J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: <u>ITP 236</u>   **Credits:** <u>4</u>

Course Title: <u>C# Programming II</u>

Course Description:

Focuses instruction in advanced object-oriented techniques using C# for application development. Emphasizes database connectivity and back-end development using the .NET Framework and database processing using LINQ and the Entity Framework. Prerequisites: ITP 136 and ITD 130 or equivalent. Lecture 4 hours per week. 4 credits

General Course Purpose:

ITP 236 is a requirement for the Information Systems Technology AAS - Computer Programmer concentration. It is a course for students interested in developing advanced knowledge of C# programming and may be used as an elective for the Computer Applications and Web Development concentrations of the Information Systems Technology AAS degree.

Course Prerequisites and Co-requisites

Prerequisites: ITP 136 and ITD 130 or equivalent

Student Learning Outcomes
Upon completing the course, the student will be able to

- Develop a three-tier C# application using object-oriented architecture;
- Use C# to build an Entity Framework layer to access and modify data;
- Use C# to build a POCO (Plain Old CLR Object) business layer; and
- Prepare C# for building user interfaces.

Major Topics to Be Included:

- Object-oriented programming
- Writing and handling events
- Class Extensions
- LINQ
- Entity Framework

Effective Date/Updated: January 20, 2022