

Hagerstown Community College Master Syllabus

SDE 130: Introduction to Object Oriented Programming

Course Information:

SDE 130 - Introduction to Object Oriented Programming
3 Credits
Online

Instructor Information:

Course Description:

This course is intended to show basic concepts in programming. Using a programming language like C# (currently), students will learn file management, programming techniques, program design and implementation, basic Object Oriented Programming (OOP), control statements and structure. The class covers variables, function, subroutines, user-centered design, arrays, rule sets and random vents. Students will be able to recognize and correct common programming errors as well as utilize programming problem solving techniques. Course fee required.
Corequisite: CSC 102 or IC3 certification.

Textbook:

Gaddis, Tony. Starting Out With Visual C#, Fourth Edition. Addison-Wesley, Boston, 2017.

Student Learning Outcomes and Course Content Objectives:

- Evaluate and understand the benefits and challenges associated with an object-oriented analysis design approach to software and project development
- Identify the key concepts used in object-oriented development including inheritance, encapsulation, data types, control flow, polymorphism and programming techniques
- Identify design patterns in terms of participating objects and classes and the roles they take on relative to the problem design solves
- Investigate and evaluate OOA&D (object-orientated analysis and design) tools, methods, and models that are available and currently used in business practice
- Design an algorithmic, object-oriented solution that meets the specification of a programming problem
- Document OOD (object-oriented design) diagrams that meet industry standards
- Adeptly model and animate in 2 dimensions and 3 dimensions
- Logically formulate scripts and/or programs to solve problems
- Understand and articulate interactivity in the gaming industry, including the connectivity between computer art and programming
- Apply programming and artistic theory in practical applications
- Demonstrate problem solving skills through verbal and written media
- Apply rudimentary physical principles to animations or simulations

Definition of Credit Hour:

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute “academic” hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit.

For most classes, students should expect to do at least 2 hours of coursework outside of class for each hour of in-class coursework.

	DIRECT Faculty Instruction In-class	Student Work Out of Classroom
Tests (Study)	15	30
Assignments	15	30
Projects	15	30
Total Hours	45 h	90 h

Services for Students with Special Needs:

Students who have special needs are encouraged to identify themselves to the Coordinator of Disability Services as early as possible. Reasonable accommodations based on current documentation are provided to qualified students.