

# Natural Language Processing and Text Mining

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This course offers a comprehensive exploration of Natural Language Processing (NLP) and Text Mining, integrating linguistics, mathematics, and computer science. It covers the full spectrum of language processing by computers, from fundamental concepts to advanced machine learning applications.

Key concepts covered:

- Linguistic foundations: phonetics/graphetics, morphology, syntax, semantics, and pragmatics
- Formal languages, logics, and computational techniques for NLP
- Machine learning for text classification and information retrieval
- Sentiment mining and analysis
- Deep learning applications in NLP
- Practical chatbot creation and implementation

By the end of this course, students will be able to:

- [BC-04] Implement and evaluate machine learning models for text classification and sentiment analysis
- [BC-07] Apply NLP techniques to solve real-world text processing and analysis problems
- [BC-07] Design and develop functional chatbots using NLP principles and technologies

Prerequisites :

- Being familiar and efficient with Python programming