

SYLLABUS

DIVISION: Business and Engineering Technology

REVISED: Fall 2014

CURRICULA IN WHICH COURSE IS TAUGHT: Programming

COURSE NUMBER AND TITLE: ITP 236 – C# Programming II

CREDIT HOURS: 4 **HOURS/WK LEC:** 4 **HOURS/WK LAB:** 0 **LEC/LAB COMB:** 4

I. CATALOG DESCRIPTION: Focuses instruction in advanced object-oriented techniques using C# for application development. Emphasizes database connectivity and networking using the .NET Framework.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES

- Acquire the fundamentals of object-oriented programming and design using C#
- Gain an understanding of concepts of object oriented language; encapsulation, inheritance and polymorphism
- Learn the C# programming within the .NET framework

III. REQUIRED BACKGROUND: ITP 136 - Visual C# Programming I

IV. COURSE CONTENT:

- C# language advanced topics
- Classes and Objects
- Inheritance and polymorphism
- Interfaces
- Arrays and collections
- File input and output
- web based programs

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE.

Communication
 Cultural and Social Understanding
 Personal Development
 Scientific Reasoning

Critical Thinking
 Information Literacy
 Quantitative Reasoning

VI. LEARNER OUTCOMES	VII. EVALUATION
<p>Introduction to Computers and Programming Languages</p> <ul style="list-style-type: none"> • Learn the history of computers. • Understand the difference between low level and high level programming languages. • Understand difference between procedural languages and object-oriented language. <p>Understand the basics of computer hardware</p>	<p>Lab exercises In class assignments Project Test</p>
<p>Classes and objects</p> <ul style="list-style-type: none"> • Understand how to define a class. • Understand object-oriented concepts of classes • Be able to create objects from the classes • Understand method constructs. • Understand how to pass parameters • Understand the concept of data encapsulation 	<p>Lab exercises In class assignments Project Test</p>
<p>Interfaces</p> <ul style="list-style-type: none"> • Be able to describe what an interface is and why it is used • Understand how to implement an interface 	<p>Lab exercises In class assignments Project Test</p>
<p>Arrays and collections</p> <ul style="list-style-type: none"> • Understand array basics • Learn to declare and use one dimensional array • Understand the effect of using array elements as parameter to methods • Understand the Collection interfaces 	<p>Lab exercises In class assignments Project Test</p>
<p>File input and output</p> <ul style="list-style-type: none"> • Understand file input • understand file extensions • reading data • saving data • exporting data 	<p>Lab exercises In class assignments Project Test</p>
<p>Web based programs</p> <ul style="list-style-type: none"> • different systems 	<p>Lab exercises In class assignments Project Test</p>

- | | |
|---|--|
| <ul style="list-style-type: none">• users accessing the web• format the programs for web material• exporting data | |
|---|--|