parsons and R. Schwarzschild. Forthcoming from MIT Press in 2019</p> <p>Occasionally we will also look at material from:</p> <p><i>Meaning and Grammar: An Introduction to Semantics</i>, by Chierchia, G. and S. McConnell-Ginet (2nd Edition). 2000. MIT Press.</p> <p><i>Semantics in Generative Grammar</i>, by Heim, Irene and Angelika Kratzer. 1998. Blackwell Publishers.</p>

Course title	Python for Natural Language Processing
Category (Mention the appropriate category (a/b/c) in the course description.)	a. Existing course without any changes
Course code	MACLINGC 476
Semester	II
Number of credits	4
Maximum intake	30
Day/Time	Monday: 11.00 am – 1.00 pm Wednesday: 2.00 pm – 4.00 pm
Name of the teacher/s	Ms. Iram Ali Ahmad
Course description	<p>Introduction</p> <p>Students will learn basic Python functions to achieve simple text processing and manipulation tasks. These will involve regular expressions for normalizing and tokenizing text; word and sentence level segmentation of large unannotated corpora; Part-of-Speech (POS) tagging algorithms and implementation; supervised classification of text and evaluation of classification methods.</p> <p>The objectives of the are :</p> <ul style="list-style-type: none"> • To understand the basic concepts of programming and Python • to use core programming concepts like data types, conditionals, loops, functions and modules. • To have an overview of various tools available for writing and running Python and gets students coding quickly • To have hands-on coding experience using commonly used data structures, writing custom functions, modules and reading and writing files • To write short programs for analysing data from Indian languages • To develop a small NLP application as part of the end-semester project <p>CO1 have an understanding of the basic concepts of programming and Python</p> <p>CO2 be able to use core programming concepts like data types, conditionals, loops, functions and modules.</p> <p>CO3 have an overview of various tools available for writing and running Python and gets students coding quickly</p> <p>CO4 have hands-on coding experience using commonly used data structures, writing custom functions, modules and reading and writing files</p> <p>CO5 write short programs for analysing data from Indian languages</p> <p>CO6 develop a small NLP application as part of the end-semester project</p>

Course delivery	Lecture/Seminar/Experiential learning
Evaluation scheme	Internals: Classroom Performance, Quizzes, Practical Tests 50 % Externals: Project 50 %
Reading list	Michael Hammond. 2020. Python for Linguists. Cambridge University Steven Bird, Ewan Klein, and Edward Loper.2009. Natural Language Processing with Python. O'Reilly

Course title	Introduction to Corpus Linguistics
Category (Mention the appropriate category (a/b/c) in the course description.)	a. Existing course without any changes
Course code	MACLINGC 486
Semester	II
Number of credits	4
Maximum intake	30
Day/Time	Tuesday: 2.00 pm – 4.00 pm Thursday: 9.00 am – 11.00 am
Name of the teacher/s	Dr. Atreyee Sharma
Course description	<p>Corpus linguistics is a method of carrying out linguistic analyses. Tentatively the following topics are to be covered (but changes based on the students' background/need shall be made after enrollment):</p> <ol style="list-style-type: none"> i. Corpora (Text, Speech & Sign): Concept & Classification ii. Encoding (Concept of Font & Encoding; ASCII, ISCII & Unicode) iii. Balanced Corpus: Concept, Development & Challenges iv. Linguistic knowledge & Corpus: Annotation & Extraction v. Corpus Utilities & Corpus analysis tools (Transliteration, Frequency, N-gram, KWIC-KWOC, Concordances, etc) <p>Articles will be assigned from various textbooks, journals, and research surveys</p> <p>CO1 gain knowledge of the basics of Corpus Linguistics and Corpus Collection methods</p> <p>CO2 obtain knowledge of the applications of Corpus Linguistics in ELT,</p>

