

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: ITP 136

Credits: 4

Course Title: C# Programming I

Course Description: Teaches the fundamentals of object-oriented programming and design using C#. Emphasizes program construction, algorithm development, coding, debugging, and documentation of applications within the .NET framework. Lecture 4 hours per week.

General Course Purpose: Required in Computer Programmer Career Studies Certificate, which also feeds into the IST AAS - Computer Programmer concentration. The course can also be used as an IT elective in any degree concentration.

Course Prerequisites and Co-requisites:

None

Student Learning Outcomes:

Upon completing the course, the student will be able to

- a. Learn the basics of computer programming and program design;
- b. Apply the fundamentals of object-oriented programming and design using C#;
- c. Identify the concepts of object-oriented language, encapsulation, inheritance, and polymorphism; and
- d. Develop and write programs within the .Net framework using C# programming.

Major Topics to Be Included:

- a. Introduction to computers and programming languages
- b. C# language fundamentals
- c. Processing data
- d. Strings and other data types
- e. Making decisions in a programming environment
- f. Handling exceptions
- g. Loops (while and for)
- h. Writing and reading files
- i. Arrays and lists
- j. Classes, objects
 1. Inheritance and polymorphism
 2. Abstract classes, methods, and properties
- k. Databases fundamentals

Date Created/Updated (Month, Day, and Year): March 22, 2019