



## Summer School in Asian Language Processing

1<sup>st</sup> June – 12<sup>th</sup> August, 2006

**Course:** Computational Linguistics  
**Course Instructor(s):** Rajat Kumar Mohanty  
**Teaching Assistant(s):** Tahira Naseem  
**Text Book(s):** Speech and Language Processing (2000), by Daniel Jurafsky & James H. Martin (SLP)  
**Grades:** Labs 40%, Mid-term Exam 30%, End-term Exam 30%

Schedule of Lectures		Readings	Schedule of Lab Sessions
1	An Introduction to Morphology	SLP 3.1	
2	Morphological Analysis	Slides & Notes	Lab1: Morphological Analysis of Native Languages
3	Finite-state Morphological Parsing	SLP 3.2	Lab2: Morphological Parsing of Native Languages
4	Stemming	SLP 3.4	Lab3: Stemming in Native Languages
5	N-Grams	SLP 6	
6	Spell Checkers	Slides, SLP 5	
7	Parts-of-Speech Tagging	SLP 8	Lab4: An early attempt for POS tagging of Native Languages
8	Constituency	SLP 9.1	
9	Context-free Rules and Trees	SLP 9.2	Lab5: Context-free Rules for Native Languages
10	The Noun Phrases, Coordination, Agreement	SLP 9.4-9.6	
11	The Verb Phrase and Subcategorization	SLP 9.7	
12	Auxiliary Verbs	SLP 9.8	
13	Sentence-level Constructions	SLP 9.3	
14	Chomsky Normal Form Finite State and CFG	SLP 9.10-9.11	
15	Parsing as Search (Top-down & Bottom-up)	SLP 10.1	Lab6: Parsing Native Languages: An early attempt
16	Feature Structures	SLP 11.1	Mid-term on Computational Linguistics
17	Unification of Feature Structures	SLP 11.2	
18	Feature Structure in Grammar	SLP 11.3	Lab7: Feature Structures in Native Languages
19	Implementing Unification	SLP 11.4	
20	An Introduction to Dependency	Notes	Lab8: Annotation of Native Languages

	grammar and Annotation		
21	Relations among Lexemes and their Senses	SLP 16.1	
22	WordNet	SLP 16.2 & Notes	
23	The Internal Structure of Words	16.3	
24	Ambiguity	Slides & Notes	
25	Negation and Polarity Items	Slides & Notes	
26	Tense, Aspect and Modality	Slides & Notes	
27	An Introduction to Anaphora Resolution	Slides & Notes	
28	An introduction to VerbNet & FrameNet	Webpages	
29	Universal Networking Languages (UNL)	Webpages	Lab9: UNL Expressions in Native Languages
30	Universal Networking Languages (UNL)	Webpages	Lab10: UNL Expressions in Native Languages
31	UNL: EnConverter	Slides & Notes	Lab11: EnConversion of Native Languages
32	UNL: DeConverter	Slides & Notes	Lab12: DeConversion of Native Languages
			End-term on Computational Linguistics