

**MA Computational Linguistics – Semester III - Course Descriptions (August – December 2026)**

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Title                                                                 | <b>Linguistic Phonetics</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Category (Mention the appropriate category (a/b/c) in the course description | Existing course without changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Course Code                                                                  | <b>MACLINGE 511</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Semester                                                                     | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| No. of Credits                                                               | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Maximum intake                                                               | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Day/ Time                                                                    | Tuesday: 2.00 pm – 4.00 pm<br>Thursday: 9.00 am – 11.00 am                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Name of the teacher/s                                                        | Prof. S. Jayaraju (IPA)<br>Dr. Neelam Singh (Articulatory and Acoustics)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Course Description:                                                          | <p><b>A brief overview of the course</b></p> <p>The course ‘Linguistic Phonetics’ is an advanced level course which deals with the theoretical and practical aspects of three domains of Phonetics: articulation, IPA and acoustics. As part of the articulatory module, various speech mechanisms such as initiation, phonation, and articulation involved in the production of speech sounds, not just of English but also of other languages of the world are dealt with. IPA (International Phonetic Alphabet) is introduced and is backed by practice sessions in production, perception, and transcription of speech sounds. Similarly, theoretical inputs in acoustic phonetics are followed by hands on practical sessions in PRAAT (a speech analysis software), to enable learners get a grip on the acoustic analysis of speech. This skill is essential for students aiming to do research in the field of phonetics.</p> <p>Pre-requisite: MALINGC 511 - Phonetics and Spoken English</p> <p><b>References</b></p> <ol style="list-style-type: none"><li>1. Catford, J.C. (1977).Fundamental Problems in Phonetics. Edinburgh: Edinburgh University Press.</li><li>2. Denes, P. and Pinson,E.N.(1993). The Speech Chain, 2<sup>nd</sup> ed.Oxford: W. H. Freeman and Company.</li><li>3. Fry, D.B. (1979). The Physics of Speech. Cambridge: Cambridge University Press.</li><li>4. Ladefoged, P. (1996). Elements of Acoustic Phonetics, 2<sup>nd</sup> ed.Chicago: University of Chicago Press.</li><li>5. Ladefoged, P. and Johnson, K. (2001). A Course in Phonetics, 6<sup>th</sup> ed. Wadsworth: Cengage Learning.</li></ol> <p>(i) Objectives of the course in terms of Programme Specific Outcomes (PSO of the Programme under which the course is being offered)</p> <p>On completion of the course, the students will</p> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                          |                                                                                                                                    |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|-----|-------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|-----|------------------------------------------------------------------|----------|-------------------------------------|-----|-------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------|-----|---------------------------------------------------------------------------|-----------------|-----------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------|
|                   | <table><tr><td>CO1</td><td>Gain an in-depth understanding of the theoretical underpinnings of the three domains of phonetics: Articulation, IPA and Acoustics</td><td>PO1, PO2, PO3</td><td>Domain Specifics</td></tr><tr><td>CO2</td><td>Grasp the various articulatory mechanisms such as initiation, phonation and articulation involved in the production of speech</td><td>PO1, PO2, PO3</td><td>Domain Specific</td></tr><tr><td>CO3</td><td>Identify, produce, perceive and transcribe all the sounds of IPA</td><td>PO9, P10</td><td>Application of knowledge and skills</td></tr><tr><td>CO4</td><td>Comprehend the physics behind the transmission of speech sounds and acoustically analyse speech</td><td>PO1, PO2<br/><br/>PO9, P10</td><td>Domain Specific<br/><br/>Application of knowledge and skills</td></tr><tr><td>CO5</td><td>Efficiently use speech analysis tools such as PRAAT, CSL, Mingogram, etc.</td><td>PO7,<br/><br/>P10</td><td>Skill Enhancements<br/>Application of knowledge and skills</td></tr><tr><td>CO6</td><td>Apply the theoretical knowledge and analytical skills gained to describe and document Indian languages including lesser studied and endangered languages</td><td>PO13<br/>PO14</td><td>Generic Learning</td></tr></table> | CO1                      | Gain an in-depth understanding of the theoretical underpinnings of the three domains of phonetics: Articulation, IPA and Acoustics | PO1, PO2, PO3 | Domain Specifics | CO2 | Grasp the various articulatory mechanisms such as initiation, phonation and articulation involved in the production of speech | PO1, PO2, PO3 | Domain Specific | CO3 | Identify, produce, perceive and transcribe all the sounds of IPA | PO9, P10 | Application of knowledge and skills | CO4 | Comprehend the physics behind the transmission of speech sounds and acoustically analyse speech | PO1, PO2<br><br>PO9, P10 | Domain Specific<br><br>Application of knowledge and skills | CO5 | Efficiently use speech analysis tools such as PRAAT, CSL, Mingogram, etc. | PO7,<br><br>P10 | Skill Enhancements<br>Application of knowledge and skills | CO6 | Apply the theoretical knowledge and analytical skills gained to describe and document Indian languages including lesser studied and endangered languages | PO13<br>PO14 | Generic Learning |
