

**Natural Language Processing Course**  
**Tentative Schedule of Class Sessions 2011**  
**(revised 10/31/11)**

**Date Topics and Assignments**

- 8/30 Course Overview and Introduction to NLP, Corpus Linguistics  
Readings: Chapter 0 NLTK book.  
Optional Reading: Chapter 1 J&M either edition,
- 9/06 N-gram Analysis, Morphology  
Optional Readings: Sections 4.1 – 4.7 J&M, 2<sup>nd</sup> ed., Ch. 6 J&M, 1<sup>st</sup> ed.  
Readings: Ch. 2, J&M either ed.  
Reading: Church and Hanks paper  
J&M Morphology examples
- 9/13 Regular Expressions and Finite State Automata  
Optional Readings: Ch. 3, J&M either ed.  
Assign Homework 1: Mutual Information
- 9/20 Part-of-speech Tagging  
Optional Readings: Ch. 5 J&M 2<sup>nd</sup> ed., or Ch. 8 J&M 1<sup>st</sup> ed.  
Optional reading: Eric Brill, Transformation-Based Error-Driven Learning.
- 9/27 Context Free Grammars  
Optional Readings: Ch. 12 J&M 2<sup>nd</sup> ed., or Ch. 9 J&M 1<sup>st</sup> ed.
- 10/04 Parsing, Statistical Parsing, Dependency Parsing  
Optional Readings: Ch. 13 J&M 2<sup>nd</sup> ed., or Ch. 10 J&M 1<sup>st</sup> ed.  
Optional reading: Joakim Nivre, Deterministic Dependency Parsing of English Text.  
Homework 1 Due.
- 10/11 Semantic Representations, Lexical Semantics, WordNet  
Optional Readings: Ch. 17 J&M 2<sup>nd</sup> ed., or Ch. 14 J&M 1<sup>st</sup> ed.  
J&M 2<sup>nd</sup> ed. Sections 19.1-19.3 and 20-1 – 20-8,  
or J&M 1<sup>st</sup> ed. 16.1 – 16.2 and 17.1-17.2  
Assign Homework 2: Noun Chunking or Parse Tree processing
- 10/18 Case Grammar, Semantic Role Labeling  
Optional Readings: J&M 2<sup>nd</sup> ed. Sections 19.4 and 20.9
- 10/25 Classification and Machine Learning, Information Extraction
- 11/01 Information Retrieval, Question Answering  
Optional Reading: Ch. 23 J&M 2<sup>nd</sup> ed.  
(Preliminary) Topics for NLP Applications  
11/3 Homework 2 Due

11/08 Emotive Aspects of Language, Summarization, Machine Translation

Optional Readings: Ch. 22 J&M 2<sup>nd</sup> ed.

Choose presentation topics.

11/15 Discourse Linguistics, Anaphora & Coherence

Optional Readings: Ch. 21 J&M 2<sup>nd</sup> ed., or Ch. 18 J&M 1<sup>st</sup> ed.

Assign Final Projects.

Finalize presentation topics and groups.

(11/17 – Lab: discussion of final projects, presentation group meeting time)

11/22 THANKSGIVING BREAK

11/29 Pragmatics, Dialogue Theory,

Optional Readings: Ch. 24.1-24.3 J&M 2<sup>nd</sup> ed., or Ch. ?? J&M 1<sup>st</sup> ed.

12/06 NLP Applications: Student Presentations

(No Final Exam. Final Project Due date will be announced, possibly December 15 (last day of exams).)