	<p>MT, Lexicography, Machine learning, and Machine Translation studies</p> <p>CO3 have hands-on experience in some of the open-source corpus tools like concordances (SCP, Wordsmith, AntConc and the like.), N-gram, KWIC- KWOC, Frequency counter, and many others</p> <p>CO4 understand and will be able to apply (in small texts) the idea of annotation, abstraction and analysis</p> <p>CO5 understand the different kinds of Corpora (Speech data, Text data, Sign Language data), their collection methods, category list, rules of Standardisation, annotation techniques.</p>
Course delivery	Lecture/Seminar/Experiential learning
Evaluation scheme	Mid-term: Final::40:60
Reading list	<p>Biber, Douglas, Susan Conrad and Randi Reppen (1998). Corpus Linguistics: investigating language structure and use. Cambridge: Cambridge University Press.</p> <p>Dash, N.S. 2005. Corpus linguistics and language technology: With reference to Indian languages. New Delhi: Mittal Publications.</p> <p>Kennedy, Graeme (1998). An Introduction to Corpus Linguistics. London: Longman.</p> <p>Kyto, Merja, Matti Rissanen and Susan Wright (eds.) (1994). Corpora Across the Centuries. Amsterdam: Rodopi</p> <p>McEnery, Tony and Andrew Wilson (2001). Corpus Linguistics. 2nd edn. Edinburgh: Edinburgh University Press.</p> <p>McEnery, Tony and Andrew Hardie (2012). Corpus linguistics. Cambridge: CUP.</p> <p>Meyer, Charles F. (2002). English Corpus Linguistics: an introduction. Cambridge: CUP.</p> <p>N. S. Dash and S. Arulmozi (2018.). History, Features, and Typology of Language Corpora, © Springer Nature Singapore Pte Ltd.</p> <p>N. S. Dash and L. Ramamoorthy (2019). Utility and Application of Language Corpora, © Springer Nature Singapore Pte Ltd.</p> <p>O’Keefe, Anne and Michael McCarthy (eds.) (2012). The Routledge handbook of corpus linguistics. Abingdon: Routledge.</p> <p>Sinclair, John (1991). Corpus, Concordance, Collocation. Oxford: OUP.</p> <p>Teubert, Wolfgang and Anna Čermáková (2007). Corpus Linguistics: A Short Introduction. London: Continuum.</p> <p>Wallis, Sean (2020). Grammar and Corpus Methodology. In: Bas Aarts, Gergana Popova and Jill Bowie (eds.) The Oxford Handbook of English Grammar. Oxford: OUP.</p>

Course title	Computational Syntax
Category (Mention the appropriate category (a/b/c) in the course description.)	a. Existing course without changes
Course code	MACLINGE 587
Semester	II
Number of credits	4
Maximum intake	30
Day/Time	Tuesday & Thursday: 11.00 am – 1.00 pm
Name of the teacher/s	Prof. M. Hari Prasad
Course description	This course introduces students to the computational modelling of syntactic structure in natural language. It examines how formal syntactic theories are represented and implemented in computational systems, with emphasis on grammar formalisms, parsing techniques, constraint-based syntax, and annotated corpora. The course bridges theoretical syntax and natural language processing, enabling students to understand how syntactic knowledge is operationalized in language technologies.
Course delivery	Lectures and tutorials
Evaluation scheme	<ul style="list-style-type: none"> • Internal Assessment: 40% • End-Semester Examination: 60%
Reading list	<p>Jurafsky, D. & Martin, J. <i>Speech and Language Processing</i>.</p> <p>Sag, I., Wasow, T. & Bender, E. <i>Syntactic Theory</i>.</p> <p>Pollard, C. & Sag, I. <i>Head-Driven Phrase Structure Grammar</i>.</p> <p>Allen (1995). <i>Natural Language Understanding</i>, Ch. 2</p> <p>Carpenter (1992). <i>The Logic of Typed Feature Structures</i>, Ch. 1–2</p> <p>Allen, J. <i>Natural Language Understanding</i>;</p> <p>Copestake, A. <i>Implementing Typed Feature Structure Grammars</i>;</p> <p>Kübler et al. <i>Dependency Parsing</i>;</p> <p>Bender & Lascarides. <i>Linguistic Fundamentals for NLP</i>.</p>