| CO1               | Gain an in-depth understanding of the theoretical underpinnings of the three domains of phonetics: Articulation, IPA and Acoustics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | PO1, PO2, PO3            | Domain Specifics                                                                                                                   |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| CO2               | Grasp the various articulatory mechanisms such as initiation, phonation and articulation involved in the production of speech                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PO1, PO2, PO3            | Domain Specific                                                                                                                    |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| CO3               | Identify, produce, perceive and transcribe all the sounds of IPA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | PO9, P10                 | Application of knowledge and skills                                                                                                |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| CO4               | Comprehend the physics behind the transmission of speech sounds and acoustically analyse speech                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PO1, PO2<br><br>PO9, P10 | Domain Specific<br><br>Application of knowledge and skills                                                                         |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| CO5               | Efficiently use speech analysis tools such as PRAAT, CSL, Mingogram, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PO7,<br><br>P10          | Skill Enhancements<br>Application of knowledge and skills                                                                          |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| CO6               | Apply the theoretical knowledge and analytical skills gained to describe and document Indian languages including lesser studied and endangered languages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | PO13<br>PO14             | Generic Learning                                                                                                                   |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| Course Delivery   | Lecture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                                                                                                                                    |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| Evaluation Scheme | <ul style="list-style-type: none"><li>Internal Assessment: 40 %<br/>(3 internal tests of 20 marks each)</li><li>Final Assessment: 60 %</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |                                                                                                                                    |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |
| Reading List      | <ol style="list-style-type: none"><li>1. Catford, J.C. (1977). <b>Fundamental Problems in Phonetics</b>. Edinburgh: Edinburgh University Press.</li><li>2. Denes, P. and Pinson, E.N. (1993). <b>The Speech Chain</b>, 2<sup>nd</sup> ed.Oxford: W. H. Freeman and Company.</li><li>3. Fry, D.B. (1979). <b>The Physics of Speech</b>. Cambridge: Cambridge University Press.</li><li>4. Ladefoged, P. (1996). <b>Elements of Acoustic Phonetics</b>, 2<sup>nd</sup> ed.Chicago: University of Chicago Press.</li><li>5. Ladefoged, P. and Johnson, K. (2001). <b>A Course in Phonetics</b>, 6<sup>th</sup> ed. Wadsworth: Cengage Learning.</li><li>6. International Phonetic Association. (1999). <b>Handbook of the International Phonetic Association</b>: a guide to the use of the International Phonetic Alphabet. Cambridge: CUP.<br/>(Supplementary reading will be given as and when needed)</li></ol>                                                                                                                                                                                                                                                                                                                                                                 |                          |                                                                                                                                    |               |                  |     |                                                                                                                               |               |                 |     |                                                                  |          |                                     |     |                                                                                                 |                          |                                                            |     |                                                                           |                 |                                                           |     |                                                                                                                                                          |              |                  |

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----|--------------------------------------------------------------|-----|-------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------|-----|----------------------------------------------------|------|--------------------------------------------------------|------|---------------------------------------------------------------------------------------------------|
| Course Title                                                                 | INTRODUCTION TO OPTIMALITY THEORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Category (Mention the appropriate category (a/b/c) in the course description | Existing course without changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Course Code                                                                  | MACLINGE 521                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Semester                                                                     | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| No. of Credits                                                               | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Maximum intake                                                               | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Day/ Time                                                                    | Tuesday & Wednesday: 11.00 am – 1.00 pm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Name of the teacher/s                                                        | Prof. Hemalatha Nagarajan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Course Description:                                                          | <div>Students who complete this course will have the knowledge and skills to</div> <table><tr><td>CO1</td><td>learn the basic premises and mechanisms of Optimality Theory</td></tr><tr><td>CO2</td><td>analyse key linguistic phenomena using the formal devices of the theory</td></tr><tr><td>CO3</td><td>understand major conceptual differences between OT and traditional approaches to linguistic analysis, and critically evaluate conceptual issues and empirical problems in OT</td></tr><tr><td>CO4</td><td>observe and identify phonological variations in new linguistic contexts and explain the differences using ranked constraints.