CSE 472 Introduction to Computational Linguistics

Credits

5.0 (3 hrs lecture, 1 hr section)

Lead Instructor

Glenn Slayden

Textbook

- o *Speech & Language Processing*, Jurafsky

Course Description

Introduction to computer applications of linguistic theory, including syntactic processing, semantic and pragmatic interpretation, and natural language generation.

Prerequisites

either LING 200 or LING 400; either LING 461, CSE 311, or CSE 321.

CE Major Status

Selected Elective

Course Objectives

Be familiar with computational linguistic tools and resources, and how they are applied in research in both computational linguistics and other subfields.

Have a sense of the state of the art in this subfield.

Be able to conceptualize problems from the perspective of computational linguistics.

ABET Outcomes

n/a

Course Topics

- o Finite state morphology
- o Regular expressions
- o Formal grammars; Chomsky hierarchy; Context-free grammars
- o Bayes' theorem
- o N-grams and Language Modeling
- o Part-of-speech tagging
- o Semantic representations
- o Clustering and classifiers
- o Evaluation: Precision and Recall
- o Algorithms for corpus processing
- o Feature-structures and unification-based grammars