

SUSSEX COUNTY COMMUNITY COLLEGE

Master College Syllabus

<u>COMS114</u>	<u>INTRODUCTION TO COMPUTER SCIENCE I</u>	
<u>COURSE</u>	<u>COURSE TITLE</u>	<u>CLASSIFICATION</u>
<u>3</u>	<u>2</u>	<u>2</u>
<u>CREDITS</u>	<u>CLASS HOURS</u>	<u>LAB HOURS</u>

**RECOMMENDED TEXT:**

Title: Starting Out with JAVA from Control Structures through Objects  
Author: Tony Gaddis  
Publisher: Addison Wesley  
Publication Date: 4<sup>th</sup> Edition  
ISBN: 13:978-0-13-608020-6  
0-13-608020-0

**CATALOG DESCRIPTION**

This course introduces the student to the fundamentals of computer science using an emphasis on programming methodology and problem solving. Topics include introductory concepts of computer systems, algorithm design, programming languages, software engineering and data abstraction with related applications. A high level programming language is completely discussed and is used as a means to demonstrate the concepts. Lab Fee Required.

**PREREQUISITE:** Proficiency on the College Placement Test

**TOPICS TO BE INCLUDED:**

- Data Storage
- Data Manipulation
- Operating Systems
- Networking and the Internet
- Programming Languages
- Procedure Oriented Programming
  - Assignment
  - Selection Structures
  - Repetition Structures
  - Modularity Using Functions
- Data Structures
  - Arrays
  - Strings
- Introduction to Classes and Object-Oriented Programming

**COURSE COMPETENCIES/LEARNING OUTCOMES:**

In a manner deemed appropriate by the instructor and approved by the department, students will be able to:

1. Describe the concepts of object-oriented programming (GE 4)
2. Solve problems involving decisions and repetition. (GE 4)
3. Develop algorithms that may be used in coding programs. (GE 4)

4. Apply algorithms such as the sequential sort and search in solving problems. (GE 4)
5. Design programs using traditional structured as well as object oriented methods. (GE 4)
6. Code programs using the correct syntax of the programming language. (GE 4)
7. Test programs adequately with appropriate input data. (GE 4)
8. Evaluate programming errors (syntax, logic, run-time). (GE 4)

COMS114  
Rev. 7/13 (nc)  
Prereq.