CS361 – Control Structures
Challenge Exam – Preparation Notes

Textbook (available in the Regis bookstore):

Malik, D.S. (2013). *C++ Programming: From Problem Analysis to Program Design, 6th edition.* Boston, MA: Cengage Learning; ISBN-13: 978-1-133-62638-1.

The CS361 exam consists of 2 parts.

- The first part is a written exam. You will have 2 hours to complete the written exam.

- The second part is a take-home programming exam. You will have 2 weeks to complete the programs. Your programs should be coded using an ANSI C++ compiler (Orwell Dev-C++ is recommended and used for grading) in console mode (in structured C++ code, without using any object-oriented features).
  - The Orwell Dev-C++ compiler may be downloaded free from: http://sourceforge.net/projects/orwelldevcpp/files/Setup%20Releases/

  - You must design and write the program code and return it to the testing office in the allotted time. You may be required to turn in any or all of the following as part of the take-home exam:
    1) Source code
    2) Executable code
    3) Flowcharts
    4) Test Plans

- The CS361 exam may cover any of the following Control Structures topics:
  - Design, implementation, testing, and debugging a program that uses each of the following fundamental programming constructs:
    - Basic Computation
    - Simple Input/Output
    - Conditional control structures
    - Iterative control structures
    - Definition and usage of functions
    - Parameter passing
  - Pseudo-coding, flowcharting, and using a high-level programming language to implement algorithms and solutions to problems
  - Use of structured (functional) decomposition to break a program into smaller pieces
  - Identification of the deficiencies in the design and implementation of a program
  - Use of recursion to solve problems

More detail about coverage of each of these topics can be found online in the Module for this course at: http://www.regis.edu/CPS/CPS-Student-Portal/UG-Syllabi.aspx

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