



COURSE OUTLINE

CSD207

Prepared: Bazlur Rasheed Approved: Corey Meunier

Course Code: Title	CSD207: INTRO TO C# & .NET DESKTOP APPLICATIONS
Program Number: Name	2090: COMPUTER PROGRAMMER
Department:	COMPUTER STUDIES
Semester/Term:	17F
Course Description:	<p>This course introduces the student to the C# programming language and the .NET framework. Students will design, develop, test and debug applications demonstrating practical knowledge of C# language constructs and the .NET framework and libraries. Desktop applications including Windows Forms and console based applications will be written in the Visual Studio Integrated Development environment.</p> <p>Students will write applications that build on concepts and language constructs developed in this and other courses including structured programming techniques, basic language syntax, data types, file I/O, variable scope, arrays, collection classes, references, sequence, selection, repetition and object oriented programming techniques such as encapsulation, inheritance, polymorphism and UML syntax.</p> <p>This is a lab oriented course with emphasis on practical hands on exercises. Students will be introduced to and gain practical knowledge in the use of git, git clients and cloud based repositories.</p>
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Vocational Learning Outcomes (VLO's): Please refer to program web page for a complete listing of program outcomes where applicable.	#1. Use documented solutions to troubleshoot problems associated with software installation and customization. #2. Develop, test, document, deploy, and maintain secure program code based on specifications.
Essential Employability Skills (EES):	#1. Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. #2. Respond to written, spoken, or visual messages in a manner that ensures effective communication. #3. Execute mathematical operations accurately. #4. Apply a systematic approach to solve problems.



COURSE OUTLINE

CSD207

Prepared: Bazlur Rasheed Approved: Corey Meunier

- #5. Use a variety of thinking skills to anticipate and solve problems.
- #6. Locate, select, organize, and document information using appropriate technology and information systems.
- #7. Analyze, evaluate, and apply relevant information from a variety of sources.
- #8. Show respect for the diverse opinions, values, belief systems, and contributions of others.
- #9. Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
- #10. Manage the use of time and other resources to complete projects.
- #11. Take responsibility for ones own actions, decisions, and consequences.

Course Evaluation:

Passing Grade: 50%, D

Other Course Evaluation & Assessment Requirements:

To successfully pass this course, the student must receive passing grades for both the Test and Evaluation portion of the class and the Laboratory portion.

Grade
 Definition Grade Point Equivalent
 A+ 90 – 100% 4.00
 A 80 – 89%
 B 70 - 79% 3.00
 C 60 - 69% 2.00
 D 50 – 59% 1.00
 F (Fail) 49% and below 0.00

CR (Credit) Credit for diploma requirements has been awarded.
 S Satisfactory achievement in field /clinical placement or non-graded subject area.
 U Unsatisfactory achievement in field/clinical placement or non-graded subject area.
 X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
 NR Grade not reported to Registrar’s office.
 W Student has withdrawn from the course without academic penalty.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Lab Assignments	30%
Lecture Assignments and Attendance	10%
Quizzes	10%
Theory and Lab Tests	50%

Books and Required

Beginning C# 6 Programming with Visual Studio 2015 by Benjamin Perkins, Jacob Vibe



COURSE OUTLINE

CSD207

3

Prepared: Bazlur Rasheed Approved: Corey Meunier

Resources:

Hammer and Jon D. Reid
Publisher: John Wiley & Sons, Inc., Wrox a Wiley Brand.
ISBN: 978-1-119-09668-9

Course Outcomes and Learning Objectives:

Course Outcome 1.

Introduction to Visual C# and .NET Framework

Learning Objectives 1.

- What is C#?
- What is the .NET Framework?

Course Outcome 2.

Introduction to Visual Studio and Visual Programming

Learning Objectives 2.

- The Visual Studio 2017 Integrated Development Environment
- Navigating the Visual Studio IDE
- Create a simple application (Command Line Programming)
- Create a simple application (Visual Programming)

Course Outcome 3.

Introduction to C# Console and Windows Application Programming

Learning Objectives 3.

- Console Applications
- Desktop Applications
- Web Applications



COURSE OUTLINE

CSD207

4

Prepared: Bazlur Rasheed Approved: Corey Meunier

Course Outcome 4.

Variables and Expressions

Learning Objectives 4.

- Basic C# Syntax
- Basic C# Console Application Structure
- Variables
- Expressions

Course Outcome 5.

Flow Control

Learning Objectives 5.

- Boolean Logic
- Branching
- Looping

Course Outcome 6.

More about Variables

Learning Objectives 6.

- Type Conversion
- Complex Variable Types
- String Manipulation

Course Outcome 7.

Functions



COURSE OUTLINE

CSD207

Prepared: Bazlur Rasheed Approved: Corey Meunier

Learning Objectives 7.

- Defining and Using Functions
- Variable Scope
- The Main() Function
- Struct Functions
- Overloading Functions

Course Outcome 8.

Debugging and Error Handling

Learning Objectives 8.

- Debugging in Visual Studio
- Error Handling

Course Outcome 9.

Introduction to Object-Oriented Programming

Learning Objectives 9.

- What Is Object-Oriented Programming?
- OOP Techniques
- OOP in Desktop Applications
- Defining Classes
- Class Definitions in C#
- System.Object
- Constructors and Destructors
- OOP Tools in Visual Studio
- Class Library Projects
- Interfaces Versus Abstract Classes
- Struct Types
- Shallow Copying Versus Deep Copying



COURSE OUTLINE

CSD207

6

Prepared: Bazlur Rasheed Approved: Corey Meunier

Course Outcome 10.

Defining Class Members

Learning Objectives 10.

- Member Definitions
- Additional Class Member Topics
- Interface Implementation
- Partial Class Definitions
- Partial Method Definitions

Course Outcome 11.

Class Designer in Visual Studio using Unified Modeling Language (UML) Syntax

Learning Objectives 11.

- Understand the physical structure of the software objects and their relationships
- How to design UML class diagram
- Generate C# code using visual studio

Course Outcome 12.

Basic Desktop Programming

Learning Objectives 12.

- Windows Forms
- Windows Presentation Foundations (WPF)
- Events
- Controls (Forms, Labels, TextBox, buttons, etc.) Properties and Layout
- GroupBoxes and Panels
- Checkboxes and RadioButtons



COURSE OUTLINE

CSD207

7

Prepared: Bazlur Rasheed Approved: Corey Meunier

- PictureBoxes

Course Outcome 13.

Advanced Desktop Programming

Learning Objectives 13.

- Menus
- MonthCalendar control
- DateTimePicker control

Course Outcome 14.

Git, Git clients and cloud based repositories

Learning Objectives 14.

- Git a version control system (VCS)
- Git Basics
- Git Clients
- GitHub a Web-based Git

Date:

Friday, September 1, 2017

Please refer to the course outline addendum on the Learning Management System for further information.