SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: CSCI 110 Department: Engineering & Sci. Transfer

Course Title: Computer Science 1 Semester: Spring Year: 1997

Objectives/Competencies

Course Objective	Competencies
1. Problem solving with C++	1. Define type compatibility 2. Solve arithmetic expressions 3. Explain input and output 4. Explain integer division - mod and div
2. C++ programming techniques	1. Explain constants 2. Format an output 3. Apply simple branching - if-then-else 4. Explain compound statements 5. Analyze known algorithms
3. Designing procedures for subtasks	1. Write simple C++ procedures 2. Explain variable and value parameters 3. Coordinate procedures 4. Calling procedures 5. Test procedures
4. Designing programs that make choices	1. Explain nested statements

Course Objective	Competencies
	2. Trace if-then and if-then else statements 3. Analyze complex Boolean expressions 4. Trace the case statement 5. Evaluate Boolean expressions
5. Problem solving using loops	1. Define the while statement] 2. Terminate an input loop 3. Modify an algorithm 4. Explain the repeat statement 5. Differentiate between the while and repeat loops 6. Design robust programs 7. Explain the for statement
6. Designing functions and data types	1. Explain the use of functions 2. Describe the functions ored, succ, ord and chr 3. Construct functions that change their minds 4. Make string comparisons 5. Explain parallel arrays
7. Arrays for problem solving	1. Describe an array 2. Explain input and output with arrays 3. Recognize partially filled arrays 4. Design multidimensional arrays 5. Explain parallel arrays
8. Records and other data structures	1. Describe records 2. Differentiate between records and arrays

Course Objective	Competencies
	3. Explain records within records 4. Apply the with statement 5. Construct arrays of records
9. Text files and secondary storage	1. Make a text file 2. Write and read text file 3. Describe eof and eoln 4. Perform basic editing of text files