GROSSMONT COLLEGE

 COURSE OUTLINE OF RECORD

Curriculum Committee Approval: 04/20/2021

GCCCD Governing Board Approval: 05/18/2021

COMPUTER SCIENCE INFORMATION SYSTEMS 290 – INTRODUCTION TO C# PROGRAMMING

1. Course Number Course Title Semester Units

 CSIS 290 Introduction to C# Programming 4

Semester Hours

3 hours lecture: 48-54 hours 96-108 outside of class hours 3 hourslaboratory: 48-54 hours

192-216 total hours

2. Prerequisites

 None

Corequisite

 None

 Recommended Preparation

A “C” grade or higher or “Pass” in CSIS 119 or equivalent.

3. Catalog Description

This course is designed to provide students with an introduction to C# programming in the Visual Studio integrated development environment. Emphasis will be on learning the fundamentals including sequence, decision and repetition. The course will also focus on object-oriented design, testing and debugging on a Windows .NET platform.

4. Course Objectives

 The student will:

a. Develop a first program using C#.
b. Demonstrate the use of valid data.
c. Create GUI Objects and the Visual Studio IDE.
d. Demonstrate making decisions.
e. Demonstrate looping.
f. Explore Arrays.
g. Solve Methods.
h. AnalyzeAdvanced Method Concepts.
i. Synthesize Classes and Objects.
j. Demonstrate building Inheritance.
k. Identify exception handling.
l. Understand the use of controls and handling events.
m. Synthesize Files and Streams.
n. Build Data Queries

5. Instructional Facilities

 Standard Classroom

6. Special Materials Required of Student

 None

7. Course Content

1. First Program Using C#
2. The utilization of Data
3. The use of GUI Objects and the Visual Studio IDE
4. Decisions and their evaluation
5. The concepts of Looping
6. The concept of Arrays and their benefits and challenges
7. Introduction to Methods
8. Advanced Method Concepts
9. The usage of Classes and Objects
10. Introduction to Inheritance
11. Exception handling
12. The process and utilization of controls
13. The process of what it means to conduct ‘Handling’ of events
14. Files and Streams
15. Data Queries

8. Method of Instruction

 a. Lecture and demonstration in a traditional classroom or via electronic means

 b. Topical discussion of current programming trends and issues

 c. Student exercises in either a dedicated or a virtual lab environment

 d. Reading assignments.

9. Methods of Evaluating Student Performance

 a. Examinations and quizzes including a final examination.

 b. Skills demonstration**:** An example would be having a button trigger a handler method that then calls another UI method to change the button color.

 c. Projects and hands-on lab assignments: An example would be making an application that tracks contacts allowing entry and look up.

 d. Projects and scenario-based lab activities: To include multiple hands-on C# activities applied from the textbook and other sources, such as chapter-by-chapter projects.

10. Outside Class Assignments

 a. Team and individual projects**,** an example would include the writing of a program to solve a problem within a scientific or business situation or an interactive game utilizing the C# programming language.

 b. Read and analyze instructor assigned case studies; post analysis and comments to the class discussion board.

 c. Participate in and respond to other students’ analysis and comments on the class discussion board.

d. Complete and pass section quizzes and course final exam.

11. Representative Texts

 a. Representative Text(s):

Joyce Farrell , *Microsoft Visual C#: An Introduction to Object-Oriented Programming*. (MindTap Course List) 7th Edition Cengage Publishers**,** 2017.

b. Supplementary texts and workbooks:

 None

 Addendum: Student Learning Outcomes

 Upon completion of this course, our students will be able to do the following:

* 1. Identify the elements of the programming environment.
	2. Identify the process of program design and development.
	3. Create and debug computer programs in the assigned language.