

**University of Arkansas – Fort Smith
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General Syllabus

CSCE 31103 Artificial Intelligence

Credit Hours: 3

Lecture Hours: 3

Laboratory Hours: 0

Prerequisite: CSCE 20003 Data Structures

Effective Catalog: 2018-2019

I. Course Information

A. Catalog Description

Overview of the evolution of artificial intelligence techniques and applications. Introduces different paradigms for problem solving and provides an in-depth study of one or more key areas of AI such as expert systems, neural networks, robotics, logic programming, intelligent agents, machine learning, and natural language processing. Students design, develop, and implement systems utilizing techniques of artificial intelligence to reinforce the areas of study.

II. Student Learning Outcomes

A. Subject Matter

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

1. Evaluate and explain the proven techniques utilized in artificial intelligence.
2. Interpret the future of artificial intelligence research.
3. Evaluate and assess the appropriateness of AI methods for different situations.
4. Create functional programs utilizing one or more AI techniques.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills - Students will identify an artificial intelligence problem, break it down into its component parts and develop an algorithm to test the solution.

III. Major Course Topics

- A. Fundamental issues
- B. Basic search strategies
- C. Knowledge-based reasoning
- D. Advanced search
- E. Natural language processing
- F. Machine learning
- G. Agents