

**CS 1143**  
**Beginning Programming**

**Course Description:** Designed for Computer Science majors, this course affords students a basic understanding of computer programming. Students will utilize accepted programming concepts and perform number system conversions. In addition, they will design and code structured modular programs using design tools such as hierarchy charts, flowcharts, and pseudocode.

Problem solutions will be developed using pseudocode, flowcharts, and/or hierarchy charts and then implemented using a component of MS Visual Studio.NET 2005, namely, Visual C++.NET language; however, the procedural constructs will be emphasized using C language which is embedded in C++. A brief introduction to object-oriented programming can be studied as well.

**Course Competencies and Learning Objectives:** Programming concepts and C++ is used globally; hence all are global awareness competencies.

The core competency of this course is mastery of structured programming concepts. Students who successfully complete this course will be able to:

1. Systematically analyze and solve programming problems by developing structured algorithms, structured flowcharts and/or pseudocode, and implement them using corresponding C++ code.
2. Utilize the fundamental control structures of programming: sequence, selection and iteration.
3. Input, compile, execute, test, debug, and verify outputs of C++ programs using data types, variables, constants, arithmetic operators, input/output, calculation, processing, control structures, functions, arrays, and sequential access files.
4. Perform number system conversions.

**Note:** This sample syllabus is being provided in order to give general knowledge of the subject and should not be considered the sole outline of the course. Class format, assignments, and due dates may vary by professor.