

University of Arkansas – Fort Smith
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General Syllabus

CS 3403 .NET Application Programming

Credit Hours: 3

Lecture Hours: 3

Laboratory Hours: 0

Prerequisites: CS 1024 Foundations of Programming II

Prerequisites or corequisites: CS 2033 Web Systems

Effective: 2020-2021

I. Course Information

A. Catalog Description

Introduction to the Microsoft .NET Framework. Introduction to this managed code platform and the numerous tools and technologies for developing stand-alone Windows applications, web applications, and distributed network applications.

II. Student Learning Outcomes

A. Subject Matter

1. Explain how the .NET Framework is structured to support application development, including the Common Language Runtime (CLR).
2. Create programs using the C# programming language, using Visual Studio.
3. Construct and implement web applications using ASP.NET and other technologies in the .NET framework.
4. Create applications using data access capabilities.
5. Formulate higher level programming algorithms (using advanced concepts like inheritance and polymorphism) into a .NET environment.

B. University Learning Outcomes

This course enhances student abilities in the following areas:

Analytical Skills

Critical Thinking Skills

Students will identify a problem, break it down into its component parts and develop a solution using a .Net language.

III. Major Course Topics

- A.** .NET Framework overview
- B.** Common Language Runtime
- C.** C# fundamentals
- D.** Variables
- E.** User inputs
- F.** Decision structures
- G.** Control structures
- H.** Exception handling
- I.** Methods
- J.** Classes
- K.** Windows Forms programming
- L.** Basics of Visual Studio
- M.** Designing Graphical User Interface (GUI)
- N.** Event Driven Programming
- O.** Files and Streams
- P.** Data access in .NET
- Q.** LINQ Concepts with Lists and Database Connections
- R.** SQL and Database Connections in .NET
- S.** Web application development in .NET