</td></tr><tr><td>CO5</td><td>acquire cognitive and technical skills to analyse phonological aspects of languages</td></tr><tr><td>CO6</td><td>attain analytical skills to examine data, evaluate research findings, and conduct research in various languages</td></tr><tr><td>CO7</td><td>apply the principles of phonological variation to the structures of their languages.</td></tr><tr><td>CO8</td><td>plan fieldwork for collection of data pertaining to speech sounds- segmental and supra-segmental.</td></tr><tr><td>CO9</td><td>extend knowledge of phonology to other disciplines</td></tr><tr><td>CO10</td><td>document and study lesser-known languages and dialects</td></tr><tr><td>CO11</td><td>study phonological influences of languages in contact (contact phonology) and dialectal phonology</td></tr></table> |  |  | CO1 | learn the basic premises and mechanisms of Optimality Theory | CO2 | analyse key linguistic phenomena using the formal devices of the theory | CO3 | understand major conceptual differences between OT and traditional approaches to linguistic analysis, and critically evaluate conceptual issues and empirical problems in OT | CO4 | observe and identify phonological variations in new linguistic contexts and explain the differences using ranked constraints. | CO5 | acquire cognitive and technical skills to analyse phonological aspects of languages | CO6 | attain analytical skills to examine data, evaluate research findings, and conduct research in various languages | CO7 | apply the principles of phonological variation to the structures of their languages. | CO8 | plan fieldwork for collection of data pertaining to speech sounds- segmental and supra-segmental. | CO9 | extend knowledge of phonology to other disciplines | CO10 | document and study lesser-known languages and dialects | CO11 | study phonological influences of languages in contact (contact phonology) and dialectal phonology |
| CO1                                                                          | learn the basic premises and mechanisms of Optimality Theory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO2                                                                          | analyse key linguistic phenomena using the formal devices of the theory                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO3                                                                          | understand major conceptual differences between OT and traditional approaches to linguistic analysis, and critically evaluate conceptual issues and empirical problems in OT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO4                                                                          | observe and identify phonological variations in new linguistic contexts and explain the differences using ranked constraints.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO5                                                                          | acquire cognitive and technical skills to analyse phonological aspects of languages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO6                                                                          | attain analytical skills to examine data, evaluate research findings, and conduct research in various languages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO7                                                                          | apply the principles of phonological variation to the structures of their languages.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO8                                                                          | plan fieldwork for collection of data pertaining to speech sounds- segmental and supra-segmental.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO9                                                                          | extend knowledge of phonology to other disciplines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO10                                                                         | document and study lesser-known languages and dialects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| CO11                                                                         | study phonological influences of languages in contact (contact phonology) and dialectal phonology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Course Delivery                                                              | Offline-lectures, Seminars and Presentations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |
| Evaluation Scheme                                                            | Internal Assignment: 40 marks (quiz, assignments etc)<br>Semester End: 60 marks (semester end examination)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |     |                                                              |     |                                                                         |     |                                                                                                                                                                              |     |                                                                                                                               |     |                                                                                     |     |                                                                                                                 |     |                                                                                      |     |                                                                                                   |     |                                                    |      |                                                        |      |                                                                                                   |



