

## **CSCI 3101 - A CONTEMPORARY PROGRAMMING LANGUAGE**

**CREDIT HOURS:** 1-3

**PREREQUISITES:** 6 hours of computer science or the equivalent. Additional prerequisites may vary with different languages.

**GRADE REMINDER:** Must have a grade of C or better in each prerequisite course.

### **CATALOG DESCRIPTION**

Language constructs and applications area. Control structures, input/output, data structures. Use of language in problem solution implementation. May be repeated once for a different language.

### **PURPOSE OF COURSE**

To introduce, and cover in breadth and depth, an important contemporary subject that is not yet in the curriculum. The specific goals depend on the specific subject.

### **EDUCATIONAL OBJECTIVES**

Upon successful completion of the course, students should be able to:

1. Apply a disciplined approach to problem solving and algorithm design.
2. Utilize the following: strategies for problem solving, techniques for analyzing problems and defining requirements, tools for representing algorithms, and methods for verifying and validating algorithms and programs.
3. Write programs in a contemporary programming language.
4. Design and, by means of the programming language being learned, implement imperative solutions to moderately complex problems.
5. Demonstrate a solid knowledge of and an ability to properly use these programming features and facilities: data types, fundamental data structures (arrays, records, and arrays of records) control structures, procedures, functions, parameters, text files, and binary files.
6. Work cooperatively on software development projects.

### **COURSE CALENDAR**

This course meets for a minimum of 12.5 lecture contact hours for each hour of credit during the semester. Students have significant weekly reading assignments. Students are expected to complete weekly homework/programming assignments, and 2-3 periodic exams in addition to the final exam. Students are expected to prepare for any class assignments or quizzes over the material covered in class or in the reading material. Successful completion of these activities requires at a minimum two additional hours for each hour of credit for outside of classroom work each week.

### **CONTENT**

Depends on the specific subject.

## **TEXTBOOK**

Depends on the specific subject.

## **REFERENCES**

Depends on the specific subject.