

# COMPUTER & OFFICE STUDIES, PROGRAMMING (COSP)

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## **COSP 7 (C-ID COMP 112) 4 units**

### **Programming Concepts and Methodologies**

#### **72 hours lecture**

Recommended Preparation: COSA 50.

Grading: letter grade or pass/no pass.

Formerly CBIS 7. This course is an introduction to programming concepts and methodologies including syntax, structured design, debugging, variables identifiers, flowchart and simple UML design, programming error detection, extracting and manipulating data from arrays, array sorting with passing parameter and augmenting test data.

Transferable to both UC and CSU; see counselor for limitations

## **COSP 8 4 units**

### **Visual Basic Programming**

#### **72 hours lecture**

Recommended Preparation: COSA 50.

Grading: letter grade or pass/no pass.

Formerly CBIS 8B. The class introduces students to the development of information systems using Visual Basic .NET language. The following programming concepts are covered: the software life-cycle, .Net IDE, data types, control structures, methods, strings and arrays, object-oriented programming, GUI design and development, file I/O, database and ASP. Students should have completed a 3-unit computer concepts and applications course such as COSA 50 as preparation for this course.

Transferable to both UC and CSU; see counselor for limitations

## **COSP 10 4 units**

### **Introduction to C# Programming**

#### **72 hours lecture**

Recommended Preparation: COSP 7.

Grading: letter grade or pass/no pass.

Formerly COSP 216. This course is an introductory presentation of the C# language, including data structures and examples. Emphasis is placed on programming business applications including design, development, and documentation. Students should have completed the COSP 7 course or equivalent as preparation for this course.

Transferable to CSU Only

## **COSP 36 (C-ID ITIS 140) 4 units**

### **Systems Analysis and Design**

#### **72 hours lecture**

Recommended Preparation: COSA 50 and COSP 38.

Grading: letter grade or pass/no pass.

Formerly CBIS 36. This course covers the broad concepts and methods of system analysis and design, while emphasizing the latest object-oriented techniques. Topics include development processing models, conceptual and physical design, system implementation and maintenance techniques, project management, collaborative communication skills, and the responsibilities of systems analysts. Students should have completed the COSA 50 and COSP 38 courses or equivalent as preparation for this course.

Transferable to CSU Only

## **COSP 38 (C-ID ITIS 180) 4 units**

### **Database Concepts**

#### **72 hours lecture**

Recommended Preparation: COSA 50.

Grading: letter grade or pass/no pass.

Materials Fee: \$10.

Formerly CBIS 38. This course covers concepts and technologies of database systems. Topics include data modeling, design, and the implementation of relational databases; Structured Query Language-SQL; concurrency control; distributed database systems; data warehousing; Web enabled database technologies; and the functions of database administration. Upon successful completion of this course, students will be given a voucher to sit for the Microsoft Technology Associate (MTA) industry certification exam.

Transferable to CSU Only

## **COSP 201 1 units**

### **Mobile App Development**

#### **18 hours lecture**

Recommended Preparation: COSA 1.

Grading: letter grade or pass/no pass.

This course is an introduction to building apps for Android devices, including Android phones and tablets, using MIT App Inventor or other App development tools. This course does not require previous programming skills. Students will learn how to design and develop an app and use visual program blocks to specify the app's behavior. Students will do several assignments intended to teach app development followed by a final project.

## **COSP 230 3 units**

### **Android App Development in Java**

#### **54 hours lecture**

Prerequisite: CS 11 or CS 21 or CS 31.

Grading: letter grade or pass/no pass.

This is a course that will teach the professional level of skills and practices needed to develop and publish a variety of types of applications or Apps on Android phones and tablets. Students should be able to design, develop, and test their own professional quality Apps by the end of the course.

## **COSP 231 1 units**

### **Intro to Data Analytics/Modeling**

#### **18 hours lecture**

Grading: letter grade or pass/no pass.

Data analytics and visualization are expanding fields that offer tremendous opportunities for career growth. This course introduces topics by exploring the use of the latest analytic and modeling tools in order to derive meaningful information from data sets commonly used in social and business environments. Students will practice acquiring, organizing, and presenting data using current, industry-standard tools and formats.

## **COSP 237 4 units**

### **Database Programming with SQL**

#### **72 hours lecture**

Recommended Preparation: COSP 38.

Grading: letter grade or pass/no pass.

This course offers students an introduction to database programming concepts and techniques. The class covers the concepts of both relational and object relational databases through the SQL (Structured Query Language). Students are taught to create and maintain database objects and to store, retrieve, and manipulate data. In addition, students learn to create SQL blocks of application code that can be shared by multiple forms, reports, and data management applications.

**COSP 631 0 units**

**Intro to Data Analytics/Modeling**

**18 hours lecture**

Grading: non graded.

Data analytics and visualization are expanding fields that offer tremendous opportunities for career growth. This course introduces topics by exploring the use of the latest analytic and modeling tools in order to derive meaningful information from data sets commonly used in social and business environments. Students will practice acquiring, organizing, and presenting data using current, industry-standard tools and formats.