

## COURSE DETAIL

### NATURAL LANGUAGE PROCESSING

**Country**

Denmark

**Host Institution**

University of Copenhagen

**Program(s)**

University of Copenhagen

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Computer Science

**UCEAP Course Number**

134

**UCEAP Course Suffix****UCEAP Official Title**

NATURAL LANGUAGE PROCESSING

**UCEAP Transcript Title**

NATURAL LANG PROCES

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## Course Description

This course introduces the fundamentals of natural language processing (NLP), i.e. computational models of language and their applications to text. This course combines machine learning (ML), including fundamental formalisms and algorithms, with a strong hands-on experience. The course covers topics including the NLP tasks of language modeling, text classification, semantics, information extraction, parsing, pragmatics, machine translation, summarization, and answering questions. Methods covered include text classification, structured prediction, representation and deep learning, conditional random fields, and beam search. Students learn efficient implementations and the relationship between NLP tasks. This course also explores the themes of discriminative and generative learning, and various ways of obtaining supervision for training statistical NLP models. Students apply the skills and concepts learned in this course to other fields including data science, political science research, and gene sequencing.

## Language(s) of Instruction

English

## Host Institution Course Number

NDAK18000U

## Host Institution Course Title

NATURAL LANGUAGE PROCESSING

## Host Institution Campus

Science

## Host Institution Faculty

## Host Institution Degree

## Host Institution Department

Computer Science

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