

***ICS 482: Natural language  
Processing  
Pre-introduction***

Husni Al-Muhtaseb

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

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## **NLP - NLU**

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Sun., Mond., Tues., 11:20 – 11:50

12:20 - 01:00

# Questionnaire

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## **Meeting – Starting next time**

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**24 - 256**

# NL Applications

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- Computer-aided translation
- Machine translation
- NL interfaces
- Information retrieval
- Speech technology
- Computer-assisted language learning

# Natural language Processing

## Topics

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- Word
- Syntax
- Semantics
- Pragmatic
- Multilingual



# **NLP Topics: Words**

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- Regular Expressions and Automata
- Morphology and Finite-State Transducers
- Computational Phonology and Pronunciation Modeling
- Probabilistic Models of Pronunciation and Spelling

# NLP Topics: Syntax

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- N-gram Models of Syntax
- HMMs and Speech Recognition
- Word Classes and Part-of-Speech Tagging
- Context-Free Grammars for English
- Parsing with Context-Free Grammars
- Features and Unification
- Lexicalized and Probabilistic Parsing
- Language and Complexity

# **NLP Topics: Semantics**

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- Representing Meaning
- Semantic Analysis
- Lexical Semantics
- Word Sense
- Disambiguation
- Information Retrieval

# **NLP Topics: Pragmatics**

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- Discourse
- Dialog and Conversational Agents
- Natural Language Generation

# **NLP Topics: Multilingual Processing**

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- Machine Translation

**Thank you**

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