|              |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading List | <p>Kager, Rene (1999), Optimality Theory, Cambridge: Cambridge University Press</p> <p>Prince, Alan and Smolensky, Paul (2004) Optimality Theory: Constraint Interaction in Generative Grammar. Malden, Mass., and Oxford, UK: Blackwell. (Revision of 1993 technical report, Rutgers University Center for Cognitive Science. Available on Rutgers Optimality Archive, ROA-537)</p> <p>McCarthy (2007) Harmonic Serialism</p> |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course title                                                                   | <b>Research Methodology</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Category (Mention the appropriate category (a/b/c) in the course description.) | Existing course without changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Course code                                                                    | <b>MACLINGRMC 598</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Semester                                                                       | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Number of credits                                                              | 4 credits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Maximum intake                                                                 | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Day/Time                                                                       | Monday: 2.00 pm – 4.00 pm<br>Friday: 11.00 am – 1.00 pm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Name of the teacher/s                                                          | Prof. Roopa Suzana, Dr. Iram Ali Ahmad and Prof. S. Jayaraju                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Course description                                                             | <p><b>Introduction</b></p> <p>The Research Methodology course in linguistics aims to teach students the fundamental techniques and approaches used in linguistic research. It focuses on developing skills to design studies, collect and analyse data, and draw valid conclusions. Overall, the course aims to empower students with the tools and knowledge necessary to conduct rigorous and meaningful research in the field of linguistics.</p> <p>This course has three modules.</p> <p><b>Module1: Types of Research and Research Design</b></p> <p>This module is designed to enhance students’ ability to critically evaluate existing linguistic research, identify gaps in the literature and contribute to the ongoing discourse in the field. It further equipslearners with the skills to identify research problems, formulate research questions, build hypotheses, and state objectives clearly. In addition, it also developsskills to build an appropriate research design based on the nature of enquiry.</p> <p><b>Module 2: Data Collection Techniques</b></p> <p>This module on field methods in linguistics typically involves collecting and documenting linguistic data. It introduces learners to various methods of gathering linguistic data, such as designing questionnaires and tests, interviews, surveys, experiments, audio recordings, and corpus analysis. It also equips learners with the knowledgeof using appropriatetechniques and tools necessary to conduct effective and rigorous linguistic fieldwork. Emphasis is also laid on the importance of involving and collaborating with language speakers and communities throughout the research process. In addition, it also addresses the ethical issues related to linguistic research, such as consent, privacy, and cultural sensitivity.</p> <p><b>Module 3: Data Analysis and interpretation and Academic Writing</b></p> <p>This module focuses on training learners how to analyseand interpret linguistic data.It introduces students to the various instrumental techniques used in the analysis of linguistic/Phonetic data. Students will have hands-on experience in designing and conducting small-scale research projects, collecting linguistic data, analysing results, and drawing valid conclusions. Students will also learn about data analysis and experiments in syntax and semantics.</p> <p>This module also focuses on equipping learners with the required technical writing skills to present the literature review, description of the methodology used for the research experiment. It trains learners on how to paraphrase, use appropriate methods of in-text citation and referencing using APA style. It also draws their attention to the issue of plagiarism.</p> |
| Course delivery                                                                | Lecture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Evaluation scheme                                                              | Internal: 40% (Assignments/ Presentations)<br>External: 60% (Term Paper)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Reading list                                                                   | Bowern, C. 2015. <i>Linguistic fieldwork: A practical guide</i> . Springer.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Chelliah, S. L., &amp; De Reuse, W. J. 2010. <i>Handbook of descriptive linguistic fieldwork</i>. Springer Science &amp; Business Media.</p> <p>De Laine, M. 2000. “Fieldwork, participation and practice: Ethics and dilemmas in qualitative research”. <i>Fieldwork, Participation and Practice</i>, 1-240.</p> <p>Lee-Treweek, G., &amp;Linkogle, S. (Eds.). 2000. <i>Danger in the field: Risk and ethics in social research</i>. Psychology Press.</p> <p>Newman, P., &amp; Ratliff, M. (Eds.). 2001. <i>Linguistic fieldwork</i>. Cambridge University Press.</p> <p>Butcher, A. 2013. <i>Research Methods in Phonetic Fieldwork</i>. Bloomsbury Publishing.</p> <p>Staley, Kent W. 2014. <i>An Introduction to the Philosophy of Science</i>. Cambridge University Press.</p> <p>Sprouse, Jon. 2023. <i>The Oxford Handbook of Experimental Syntax</i>. Oxford University Press.</p> <p>Goodall, Grant. 2021. <i>The Cambridge Handbook of Experimental Syntax</i>. Cambridge University Press.</p> <p>Ball, Derek and Brian Rabern. 2018. <i>The Science of Meaning</i>. Oxford University Press.</p> |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                              |                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Title                                                                 | <b>Advanced Topics in Semantics</b>                                                                                                                                                                                                                                                                                                                          |
| Category (Mention the appropriate category (a/b/c) in the course description | Existing course without changes                                                                                                                                                                                                                                                                                                                              |
| Course Code                                                                  | <b>MACLINGE - 551</b>                                                                                                                                                                                                                                                                                                                                        |
