

SOUTHEAST COMMUNITY COLLEGE
ADVANCED TECHNOLOGIES & SKILLED TRADES DIVISION
Computer Information Technology Program
Revision Date: November 10, 2025

I. CATALOG DESCRIPTION

Course Number: INFO1434
Course Title: C#.NET
Prerequisite(s): INFO1171, INFO1215
Corequisite(s): INFO1411, MATH1020 or higher
Catalog Description: This course is an introduction to the C# programming language and the .NET framework. Topics focus on windows form applications, structured coding, object-oriented principles, exception handling, file processing, and database connectivity.
Credit Hours: 4
Class Hours: 60
Lab Hours: 0
Total Contact Hours: 60

II. COURSE OBJECTIVES: *Course will:*

- A. Introduce the .NET framework and Visual Studio.
- B. Introduce to the C# programming language.
- C. Review basic coding structures.
- D. Investigate object-oriented programming concepts.
- E. Provide hands-on training in the basics of creating and using classes.
- F. Provide an overview of applications that utilize Data files.
- G. Provide training in advanced-level object-oriented programming skills.
- H. Describe database programming concepts.
- I. Provide students with the opportunity to apply programming concepts and skills to a variety of hands-on projects.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Recognize the components of a C#.NET program.
 - 2. Understand C# arithmetic operators.
 - 3. Identify program control statements using the C# syntax.
 - 4. Recognize the correct use of decision structures using the C# syntax.
 - 5. Demonstrate an understanding of classes, methods and modular program design.
 - 6. Recognize the need and use of arrays in the C# programming language.
 - 7. Use collections and generics using the C# programming language.
 - 8. Develop an application with sequential access data files.
 - 9. Demonstrate event-driven program concepts.
 - 10. Integrate objects and controls using basic OOP principles in forms design.
 - 11. Implement basic OOP principles to create class modules with properties and methods.
 - 12. Instantiate objects using a class module.
 - 13. Use ADO.Net to access and update relational databases.
 - 14. Use the three-tier approach to OOP design.

- B. General Education Learning Outcomes (GELOs)
 - 1. GELO #3: Critical Thinking & Problem Solving
Outcome 2: Synthesize information to arrive at reasoned solutions to problems.

IV. CONTENT/TOPICAL OUTLINE

- A. Fundamental programming in .NET and C#.
- B. Basics of the .NET framework
- C. Overview of programming structures
- D. Arrays and Collections
- E. Addition .NET Controls and Objects
- F. Introduction to OOP principles
- G. Overview of Classes including Constructors, Properties – fields (instance variables) and methods
- H. Exceptions and Delegates
- I. Inheritance and interfaces
- J. Uses of Sequential Files
- K. Advanced GUI components including multiple form applications
- L. Database access using ADO.Net
- M. Design a three-tier application

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): Boehm, Anne & Murach, Joel, *Murach's C#* (Refer to CID and/or instructor for current edition)
- B. Other Resources: Required software available as a free download.
- C. Computer and Internet access

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation may include a combination of the following:
 - 1. Technology enhanced lectures
 - 2. Group discussions
 - 3. Engaged learning activities

VII. METHODS OF EVALUATION

- A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
 - 1. Attendance and /or participation activities
 - 2. Homework assignments
 - 3. Quizzes
 - 4. Tests

VIII. SPECIFIC COURSE REQUIREMENTS

- A. This course will not qualify as a prerequisite if the student receives a final grade below a C (70%).