Course title	Language and Gender
Category (Mention the appropriate category (a/b/c) in the course description.)	a. Existing course without changes
Course code	MACLINGE 561
Semester	II
Number of credits	4
Maximum intake	40
Day/Time	Monday 11:00 am - 1:00 pm, Thursday 2:00 - 4:00 pm
Name of the teacher/s	Smita Joseph
Course description	<p>Include the following in the course description</p> <p>a) A brief overview of the course: This course explores the relationship between language and gender. It will introduce the earliest ideas regarding the language of women as given by Robin Lakoff and discuss the problems associated with these ideas. It will introduce the terms sex and gender and highlight the differences between the two concepts. The linguistic and non-linguistic resources that contribute to the making of male and female identities will also be discussed in the course. The course will also explore how language plays a role in changing gendered practices.</p> <p>b) Objectives of the course in terms of Programme Specific Outcomes (PSO of the Programme under which the course is being offered) By the end of the programme, students will: PO1 acquire an advanced knowledge of various branches of languages sciences (theoretical and applied) and emerging developments in the field: <i>knowledge and understanding</i> PO2 acquire procedural knowledge for analysis of languages leading to research and development: <i>knowledge and understanding</i> PO3 acquire theoretical and functional understanding of phonetics with special reference to English: <i>knowledge and understanding</i> PO4 gain knowledge of Indian linguistic tradition: <i>knowledge and understanding</i> PO5 acquire cognitive and technical skills to analyse various aspects of languages and synthesise ideas from a range of sources: <i>skills</i> PO6 attain advanced analytical skills to evaluate research findings, to design and conduct research in various languages: <i>skills</i> PO7 gain expertise in using relevant tools to analyse linguistic data: <i>skills</i></p>

PO8 apply theoretical and technical knowledge to analyse data from Indian and other languages: *application*

PO9 apply advanced knowledge to carry out empirical studies in languages: *application*

PO10 extend knowledge of linguistics to augment other disciplines such as Artificial Intelligence, Neuroscience, Cognitive Psychology, Forensic and Clinical Sciences, Legal Studies, Marketing, Diplomacy, etc.: *application*

PO11 address language-related societal needs and issues: language planning, language maintenance, language standardisation, language variation and language and gender: *generic*

PO12 describe and document lesser-studied and endangered languages: *generic*

PO13 plan, execute, and report the results of an investigation: *generic*

c) Learning outcomes

a) domain specific outcomes:

CO1 Demonstrate a thorough awareness of the most important ideas and topics in the field of gender and language studies

CO2 Understand how language reflects and constructs gender, specifically how men and women communicate and how language enacts femininity and masculinity

CO3 Understand the language used by women, men, and children in a variety of circumstances, including casual conversation among friends and conversation in professional or public settings, arrived through a wide range of studies that the students will become familiar with

CO4 Understand how gender and identity can be analyzed in language, arrived through a variety of different theoretical and methodological frameworks

CO5 Understand the critical interaction with previous and contemporary approaches to the study of language and gender

CO6 Compare actual data produced by sociolinguistics and discourse analysis with folk linguistic and stereotyped concepts of gender

CO7 Acquire the knowledge and abilities necessary to conduct independent, empirical studies on language and gender

CO8 Be equipped to look at how language shapes gender and other identities

CO9 Understand gender and linguistic studies as an academic field of study, be familiar with its major concepts, history, assumptions, and theories/theorists,

