

# 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: CSC106 – Intermediate PC Applications with Programming**

### **Department: Business and Computer Science**

Chairperson or Course Coordinator: Dr. Aslihan Cakmak

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**Prerequisites:** MAT-014 or appropriate score on the College placement test

**Co-requisites:** None

### **Course Description:**

This course emphasizes problem solving with programming using the Python programming language and problem solving with applications using Microsoft Excel. In addition to problem solving skills the course presents current technologies and their impacts on society. The course is designed for students who already possess familiarity with computer applications. It is recommended for students planning to transfer to an upper division college that has a computer programming requirement in its computer literacy course

**General Education Status:** Gen Ed – Computer Science

**Credits:** 3

**Lecture Hours:** 1

**Lab Hours:** 4

### **Learning Outcomes:**

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

1. Explain the parts of a PC.
2. Demonstrate how to use a PC properly.
3. Demonstrate effective use of Microsoft Windows.
4. Demonstrate the use of Microsoft Office applications.
5. Explain proper security procedures for PC use.
6. Explain proper ethics for PC use.

7. Demonstrate the effective use of the Internet by collecting information and evaluating the quality of the collected information.
8. Discuss security issues related to computer use and understand how to protect a PC and your personal information.
9. Describe mobile computing devices and the advantages and limitations of each.
10. Develop and document algorithms of moderate complexity.
11. Write Python programs of moderate complexity.

## **Course Content Areas:**

### **General Computing Concepts**

- Current Technologies and their impacts on society

### **Python**

- Algorithm Development
- Data types and Expressions
- Control Statements – Selection Statements and Loops
- Strings
- Debugging
- List and Dictionaries
- Boolean Expressions
- Design with Functions

### **Excel**

- Creating A Worksheet and A Chart
- Formulas, Functions, And Formatting
- Working with Large Worksheets, Charting, And What If Analysis
- Financial Functions, Data Tables, And Amortization Schedules
- Working with Multiple Worksheets and Workbooks
- Creating, Sorting, and Querying a Table
- Working with Trendlines, Pivot Table Reports, Pivot Chart Reports, And Slicers