CSC K108 Introduction to Programming

Course Syllabus - Fall 2012

Course: CSC K108 – Introduction to Programming

Program: Computer Science

Hours: Lecture Mon 5:20 – 8:05 pm and Lab Mon 8:10 – 9:50 pm (Room E 119)

Instructor: George Volkov
Office: Room C 258
Campus Office Hours: Mondays 3:30 – 5:00 pm
Wednesdays 12:30 – 2:00 pm
Thursdays 3:30 – 5:00 pm
Phone: (860) 885-2384
E-mail: gvolkov@trcc.commnet.edu

Delivery Format: On-ground with Academic Folder materials/samples/presentations

Dates: Aug. 27 – Dec. 17. No class on Sep. 3 (Labor Day) and Nov. 12 (Veterans Day)

Textbook: Problem Solving, Abstraction, and Design Using C++, special TRCC 6th Edition by Frank Friedman and Elliot Koffman, ISBN # 978-0-558-82872-1, full edition ISBN # 978-0-13-607947-7

Course Objectives: The main objective of this course is to provide the student with a broad introduction to computer science including computer design, programming, information processing and algorithmic problem solving. It is intended as a foundation for beginning computer science students and others seeking to use computers as a tool in business, engineering, science and other disciplines. In addition, this course provides an introduction to C++, a high level computer programming language. The student will learn to design, develop and implement programs to solve various data processing problems. Specifically, at the completion of the course students will be able to describe, design and use the basic programming concepts and C++ features including but not limited to the following:

- Basics of Computers, Problem Solving, and Programming
- Overview of C++ programming language
- Top-Down Design with Functions and Classes
- Selection Structures
- Repetition and Loop Statements
- Modular Programming
- Simple Data Types
- Streams and Files
- Basics of Data Structures

Software: This course will specifically use the Microsoft Visual Studio 2010 Professional software package. This will be available to students as part of the MSDN Academic Alliance.

Supplies and Materials:

Removable media will be required. A USB memory device with a minimum of 4GB capacity is recommended.

Lab Assignments: Weekly assignments from the end of chapter problems or from additional instructor handouts will be given. The hand-in format will be via printed hardcopy. Class assignments should be submitted on or before the due date. An assignment will lose 20% of the score if it is submitted late. Assignments will be graded on professionalism, accuracy, style and completeness. The details for each assignment, including work to be done and the due date will be discussed in class. Students are encouraged to interact with the instructor or other students on these assignments via classroom discussion, but must personally perform the necessary actions to complete the assignments.

Grading and Evaluation Criteria:

45 % of the grade is based on lab assignments
45 % of the grade is based on midterm and final examinations
10 % of the grade is based on attendance and class participation

College Withdrawal Policy:

Students may withdraw, through the Registrar's Office, for any reason. Last day to withdraw is Dec. 10. The withdrawal process must be initiated by the student. Failure to do so will result in a semester grade based on the work completed before the student stopped attending the class.

Week	Topics	Textbook assignments
1	Computer science as a Career Path Introduction to Computers, Problem solving and Programming	Reading: Chapter 0 and Chapter 1 HW: Special Introductory Assignment"
2	Introduction to Visual studio 2008 First Look at C++	Reading: Chapter 2, pages 53 – 80 HW: Page 111, # 5, #6 and 10 combined, and #11
3	Overview of C++	Reading: Chapter 2, pages 80 – 110 HW: Pages 112 - 113, #13, #15 and #18
4	Intro to Top-Down Design with Functions and Classes	Reading: Chapter 3, pages 118 – 157 HW: Pages 188 - 189, #4 and #8
5	More on Top-Down Design with Functions and Classes	Reading: Chapter 3, pages 157 – 187 HW: Pages 190 - 191, #9, #13, #14 and #15
6	Intro to Selection Structures	Reading: Chapter 4, pages 197 – 229 HW: Pages 251 - 253, #6, #8 and #9
7	More on Selection Structures	Reading: Chapter 4, pages 229 – 251 HW: Pages 253 – 256, #11, #14 (incorporated into Ch.2 HW #6 and 10 combined) and #18
8	Midterm Exam	Reading: None Midterm study and review
9	Intro to Repetition and Loop Statements	Reading: Chapter 5, pages 259 – 286 HW: Pages 324 - 326, #2, #6 and #7
10	More on Repetition and Loop Statements	Reading: Chapter 5, pages 286 – 323 HW: Pages 327 - 328, #13, #14 and #15
11	Modular Programming	Reading: Chapter 6, pages 333 – 363 HW: Pages 378 - 382, #2, #3 and #4 combined
12	More on Modular Programming	Reading: Chapter 6, pages 363 – 375 HW: Pages 380 – 382, #5, #7 and #9
13	Simple Data Types	Reading: Chapter 7, pages 387 – 432 HW: Pages 434 – 436, #7 and #10
14	Streams and Files and Introduction to Arrays and Structures	Reading: Chapter 8, pages 444 – 477 HW: Page 479, #3 and #4
15	Final Exam	Reading: None Final study and review

Note: The foregoing course outline is subject to change as conditions warrant.