**Course: Advance Bio Informatics**

**Module Title: Natural Language Processing**

**Module No: 95**

**Natural language Processing (NLP)**

* Field of CS, AI and CL concerned with the interactions between computers & Natural languages.
* Major Focus: HCI, NLU, NLG.

**NLP Methods**

Hand written rules. Statistical Inference algos:

* Robust to unfamiliar i/p (e.g. containing words or structures that have not been seen before).
* Erroneous input (e.g. with misspelled words or words accidentally omitted).
* Methods used are stochastic, probabilistic and statistical.
* Methods for disambiguation often involve the use of corpora and Markov models.

**Major tasks in NLP**

* Automatic summarization.
* Discourse analysis.
* Machine translation.
* Morphological segmentation.
* Named entity recognition (NER).
* Natural language generation.
* Natural language understanding.

**Applications of NLP**

* Native Language Identification.
* Stemming.
* Text simplification.
* Text-to-speech.
* Text-proofing.
* NL search.
* Query expansion.
* Essay scoring.
* True-casing.