| Semester                                                                     | III                                                                                                                                                                                                                                                                                                                                                          |
| No. of Credits                                                               | 4                                                                                                                                                                                                                                                                                                                                                            |
| Maximum intake                                                               | 30                                                                                                                                                                                                                                                                                                                                                           |
| Day/ Time                                                                    | Monday & Wednesday: 4.00 pm – 6.00 pm                                                                                                                                                                                                                                                                                                                        |
| Name of the teacher/s                                                        | Dr. Utpal Lahiri                                                                                                                                                                                                                                                                                                                                             |
| Course Description:                                                          | <p>This course is a continuation of Semantics I and is intended to give a basic introduction to advanced topics.</p> <p>Topics include:</p> <p>Logical Form and Quantifiers<br/>Generalized Quantifier Theory<br/>Lambda Calculus<br/>Adverbial Modification and Event Semantics; tense, aspect<br/>Anaphora and Indexicals.</p>                             |
| Course Delivery                                                              | Lecture                                                                                                                                                                                                                                                                                                                                                      |
| Evaluation Scheme                                                            | Internals: 40 marks<br>External: 60 marks                                                                                                                                                                                                                                                                                                                    |
| Reading List                                                                 | <p>Required text:<br/>Altshuler, D., T. Parsons and R. Schwarzschild (2018). <i>A Course in Semantics</i>. MIT Press.</p> <p>Recommended texts:<br/>Chierchia, G. and S. McConnell-Ginet (2000). <i>Meaning and Grammar</i>. MIT Press (2nd Edition)<br/>Heim, I. and von Stechow (2007). <i>Notes on Intensional Semantics</i>. Ms., MIT (downloadable)</p> |

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Title                                                                 | Introduction to Psycholinguistics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Category (Mention the appropriate category (a/b/c) in the course description | Existing course without changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Course Code                                                                  | MACLINGE 565                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Semester                                                                     | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| No. of Credits                                                               | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Maximum intake                                                               | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Day/ Time                                                                    | Monday: 11.00 am – 1.00 pm<br>Thursday: 2.00 pm – 4.00 pm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Name of the teacher/s                                                        | Prof. Shruti Sircar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Course Description:                                                          | <p>This course is an introduction to psycholinguistics, the study of how individuals comprehend, produce, and acquire language. As part of the larger field of cognitive science, psycholinguistics is an interdisciplinary field shaped by research in psychology, linguistics, artificial intelligence, neuroscience, and philosophy. We will primarily be concerned with questions such as: what does it mean to know a language? What are the cognitive processes involved in language use? What social rules are associated with language use? What brain mechanisms are active in language use?