GREENVILLE TECHNICAL COLLEGE

Business and Technology Division
Computer Technology
Course Syllabus
C# Programming I - CPT 230

Credit/Contact Hours:
3.0

Prerequisite:
CPT 101/CPT170 or CPT 113, MAT 102 or higher

Co-requisite:
None

Course Description:
This course introduces designing, coding, testing, and debugging C# programs. Topics include procedural, functional, and object-oriented techniques; programming; IDEs; .NET; processing data; data types; I/O; decision processing; control structures; modularized coding with methods; and arrays.

Purpose of Course:
This course introduces the student to the syntax and coding of the C# programming language. This includes the design, coding, testing, and debugging of code as well as exception handling and validation to prevent errors.

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Required Texts:

1. Title: <u>FUNDAMENTALS OF COMPUTER PROGRAMMING WITH C#</u>;
   ISBN: 9789544007737
   Note: This book is available for free download or online reading from:
   http://www.introprogramming.info/english-intro-csharp-book/

2. Must access Blackboard for course-related information.

Additional Materials:

1. Flowgorithm software (http://flowgorithm.org/download/)

2. Visual Studio 2015 Enterprise (See Microsoft Imagine Registration topic under course home page)

Course Outcomes:
Students who successfully complete this course will have demonstrated the skills required to accomplish the following objectives with a minimum competence level of 70 percent.

1. Students will be able to use fundamentals of programming such as variables, conditional and iterative execution, and methods..

2. Students will be able to recognize fundamentals of object-oriented programming, including defining classes, invoking methods, and using class libraries.

3. Students will be able to identify the principles of software development.

4. Students will be able to produce a C# computer program to solve problems by following specifications.

5. Students will be able to use the Microsoft Visual Studio environment to create, debug and run programs.

The objectives of the CPT 230 course are intended to meet the CPT/Programming program level student learning outcomes 2 and 6 below.

Program Student Learning Outcomes:
Upon successful completion of the CPT/Programming program, the graduate will be able to:

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1. Students will be able to analyze, design, develop, and document solutions that will satisfy the information needs of business users using established design methodologies and standards.
2. Students will be able to design, create, test, and document logical programming solutions to prescribed specifications following established standards and using current development environments and languages for application development and database management.
3. Students will be able to demonstrate the knowledge and ability to install and maintain microcomputer hardware and operating system software.
4. Students will be able to demonstrate the use of a minimum of three business application software packages.
5. Students will be able to demonstrate fundamental team building, project management, and presentation skills by participating in team projects that include team goals and values, a development methodology for documentation and coding, group presentations, and exposure to topics such as diversity, time management, and goal setting.
6. Students will be able to demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer lab assignments.

Greenville Technical College Core Competencies:

Communication Core Competency: Students will demonstrate effective written and oral communication skills to convey information, ideas, or opinions.

- Written Communication: Students will demonstrate effective written communication skills to convey information, ideas, or opinions.
- Oral Communication: Students will demonstrate effective oral communication skills to convey information, ideas, or opinions.

Critical Thinking Core Competency: Students will demonstrate effective reasoning, problem solving, or quantitative skills to develop an opinion or conclusion.

- Critical Reasoning: Students will employ inquiry, analysis, and synthesis of information to formulate and/or evaluate an opinion or conclusion.
- Problem Reasoning: Students will design and formulate a strategy to answer a question or achieve a desired goal.
- Quantitative Reasoning: Students will be able to analyze numerical information or observable facts resulting in informed conclusions.

Information Literacy Core Competency: Students will be able to locate, evaluate, and use information effectively from diverse sources.

Professionalism Core Competency: Students will demonstrate conduct and etiquette appropriate to the community and chosen career.

- Professionalism: Students will display professional conduct and work habits.
- Teamwork: Students will collaborate with others to accomplish a shared goal.

Instructional Agreement:
This syllabus is an agreement between the student and instructor concerning course objectives, course content, grading and other policies and procedures particular to the course as well as any posted program, departmental, and divisional policies. It is also the student's responsibility to become familiar with the Student Handbook/College Catalog found in the Student Resource area of Blackboard.

Grading Scale:
GRADING POLICY

Your grade in the course is based on:

In-class assignments	5%
Module assignments	40%
Module quizzes	15%
Midterm exam	20%
Final exam	20%

All assignments must be completed and submitted to the instructor by the due date in order to receive credit for the assignment.

Final letter grades will be issued as follows:

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\begin{aligned}
A &= 90 - 100 \\
B &= 80 - 89 \\
C &= 70 - 79 \\
D &= 60 - 69 \\
F &= 0 - 59
\end{aligned}
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Course Policies:

Disabilities Information

Students with disabilities, including those who were served in Special Education (resource or tutorial), should contact Student Disability Services (SDS) to discuss their need for services and accommodations. The main SDS office is located on the Barton Campus in the Student Center Building 105, office 113. Staff can be reached by phone at 864 250-8202 or via email to DisabilityServices@gvltec.edu . Appointments are

available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services: http://gvltec.edu/disability-services/

Efforts have been made to ensure all materials presented in an electronic format are accessible for students with disabilities and the college is committed to this obligation. However, if you experience any difficulty accessing these materials please notify your instructor immediately so a solution can be provided. You may also contact Student Disability Services directly at 864-250-8202 or by email at DisabilityServices@gvltec.edu.

Students who need a PDF reader for accessibility of course documents presented in PDF format may download a free reader at https://acrobat.adobe.com/us/en/products/pdf-reader.htm

Starfish

We care about your success! Greenville Technical College is proud to offer Starfish, a software tool designed to promote student success through coordination and communication between students, instructors and support staff.

When you set up your profile in Starfish, you can connect with services, faculty and staff at Greenville Technical College. The link to Starfish is located in Blackboard. Throughout the term, you may receive emails regarding your attendance, course grades or academic performance.

To benefit from this software, it is important that you check your Greenville Technical College Gmail regularly and read the Starfish alerts. If your academic performance begins to drop, you may also be contacted directly by a Success Coach or the Student Success Center.

Start, Stay, Succeed!

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Plan of Instructions

Module 1   Variables, Expressions, and Operators.
            Chapter 1 Introduction to Programming
            Chapter 2 Primitive Types and Variables
            Chapter 3 Operators and Expressions

Module 2   Input/Output.
            Chapter 4 Console Input and Output

Module 3   Selection
            Chapter 5 Conditional Statements

Module 4   Loops
            Chapter 6 Loops

Midterm Exam   (Covers Chapters 1-6)

Module 5   Arrays
            Chapter 7 Arrays

Module 6   Methods and Introduction to Visual Studio
            Chapter 9 Methods

Module 7   Class Libraries, Exception Handling, and Data Files
            Chapter 11   Creating and Using Objects
            Chapter 12   Exception Handling
            Chapter 15   Text Files

Module 8   Classes
            Chapter 14   Defining Classes

Final Exam   (Covers Chapters 7, 9, 11-12, 14-15)