

COURSE DETAIL

LANGUAGE TECHNOLOGY

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

130

UCEAP Course Suffix**UCEAP Official Title**

LANGUAGE TECHNOLOGY

UCEAP Transcript Title

LANGUAGE TECHNOLOGY

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

The course introduces theories and techniques of natural language processing and language technology. It covers the whole field, from speech recognition and synthesis to semantics and dialogue. The course focuses on industrial and laboratory applications, such as document retrieval on the Internet, information extraction, conversational agents, and verbal interaction in virtual worlds. Fundamental algorithms are described using Prolog or regular expressions. Topics covered in this course include an overview of language processing (applications, disciplines of linguistics, examples); Corpus and word processing (regular expressions, automata, an introduction to Perl, concordances, tokenization, counting words, collocations); morphology, transducers, and part-of-speech tagging; Prolog to write phrase-structure grammars (constituents, trees, using Prolog to do natural language analysis, DCG rules, variables, getting the syntactic structure, compositional analysis to get the semantic structure); syntactic formalisms (constituency and dependency, chart parsing, statistical parsing, functions, dependency parsing); semantics (formal semantics, lambda-calculus, compositionality such as nouns, verbs, determiners, words and meaning, lexical semantics, case grammars, semantic grammars); discourse and dialogue (rhetoric, anaphora, structure, RST, automata, pairs, speech acts, multimodality); and an overview of speech synthesis and speech recognition.

Language(s) of Instruction

English

Host Institution Course Number

EDAN20

Host Institution Course Title

LANGUAGE TECHNOLOGY

Host Institution Course Details

<http://cs.lth.se/edan20/>

Host Institution Campus

Host Institution Faculty

Engineering

Host Institution Degree**Host Institution Department**

Engineering- Computer Science

Course Last Reviewed

2022-2023

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