	<p>and recognize its epistemological and methodological diversity and character</p> <p>CO10 Examine how gender and power dynamics are portrayed in language</p> <p>CO11 Demonstrate an understanding of the theoretical applications of language and gender studies in one's speech community</p> <p>CO12 Gain knowledge and sensitivity to the gender implications of the usage of English language in various circumstances</p> <p>CO13 Use appropriate spoken and written English to communicate in formal and academic settings</p> <p>b) value addition: The course enriches student competencies by bringing in gender sensitivity to various disciplines such as media, literature, sociology, education, anthropology, etc.</p> <p>c) skill-enhancement: Student-centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences</p>
Course delivery	Lecture method for all modules
Evaluation scheme	<p>Internal (modes of evaluation): Three internal exams (MCQs, case study test, written exam = 40%)</p> <p>End-semester (mode of evaluation): Written exam (60%)</p>
Reading list	<p>Essential reading: Eckert, P., & McConnell-Ginet, S. (2003). <i>Language and gender</i>. CUP</p>

Course title	Fundamentals of Forensic Phonetics
Category (Mention the appropriate category (a/b/c) in the course description.)	b. Existing course without changes
Course code	MACLINGE 514
Semester	II
Number of credits	4
Maximum intake	30 (on first-come-first-served-basis for MA courses only)
Day/Time	Monday & Wednesday: 2.00 – 4.00 pm
Name of the teacher/s	Dr. Didla Grace Suneetha
Course description	<p>i) A brief overview of the course</p> <p>The course ‘Fundamentals of Forensic Phonetics’ is designed to facilitate a sound understanding of the different theoretical and practical aspects of Forensic speech science (FSS) such as Speaker Profiling, Content Identification, Audio Authentication, and Speaker Identification. Further, it briefs about the current international practices and standard protocols employed in Forensic Speaker Identification. In addition, this course entails an end-semester <i>Research Project</i> which facilitates learners to plan, execute and report research findings.</p> <p>ii) Objectives of the course in terms of Programme Specific Outcomes (PSO of the Programme under which the course is being offered)</p> <p>C01:To facilitate a thorough understanding of the various aspects of FSS and their applications in the world of crime; CO2:To equip learners to use PRAAT software to analyse forensic speech samples; C03:To acquaint learners with the current international practices and forensic evidence standards employed in the court of Law with specific reference to speech-related cases; and C04:To equip learners to carry out independent research and present findings.</p> <p>iii) Learning outcomes</p> <p>a) domain specific outcomes Upon completion of the course, students will</p> <ul style="list-style-type: none"> • gain knowledge of the theoretical and practical aspects of forensic speech science; • be able to use PRAAT (speech analysis software) to analyse forensic speech samples; • be equipped to carry out independent research in Forensic Phonetics. <p>b) value addition This course is aimed at bridging the gap between academia and forensic labs. Further, the collaboration between theoretical and practical worlds can facilitate better administration of justice with specific reference to speech-</p>

	<p>related cases.</p> <p>c) skill-enhancement This course will adequately train the learners to use PRAAT (a speech analysis software) to analyse forensic speech samples.</p> <p>d) employability quotient This is a practical course which will facilitate the learners to be employed in Forensic Labs as forensic speech science experts in addition to various teaching and research assignments.</p>
Course delivery	<p>All the theoretical aspects of FSS will be delivered in the form of lectures.</p> <p>The student projects will involve experiential learning and project presentations will be in the form of seminars.</p>
Evaluation scheme	<p>Internals (40%): Assignments (10%), Written Tests (30 %)</p> <p>Externals (60%): Semester-end Project presentation (30%) and Written Exam (30%)</p>
Reading list	<p>Essential reading</p> <p>1) Hollien, Harry. (1990) <i>Acoustics of Crime</i>, New York: Plenum Press.</p> <p>Additional reading</p> <p>1) Baldwin R. John and French. Peter. (1990). <i>Forensic Phonetics</i>, London: Pinter Publishers Ltd.</p> <p>2) Rose, Philip. (2002). <i>Forensic Speaker Identification</i>, London: Taylor and Francis.</p>