</p> <p>i. Learning outcomes—</p> <p>By the end of the programme, the students will have:</p> <p><b>PO1:</b> obtained a sound knowledge of various branches of language sciences: theoretical and applied</p> <p><b>PO2:</b> acquired skills to analyse various aspects of a language/ languages</p> <p><b>PO3:</b> applied theories to analyse data from Indian and other languages</p> <p><b>PO4:</b> understood how theories are built with evidence/data from languages</p> <p><b>PO5:</b> obtained theoretical and functional understanding of phonetics with special reference to English</p> <p><b>PO6:</b> carried out empirical studies in languages</p> <p><b>PO7:</b> learnt to apply knowledge of linguistics to other disciplines such as Artificial Intelligence, Cognitive Psychology, Forensic and Clinical Sciences</p> <p><b>PO8:</b> learnt to address language-related societal needs and issues: language planning, language maintenance, language standardization, language variation and language and gender</p> <p><b>PO9:</b> learned to describe and document lesser studied and endangered languages</p> <p><b>PO10:</b> 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><b>CO1:</b>understand the relationship between theoretical linguistics and psychology</p> <p><b>CO2:</b> learn how acoustic stimuli are mapped to phonetic and phonological representations</p> <p><b>CO3:</b> learn how are words stored and organized in memory</p> <p><b>CO4:</b> learn how syntactic structure is computed in real time</p> <p><b>CO5:</b>understand how syntactic dependencies (movement, anaphora, agreement) are processed</p> <p><b>CO6:</b> learn about the difference between producing linguistic expressions versus perceiving them</p> <p><b>b) value addition:</b></p> <p>Most psycholinguists work in academia, but a psycholinguistics degree with special reference to language disorders can also set you up for a career in speech-language pathology, education, and research. Training in psycholinguistics can equip you to work in the fast-growing field of artificial intelligence and machine learning,</p> |

|                   |                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <p><b>c) skill-enhancement</b><br/>Student-centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experiences.</p> <p><b>d) employability quotient</b><br/><br/>During the last 3 years, inputs from latest research and industry are fed into curriculum renewal and revision.</p>                   |
| Course Delivery   | Lecture and Experiential learning for all modules                                                                                                                                                                                                                                                                                                                                       |
| Evaluation Scheme | Three quizzes (MCQ, short/long answers) – 40% of the internal assessment (closed book)<br>60% external examination: sit down closed book examination                                                                                                                                                                                                                                    |
| Reading List      | Essential reading:<br>Carroll, David W. 2008. Psychology of Language. 5th ed. Thomson Wadsworth.<br>Harley, Trevor A. 2001. The psychology of language: from data to theory. 2nd ed. Oxford: Taylor and Francis.<br>Field, John. 2003. Psycholinguistics: a resource book for students. London: Routledge.<br>Scovel, Thomas. 1998. Psycholinguistics. Oxford: Oxford University Press. |

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Title                                                                 | <b>Introduction To Tagging And Parsing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Category (Mention the appropriate category (a/b/c) in the course description | c)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Course Code                                                                  | <b>MACLINGC 577</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Semester                                                                     | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| No. of Credits                                                               | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Maximum intake                                                               | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Day/ Time                                                                    | Wednesday & Friday: : 2.00 pm – 4.00 pm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Name of the teacher/s                                                        | Dr. Atreyee Sharma                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Course Description:                                                          | <p>In the first part students are exposed to the first layer of Tagging and Parsing namely, Morphological Analyzer, Parts of Speech Tagging, Named Entity and Named Entity Recognition. Students read and research on different tag sets, models, challenges and issues regarding Morphological Analyzer, POS Tagging and NER wrt Indian languages. In this course, they will be exposed to Local Word Grouping, Chunking, Parsing and Tree Banks. Shallow parsing or chunking or light parsing) will be taught in terms of analysis of a sentence which first identifies constituent parts of sentences (nouns, verbs, adjectives, etc.) and then links them to higher order units that have discrete grammatical meanings (noun groups or phrases, verb groups, etc.). The term Parsing has slightly different meanings in different branches of linguistics and computer science.</p> <p>Traditional sentence parsing is often a method of understanding the exact meaning of a sentence or word, sometimes with the aid of devices such as sentence diagrams. Students will be introduced to the concepts of LWG, Chunking and Parsing and work out real world data to understand the terms and their significance in the world of NLP.</p> <p><b>CO1</b> To understand and analyze the grammatical structure of a sentence and to disambiguate words that have multiple meanings.</p> <p><b>CO2</b> To understand the design and nature of various tag sets available for PoS Tagging.</p> <p><b>CO3</b> To analyze and understand automatic text processing tools to consider which part of speech each word is.</p> <p><b>CO4</b> To have hands on experience in manual tagging and map it to statistical tagging methods.</p> <p><b>CO5</b> To make students understand the structure of sentences of their mother tongue and have them apply the PoS tagging methods in texts from their MT.</p> |
