

**University of Arkansas – Fort Smith
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General Syllabus

CS 4023 Senior Capstone

Credit Hours: 3

Lecture Hours: 3

Laboratory Hours: 0

Prerequisite: CS 4003 Software Engineering and Department Approval

Effective Catalog: 2020-2021

I. Course Information

A. Catalog Description

Students will work in teams to complete a significant software development project using an incremental agile software development approach . The project will include planning, design, development, testing, and implementation and culminate with a team presentation.

II. Student Learning Outcomes

A. Subject Matter

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

1. Work in a team to complete a significant software development project using an incremental agile approach.
2. Analyze user specifications to design, test, and implement a solution in a team environment. A report along with all supporting documentation for the prescribed solution will be submitted for review and acceptance.
3. Collaborate and provide both individual and team updates, ensuring the project remains on schedule and is completed in an acceptable manner.
4. Conduct a post project review upon completion of the project, completing both individual and team assessments of the entire project, including hard and soft skill assessments.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills**Critical Thinking Skills**

Students will work in teams to develop and implement a project solution according to a plan developed in Software Engineering.

Communication Skills (written and oral)

Students will work in teams and participate in scheduled team meetings to implement the solution according to the project plan. They will present their project solutions and communicate their solution.

III. Major Course Topics

- A.** Agile Project Development including software sprints
- B.** Project requirements and scope defined by the team
- C.** Project resources defined and outlined by the team
- D.** Project management determined by the team and resources allocated
- E.** Testing and quality assurance designed and determined by the team and client
- F.** Professional communications within status reports, documentation and internal communication
- G.** Teamwork environment, concepts and issues while accomplishing the team project
- H.** Analyzing, designing, creating and implementing a project taking into account the social, organizational and ethical areas of concern.