Computer Programming II
CS141 : 3 (3, 3, 0)

Prerequisites:
CS-140 Computer Programming I

Objectives:

1. Summary of the main learning outcomes for students enrolled in the course.

This course will introduce the student to the concepts of object oriented programming.. Programming topics include data hiding/encapsulation and abstraction using classes and objects, inheritance, polymorphism, generic programming using template, operator overloading and file I/O. Upon successful completion of the course, the student should be able to:

- State the basic concepts of OOP.
- List the benefits of OOP over traditional structured programming
- Define key terms in OOP paradigm such as encapsulation, inheritance, and polymorphism.
- Recall the syntax of the basic C++ constructs/keywords related to OOP

2. Briefly describe any plans for developing and improving the course that are being implemented. (eg increased use of IT or web based reference material, changes in content as a result of new research in the field)

Course Description:

- General description in to be used for the Bulletin or Handbook
  This course will introduce the student to the concepts of object oriented programming. Programming topics include data hiding/encapsulation and abstraction using classes and objects, inheritance, polymorphism, generic programming using template, operator overloading and file I/O Upon successful completion of this course.

Syllabus:

1. Classes and Objects
2. Inheritance
3. Polymorphism
4. Operator Overloading
5. Templates & I/O

References:

1- Required Textbox :

C++: How To Program, Deitel and Deitel, 8th edition, Prentice Hall, 2012.

2- Essential References

The C++ Programming Language: Special Edition, Bjarne Stroustrup, 3rd edition, Addison-Wesley Professional, 2000.
C++ Programming: From Problem Analysis to Program Design, De D. S. Malik, Course Technology, 2006.
C++ Programming for the Absolute Beginner, De Dirk Henkemans and Mark Lee, Thomson Course, Technology, 2001.

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