CSC 143  
Computer Programming for Engineers and Scientists

Syllabus for CSC 143 Spring 2010

Meeting times: MWF 11:00-11:50am in SAM 202  
Lab in SAM 202 from 1:00 pm to 2:40 pm on Tuesday

Instructor:  François Lepeintre

Office Hours: SAM 212: M 12:20-1:00pm, and W, Th, F 9:00-9:50am

Phone:  (206) 587-5438


Prerequisites: CSC142 with 2.0 or better.

Course Objectives: At the completion of the course, a student should be able to:

- Apply Java classes to create event-driven, gui programs with possible stream input/output
- Apply Object-Oriented Design principles (encapsulation, inheritance, polymorphism) to software solutions.
- Implement collection classes using different data structures discussed.
- Evaluate efficiencies of different program designs (algorithms and data).
- Choose or design appropriate classes and write efficient programs to solve given problems.
- Describe in English the abstract concepts discussed and develop own abstract ideas.
- Document programs as prescribed by industry standards.
- Apply programming concepts to mathematics, modeling, and a broad range of other subjects.

Course Content: Topics include classes and interfaces, inheritance, graphics, exceptions, stream I/O, recursion, analysis of algorithms, and some dynamic structures (lists, stacks, trees). Uses the Java programming language.

This course is designed to continue the study of programming by

http://seattlecentral.edu/~flepeint/java143/syllabus.html
introducing advanced Java language features and new programming topics. Students will also learn the tools for building efficient software systems: dynamic data allocation, recursion and analysis of algorithms.

Course Format: We will meet three times a week for an interactive lecture. There is also a 2 hour lab, during which you will have the opportunity to apply the concepts covered in lecture.

Grading: Quizzes: 20%
Midterms: 15% each
Final: 30%
Homework: 20%

For this scale to apply, you need to achieve an average of 2 or better on your quizzes/exams alone and on your homework alone. If not, you will receive the lower of the two averages.

Quizzes/Exams: Quizzes will be a set of about 2 to 4 questions. Expect about 5 quizzes throughout the quarter.

There will be 3 exams: 2 midterms and 1 final.

Quiz and exam dates will be given later in the quarter. There won't be any makeup quiz or exam.

Homework: Homework will be assigned about every other week. It will consist of a problem to solve by writing a program.

Though you may discuss how to approach a problem with other students in the class (and I encourage you to do so), your program has to be yours (sometimes yours will be a team of two). Never copy down the program of somebody else's and claim it as your own work. This would be an instance of cheating.

Refer to the grading policy for details about how your homework is graded.

Your homework must be turned in on time. You can't be late for any assignments.

Resources: On the resource page, you will find a list of links relevant to the class.

A help page is available. It is a forum where you can seek help or help a fellow student.

There is also a class feedback page. Give me feedback and I will do my best to incorporate your comments in my teaching (note
that the feedback can be anonymous).

I also provided the email address of an engineer Rene Siles who works for a computer company. He agreed to answer some specific questions you might have about computer science. However, do not bombard him with questions!

Special Assistance: If you need course adaptations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please see me during my office hours as soon as possible. I am happy to help you in any way I possibly can.

My contract to you! If you come to class, do your homework and genuinely try to learn the concepts, I promise you to do my best to make your time as valuable as I can!