Course	Intermediate Programming: C# (.NET)
Course Number	CS 233 : C# (.NET)
Credits	4
Instructor	Mari Good
Office Hours	I have lab hours scheduled for the last hour of class each and every week. In addition to those hours, I'm available in my office(room 158) or in the CIT Main Lab (room 135) on Tuesday and Thursday from 11am to noon. You may leave an e-mail message at goodm@lanecc.edu. or contact me via telephone at 541-463-5838.

Course Description

This is the second in a sequence of 3 courses that teaches students to develop desktop applications in the .NET environment. The course introduces students to fundamental object oriented programming concepts as well as the syntax of the C# programming language and the Visual Studio development environment.

Learning Outcome

The intention of the course is to enable you to create simple object oriented desktop applications for the windows operating system.

Course Content

Technologies

C#	Visual Studio	Git

Themes and Issues

Syntax, semantics and style	Giving and receiving feedback	

Concepts

Programming paradigms	Object Oriented design	Classes
Inheritance	Abstract classes and interfaces	Exception handling
Data structures	Recursion	

Skills

Design object oriented solutions to intermediate programming problems.
Design and implement classes and systems of classes in C#.
Design and implement console applications to test a set of classes in C#.
Effectively use: control structures, strings, arrays and collections, structured exception handling, classes and objects.
Effectively use the Visual Studio IDE to implement, test and debug multi-project C# programs.
Effectively use Git (command line) and GitHub for version control of individual programming projects.
Discuss concepts, themes and issues orally and in writing.
Evaluate your own programs. Evaluate the programs of other students and provide constructive feedback orally and in writing. Respond appropriately to and assimilate feedback provided by other students and your instructor.

Learning Resources

Texts

C# Fundamentals for Absolute Beginners is a free video tutorial series by Bob Tabor hosted by the Microsoft Developer Network and is the primary "text" for the course. It is a good introduction to the concepts associated with the creation of console applications in Visual Studio as well syntax of C#. You can find the overview of the set of tutorials at: http://channel9.msdn.com/Series/C-Fundamentals-for-Absolute-Beginners/01#.

Three online text-based tutorials will also be used throughout the course. Readings and practice exercises will regularly be assigned from each of these sites. The introduction to each can be found at:

- http://www.w3schools.com/cs/cs_intro.asp
- http://www.tutorialsteacher.com/csharp/csharp-tutorials
- https://www.tutorialspoint.com/csharp/index.htm

Web Sites

classes.lanecc.edu will be used to host the web site for the course.

Lab

As part of the course, you may choose to work in the CIT Main Lab (building 19 room 135) This is an opportunity for you to gain practical experience with the material in a setting where you can get support and feedback.

Software

The hardware and software required for the course is available to all students in the CIT Main Lab on campus. You paid a fee when you registered for this course that provides you with unlimited access to CIT lab facilities.

Most students will find it convenient to do at least some of the work for class on a computer off campus. C#, .NET and Visual Studio are Microsoft development technologies and therefore are most commonly used on a Windows computer. As a result of a partnership between Microsoft and many educational institutions, including LCC, students may obtain a copy of the Microsoft software used for the class free of charge. Specifically, you can download a copy of Visual Studio 2017 if you intend to work on your lab assignments at home from https://aka.ms/vs/15/release/vs_community.exe. The download and installation process takes about 30 minutes.

Assessment Tasks

The learning outcome will be demonstrated by these tasks that progressively build on each other:

1. **Lab 1** – Review the design, implementation, testing and debugging of simple C# applications and the use of Visual Studio.
2. **Lab 2** –Build applications that use data structures.
3. **Lab 3 -** Build applications that use recursion.
4. **Lab 4** – Design object oriented solutions to simple problems. Implement classes in C#. Implement console applications that test classes in C#.
5. **Quiz 1** –Independently answer matching and short answer "concept" questions. Independently complete object oriented design problems that use concepts and skills introduced in first 4 labs. Independently complete C# problems that use syntactical elements introduced in first 4 labs.
6. **Lab 5** – Design, implement and test classes and programs that use arrays and collections, indexers
7. **Lab 6** – Design, implement and test classes and programs that use inheritance.

8. **Lab 7** – Design, implement and test classes and programs that use abstract classes and interfaces.
9. **Quiz 2** – Independently answer matching and short answer "concept" questions. Independently complete object oriented design problems. Independently complete C# problems that use syntactical elements introduced in labs 5 - 7.
10. **Reading Quizzes 1 – 7** – Independently answer matching and short answer concept questions based on the reading from the text each week.

Assessment and Grading

The table below summarizes the possible points for each assessment task as well as the course as a whole:

Assessment Tasks	Points
Labs 1 - 7	140
Reading Quizzes 1 - 7	70
Quizzes 1 - 2	120
Course Total	*330*

Lectures and in-class group activities will cover material in the text as well as supplementary material and are designed specifically to help students master concepts and skills. You can maximize your success in the class by reading the material in the text prior to coming to class and attempting to complete each lab.

While students are encouraged to discuss labs and quizzes and to use each other as resources, each student is responsible for his/her own work.

Letter grades for the course will be determined by the following percentages:

	+		-
A		100 to 92	91 to 90
B	89 to 88	87 to 82	81 to 80
C	79 to 78	77 to 72	71 to 70
D	69 to 68	67 to 62	61 to 60
F	Below 60		

Accessibility and Accommodations:

To request accommodations contact the Center for Accessible Resources at (541) 463-5150 or AccessibleResources@lanecc.edu

Please be aware that any accessible tables and chairs in this room should remain available for authorized students who find that standard classroom seating is not usable.