CIS 308 – C/C++ Language Laboratory
Spring 2013

Course Syllabus

Instructor: Julie Thornton
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Office Hours: TBA in Nichols 228
Course Webpage: After logging on to online.ksu.edu, click "CIS 308"
Teaching Assistant: TBA

Lecture: Mondays 3:30-5:20 in Nichols 21
-OR- Tuesdays 4:00-5:50 in Nichols 21

Textbook: There is no required textbook for the class. Lecture notes will be posted to K-State Online.

Prerequisite: CIS 300. This course assumes that you have significant programming experience in some high-level language. As such, we will cover language-independent concepts like functions, selection statements, loops, and arrays very quickly. This course also assumes that you have been exposed to object-oriented programming concepts such as managing objects, constructors, and inheritance.

Objectives: Learn to develop programs in C and C++. By the end of the course, students should be able to develop large projects in either C or C++.

The following topics will be covered:

- Programming in C
  - Unix basics
  - Input/output functions
  - Functions
  - Selection structures
  - Loops
  - Arrays
  - Strings
  - Pointers
  - File I/O
  - Dynamic memory allocation
  - Structures
  - Enum, typedef, union
  - Pre-processor directives
- Managing large projects
  - Header files, using multiple files
  - Makefiles
- Programming in C++
  - Using Visual Studio .NET

- Class syntax
- Destructors and constructors
- Creating and using objects
- C++ dynamic memory
- C++ file I/O
- Exceptions
- Operator overloading
- Constant reference parameters
- Friends and inheritance
- Virtual and pure virtual functions

Programming Language/Development: All course projects must be written in either C or C++ (as the assignment requires). We will use the Unix environment and the gcc compiler to develop programs in C. We will then use Visual Studio .NET to develop programs in C++.

Graded Work:

Exams (2)…….....(40%)
Quizzes (3-4).....(15%)
Programming projects (8)……...(35%)
Lab activities (12).....(10%)

Grading Scale: A: 100-90.0, B: 89-80.0, C: 79-70.0, D: 69-60.0, F: below 60.

Programming Projects: There will be eight individual programming projects throughout the semester. Assignment descriptions will be posted to K-State Online and will be announced during class and by KSU e-mail. These projects are to be written in either C or C++ (as the assignment requires) and submitted as a compressed file (.zip) using an online submission link on K-State Online. Late projects will not be accepted.

Exams: There will be two closed-book, closed-notes exams throughout the course – one on C and one on C++.

Quizzes: There will be three or four closed-book, closed-notes quizzes throughout the course. These quizzes will be announced in advance and will last about 10-15 minutes.

Lab Activities: Each class session will consist of about one hour of lecture followed by a one hour lab activity. Each lab will enforce the concepts from the lecture, and will be practice for the next programming project. To earn all the points for the lab activities, you must successfully complete 10 out of 12 labs.

Course Policies

Drop Policy: It is your responsibility to drop the course if you are enrolled but decide not to complete the course --- there are no “automatic” drops due to nonattendance.

Academic Honesty: Kansas State University has an Honor System based on personal integrity, which is presumed to be sufficient assurance that, in academic matters, one's work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor System. The policies and procedures of the Honor System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. The honor system website can be reached via the following URL: www.ksu.edu/honor . A component vital to the Honor System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work." A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

Attendance Policy: You are responsible for all material presented in class. If you must be absent, please ask the instructor or a fellow student what was covered. Makeup exams, quizzes, and lab activities may be considered, but only if you contact the instructor before the class period.

Collaboration Policy: Every line of work on all submitted assignments must be your own, and any form of copying or collaboration will be considered *plagiarism*. Students who submit projects that are identical or similar to that of another student, whether from collaboration or copying, will receive a zero on that assignment. (If you complete an assignment individually and then let another student copy it, then you are also guilty of plagiarism and will also receive a zero.) Similarly, you are guilty of plagiarism if you submit a project that is similar to an online post or to the instructor's solution from a past semester, and in both cases you will receive a zero. Students who plagiarize more than one assignment will be reported to the Honor Council. Remember that programming is like essay-writing – two individual solutions may both be correct, but they will look different.

Academic Accommodations for Disabled Students: Any student with a disability who needs a classroom accommodation, access to technology or other academic assistance in this course should contact Disability Support Services (dss@k-state.edu) and/or the instructor. DSS serves students with a wide range of disabilities including, but not limited to, physical disabilities, sensory impairments, learning disabilities, attention deficit disorder, depression, and anxiety. Please contact the instructor within the first three weeks of class.