Course Overview

Instructor: Jerry Shurman
Office: L386
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Hours: To be announced

Lectures: MWF, section 1 at 11:00-11:50 in P240A, section 2 at 1:10-2:00 in L389
Laboratories: Tuesday, section 1 at 9:00-10:20, section 2 at 10:30-11:50, section 3 at 1:10-2:30, all in ETC 211

This course has two tracks, one in programming and one in the theory of computation.

The programming track is an introduction to computer problem solving and structured programming, using the Java programming language. It uses the materials **Karel the Robot Learns Java** and **The Art and Science of Java**, both by Eric Roberts. The Karel handbook will be distributed on the first day of class, while the Java text is available in hardcopy form for $13.00 from the mathematics department office (L317). Both are available in electronic form for free from my home page at

http://www.reed.edu/~jerry/121/links.html

The work will involve weekly reading, weekly in-laboratory assignments, and longer programs to be completed after the laboratory meetings. Written work on Java may appear in the form of a quiz or two and some questions on the exams. The materials for this portion of the course are borrowed, with permission, from Eric Roberts, who developed the introductory Java programming course at Stanford University.

The theory of computation track develops models for computing devices and determines what they can and cannot compute. Building from finite automata, we work towards the Turing machine, a model capable of universal computation. This track uses the text **Introduction to the Theory of Computation** by Michael Sipser. This should be available at the bookstore. The work will involve weekly reading and problem sets, and periodic examinations.

As befits a computing course, this class has some electronic resources. The course handouts will be posted, along with some links to Java-related sites at the "links" URL given above. For the syllabus as it unfolds, see

http://www.reed.edu/~jerry/121/lec.html

and for the assignments as they unfold, see

http://www.reed.edu/~jerry/121/hw.html

The course mailing list is

`math121-f01@lists.reed.edu`

An email to this address will go to all the students in the course and to the instructor. You are encouraged to use this resource to discuss programming assignments and written homework with each other. Nonetheless, all the work that you hand in should be your own. Specifically, in the context of this course, academic honesty entails that your work indicate any assistance that you receive, that you not share actual program code with other students in the class, and that you not look for solutions from variants of this course that can be found online.

Another mailing list for this course is

`math121-assistants@lists.reed.edu`

An email to this address will go to the student assistants for the course (James Ayres, Eric Brattain-Morrin, Asher Davidson, Karim Lakhani, Julia Lazenby, Alice Neels) and to the instructor.