| Course Delivery                                                              | Lectures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Evaluation Scheme                                                            | <p>Mid-term evaluation: 40% (Assignments, quizzes, presentations and tests)</p> <p>End term examination: 60% (Assignments and Written examination)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Reading List                                                                 | <p>Readings will be suggested and changed as according to the topic.</p> <p>ESSENTIAL READING: Akshar Bharathi and Prashanth R. Mannem (2007), “Introduction to the Shallow Parsing Contest for South Asian Languages”, Language Technologies Research Center, International Institute of Information Technology, Hyderabad, India 500032.</p> <p>A. Ratnaparakhi. 1996. A Maximum Entropy Part Of-Speech Tagger. EMNLP 1996</p> <p>A. Bharati, V. Chaitanya, R. Sangal 1995. Natural Language Processing : A Paninian Perspective . Prentice Hall India.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>A Part of Speech Tagger for Indian Languages (POS tagger), Tag set developed at IIIT - Hyderabad after consultations with several institutions through two workshops, 2007. <a href="http://shiva.iiit.ac.in/SPSAL2007/iiit_tagset_guidelines.pdf">shiva.iiit.ac.in/SPSAL2007/iiit_tagset_guidelines.pdf</a></p> <p>Kulkarni, A., Shukla, D.: Sanskrit morphological analyzer: some issues. In: Festschrift, B.K. (ed.) Volume by LSI (2009)</p> <p>Antony, P.J., Soman, K.P.: Computational morphology and natural language parsing for Indian languages: a literature survey. <i>Int. J. Comput. Sci. Eng. Technol.</i> 136–146 (2012)</p> <p>ADDITIONAL READING: Sparck Jones, K. and Galliers, J. R. (1995). <i>Evaluating Natural Language Processing Systems</i>. Springer Verlag, Heidelberg, Germany.</p> <p>Abney, S. P., Schapire, R. E., and Singer, Y. (1999). Boosting applied to tagging and PP attachment. In <i>EMNLP/VLC-99</i>, 38–45</p> <p>Kupiec, J. (1992). Robust part-of-speech tagging using a hidden Markov model. <i>Computer Speech and Language</i>, 6, 225–242.</p> <p>Nivre, J., de Marneffe, M.-C., Ginter, F., Goldberg, Y., Hajic, J., Manning, C. D., McDonald, R., Petrov, S., Pyysalo, S., Silveira, N., Tsarfaty, R., and Zeman, D. (2016). <i>Universal Dependencies v1: A multilingual treebank collection</i>. In <i>LREC</i>.</p> <p>G. Leech, R. Garside and M. Bryant. 1992. Automatic POS-Tagging of the corpus. <i>BNC2 POS tagging Manual</i>.</p> <p>P. R. Ray , V. Harish, A. Basu and S. Sarkar 2003. Part of Speech Tagging and Local Word Grouping Techniques for Natural Language Parsing in Hindi. In <i>Proceedings of ICON 2003</i></p> |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course title                                                                   | <b>Introduction to Machine Learning</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Category (Mention the appropriate category (a/b/c) in the course description.) | Existing course without changes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Course code                                                                    | <b>MACLINGE 583</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Semester                                                                       | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Number of credits                                                              | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum intake                                                                 | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Day/Time                                                                       | Tuesday & Thursday: 4.00 pm – 6.00 pm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Name of the teacher/s                                                          | Dr. Iram Ali Ahmad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Course description                                                             | <p>This course offers a foundational and practical exploration of machine learning by emphasizing the interplay between core algorithms, implementation tools and real-world systems. Students will study key machine learning paradigms including supervised, unsupervised and reinforcement learning. The students will also engage with the mathematical principles that underlie model design and evaluation.</p> <p>Hands-on lab sessions and assignments will provide experience with widely used frameworks such as Scikit-learn and Tensor Flow. The course also introduces modern machine learning infrastructures, including data pipelines, model deployment and MLOps (Machine Learning Operations).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Course delivery                                                                | Theoretical and Hands-on Practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Evaluation scheme                                                              | Written Tests, Quizzes, Submissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Reading list                                                                   | <p><b>Core Textbooks:</b></p> <ol style="list-style-type: none"> <li>1. Géron, A. (2022). <i>Hands-on machine learning with Scikit-Learn, Keras, and TensorFlow: Concepts, tools, and techniques to build intelligent systems</i> (3rd ed.). O’Reilly Media.</li> <li>2. Bishop, C. M. (2006). <i>Pattern recognition and machine learning</i>. Springer.</li> <li>3. Murphy, K. P. (2012). <i>Machine learning: A probabilistic perspective</i>. MIT Press.</li> <li>4. Goodfellow, I., Bengio, Y., &amp; Courville, A. (2016). <i>Deep learning</i>. MIT Press.</li> </ol> <p><b>Supplementary Papers and Articles:</b></p> <ol style="list-style-type: none"> <li>8. Huyen, C. (2022). <i>Designing machine learning systems: An iterative process for production-ready applications</i>. O’Reilly Media.</li> <li>9. Hastie, T., Tibshirani, R., &amp; Friedman, J. (2009). <i>The elements of statistical learning: Data mining, inference, and prediction</i> (2nd ed.). Springer.</li> <li>10. Ng, A. (2018). <i>Machine learning yearning: Technical strategy for AI engineers, in the era of deep learning</i>. deeplearning.ai. [Available online: <a href="https://www.deeplearning.ai/machine-learning-yearning/">https://www.deeplearning.ai/machine-learning-yearning/</a>]</li> <li>11. Google Cloud. (2020). <i>MLOps: Continuous delivery and automation pipelines in machine learning</i> (Whitepaper).</li> </ol> |

|                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course title                                                                   | <b>Fundamentals of Information Retrieval and Information Extraction</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Category (Mention the appropriate category (a/b/c) in the course description.) | Existing Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Course code                                                                    | <b>MACLINGE 585</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Semester                                                                       | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Number of credits                                                              | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Maximum intake                                                                 | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Day/Time                                                                       | Monday : 9.00 am – 11.00 am & Wednesday: 