

Course Abstract

If you need accommodations due to a disability, contact Disability Services in Edison Hall Room 100, 732.906.2546.

To foster a productive learning environment, the College requires that all students adhere to the Code of Student Conduct which is published in the college catalog and website.

Course ID and Name: CSC162 – Object-Oriented Programming using Java

Department: Business and Computer Science

Chairperson or Course Coordinator: Dr. Aslihan Cakmak

Office Location: ED123

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Prerequisites: CSC 161 with a grade of “C” or better and MAT 129

Co-requisites: None

Course Description:

This course builds on the Java foundation developed in CSC 161 and is the second course required for students in the Computer Science Transfer program. It investigates the software engineering principles of encapsulation, information hiding and code reuse, and discusses how these concepts are used to build abstract data types. The object oriented programming features of classes, inheritance, polymorphism and composition are studied, along with constructors and method overloading. Students implement Java programs incorporating features from the Java programming language.

General Education Status: N/A

Credits: 4

Lecture Hours: 3

Lab Hours: 3

Learning Outcomes:

Upon successful completion of this course, a student will be able to:

1. Write, compile and execute programs using classes and objects.
2. Write programs using inheritance and polymorphism.
3. Demonstrate programs that use recursion.
4. Demonstrate searching and sorting algorithms and analyze their efficiency.
5. Design programs using exception handling.

Course Content Areas:

- Multidimensional Arrays
- Objects and Classes Introduction
- Object-Oriented Thinking
- Inheritance and Polymorphism
- Exception Handling and Text I/O
- Abstract Classes and Interfaces
- Recursion,
- Sorting
- Developing Efficient Algorithms