COUNTY COLLEGE OF MORRIS
Course Information Outline

Course Title Advanced C Programming (C#) **PREFIX & NUMBER** CMP210

Lecture Hours 3 **Laboratory Hours** 1 **Credit Hours** 3 **Course Fee** $40

Faculty Course Coordinator N. E. Binowski

Department Chairperson Approval Bonnie A. Murphy **Approval Date** 3/26/09

Division Dean Approval Patrick J. Enright **Approval Date** 5/1/09

1. **Catalog Course Description**
   This is an advanced level programming course for students with at least one semester of C#. Topics covered may include window applications, event handling, components and containers, interfaces, overloading, objects, arrays, lists, inheritance, polymorphism, recursion, collections, stacks, queues and algorithm analysis.

2. **Prerequisite(s)**
   CMP208 C Programming (C#)

3. **Co-requisite(s)**
   None

4. **Textbooks**
   TBD

5. **Supplementary Books and/or Materials**

6. **Specialized equipment, supplies, facilities, for classes limited by enrollment or restricted by accreditation and/or equipment limitations.** (Information will be used to determine differential funding category.)
   Microsoft Visual Studio.NET and internet access.

7. **Course Content (List of Topics)**
   - Windows-Based Applications
     - Event-Based Programming
     - Handling Events
       - Mouse Events
       - Key Events
   - Graphical User Interface (GUI)
     - Buttons
     - Text Fields
     - Dialog Boxes
     - Check boxes
     - Radio Buttons
     - Panel and Picture Boxes
   - Components and Containers
     - Forms: Creating and Loading
     - Form Controls
   - .NET Architecture and Base Class Libraries

- Enumerated Types
- String and StringBuilder Class
  - Arrays
  - Object Oriented Design
    - Objects
    - Static Class Members
    - Class Relationships
    - Interfaces
    - Overloading methods and operators
- Inheritance
  - Creating Subclasses
  - Overriding Methods
- Polymorphism
- Algorithms: Sorting, Searching
- Recursion
- Collections
- Stacks & Queues

8. **Statement of Course LEARNING OUTCOMES**
Upon completion of this course, students will demonstrate through successful completion of assignments, projects, and examinations
   - Knowledge of advanced-level programming language constructs
   - Experience in solving larger and more complex problems using C#
   - Sound programming and debugging practices
   - how to work collaboratively on team programming projects
   - critical thinking and decision-making skill

9. **Statement of Relation to Curriculum(s)**
Elective for all Information Technologies options.