11.00 am – 1.00 pm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Name of the teacher/s                                                          | Dr. Iram Ali Ahmad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Course description                                                             | This course introduces the foundational principles and advanced techniques of <b>Information Extraction (IE)</b> and <b>Information Retrieval (IR)</b> which are two critical components of modern Natural Language Processing (NLP). Students will explore how structured information can be extracted from unstructured and semi-structured data and how relevant information can be retrieved efficiently from large corpora and the web. The course blends traditional symbolic and statistical approaches with recent deep learning-based methods. It combines theoretical grounding with practical skills through hands-on assignments and projects involving tools such as spaCy, NLTK and Hugging Face Transformers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Course delivery                                                                | Theoretical and Hands-on Practice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Evaluation scheme                                                              | Written Tests, Quizzes, Submissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Reading list                                                                   | <p><b>Core Textbooks:</b><br/> Manning, C. D., Raghavan, P., &amp; Schütze, H. (2008). <i>Introduction to information retrieval</i>. Cambridge University Press.<br/> <a href="https://nlp.stanford.edu/IR-book/">https://nlp.stanford.edu/IR-book/</a><br/> Jurafsky, D., &amp; Martin, J. H. (2023). <i>Speech and language processing</i> (3rd ed., draft). Pearson.<br/> <a href="https://web.stanford.edu/~jurafsky/slp3/">https://web.stanford.edu/~jurafsky/slp3/</a><br/> Cowie, J., &amp; Lehnert, W. (1996). Information extraction. <i>Communications of the ACM</i>, 39(1), 80–91.<br/> <a href="https://doi.org/10.1145/234173.234209">https://doi.org/10.1145/234173.234209</a></p> <p><b>Supplementary Papers and Articles:</b><br/> Lin, J., &amp; Zhang, Y. (2021). <i>An introduction to neural information retrieval</i>. Foundations and Trends® in Information Retrieval, 15(4), 287–388. <a href="https://doi.org/10.1561/15000000071">https://doi.org/10.1561/15000000071</a><br/> Devlin, J., Chang, M. W., Lee, K., &amp; Toutanova, K. (2019). BERT: Pre-training of deep bidirectional transformers for language understanding. In <i>Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies</i> (pp. 4171–4186). <a href="https://doi.org/10.48550/arXiv.1810.04805">https://doi.org/10.48550/arXiv.1810.04805</a><br/> Gupta, S., &amp; Manning, C. D. (2020). ISABELA: Neural information extraction for question answering. In <i>Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)</i> (pp. 3916–3929). <a href="https://doi.org/10.18653/v1/2020.emnlp-main.321">https://doi.org/10.18653/v1/2020.emnlp-main.321</a><br/> Chinchor, N. (1998). Overview of MUC-7/MET-2. <i>Message Understanding Conference (MUC-7) Evaluation Reports</i>. <a href="https://catalog.ldc.upenn.edu/docs/LDC2001T02/MUC7/MUC-7-MET-2_Overview.html">https://catalog.ldc.upenn.edu/docs/LDC2001T02/MUC7/MUC-7-MET-2_Overview.html</a><br/> Callan, J. (2005). Personal information agents: Definition and implementation. In <i>Proceedings of the 28th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval</i> (pp. 1–2). <a href="https://doi.org/10.1145/1076034.1076036">https://doi.org/10.1145/1076034.1076036</a></p> |

|                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course title                                                                   | <b>SPEECH PROCESSING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Category (Mention the appropriate category (a/b/c) in the course description.) | Existing Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Course code                                                                    | MACLINGE 586                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Semester                                                                       | III                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Number of credits                                                              | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum intake                                                                 | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Day/Time                                                                       | Tuesday: 11.00 am – 1.00 pm and Friday:9.00 am –11.00 am                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Name of the teacher/s                                                          | Prof. M. Hari Prasad                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Course description                                                             | <p>After completing this course the students should be able to:</p> <ul style="list-style-type: none"> <li>• Understand the speech production and perception process.</li> <li>• Analyze speech signals in time and frequency domain.</li> <li>• Design and implement algorithms for processing speech signals.</li> <li>• Build a simple speech recognition/TTS system</li> </ul> <p>Main areas that will be covered are: Speech fundamentals, Speech analysis, Speech compression and Speech modelling</p> |
| Course delivery                                                                | Lecture cum Seminar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Evaluation scheme                                                              | <p>Internal Assignment/test – 40 %</p> <p>End-semester (mode of evaluation): Term paper 60%</p>                                                                                                                                                                                                                                                                                                                                                                                                              |
| Reading list                                                                   | <p>Daniel Jurafsky and James Martin. 2001. Speech and Language Processing. Prentice-Hall</p> <p>Xuedong Huang, Alex Acerd, Hsiao-Wuen Hon. 2001. Spoken Language Processing. Prentice-Hall</p> <p>Lawrence. R. Rabiner and Ronald W. Schafer. 2001. Introduction to Digital Speech Processing. NOW</p>                                                                                                                                                                                                       |