

University of Arkansas - Fort Smith
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General Syllabus

CS 43403 Natural Language Processing

Credit Hours: 3

Lecture Hours: 3

Laboratory Hours: 0

Prerequisite: CSCE 20003 Data Structures or CSCE 13003 Introduction to Data Science

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Comprehensive overview of the field of Natural Language Processing (NLP) that is at the core of much technological advancement, including search engines, machine translation, customer service, medicine, etc.

II. Student Learning Outcomes

A. Subject Matter

Upon successful completion of this course, the student will be able to:

1. Analyze operational knowledge of the field of natural language processing.
2. Evaluate statistical methods and probability for natural language processing.
3. Compare and contrast relational and distributed database systems.
4. Differentiate consistency models that exist within database systems.
5. Design and implement application frameworks that run in a parallel database environment.

B. University Learning Outcomes (ULO)

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills: Students will utilize analytical skills to identify a problem, break it down into its component parts and develop a solution.

III. Major Course Topics

- A. Statistical Methods and Probability
- B. Word Sense Disambiguation
- C. Text Classification
- D. Information Retrieval
- E. Sentiment Analysis
- F. Information Theory
- G. Machine Learning for NLP