Natural Language Processing

Lecturer: Mirzagitov Azat

Semester: 2   **Duration:** 18 weeks

Workload (h): 144   **Presence** (h + CH): 64 (8)   **Self-Study** (h): 72

Contents:

Background and relations to other courses: Data Structures.

Main topics and learning objectives:

Themes	Learning objectives
Basic text processing	To know and understand basic definitions: regular expressions, word tokenization, hidden Markov models, language modeling, global linear models, maximum entropy sequence models, Chomsky hierarchy of grammars, context-free grammars, relation extraction, compositionality semantics, information retrieval.
Computer morphology and language modeling	
Parsing and context-free grammars	
Named entity recognition	Be able: to use, to tune and to develop instruments for different components of natural language processing for specific task.
Relation extraction	
Information retrieval	
Sentiment analysis	
Question answering systems	

Assessment:

Formative: in interaction with lecturer and tutor during learning period. On site, skype, email are preferable.

Summative:

Number and Type; Connection to Course	Duration	Part of final mark in %
Oral Exam	90 min	100%

Learning outcomes:

Academic: to use, to tune, and to develop instruments for different components of natural language processing for specific tasks.

Prerequisites for Credit Points: The credit points will be granted when the course has been successfully completed, i.e. all parts of the examination are passed.