Syllabus

Introduction to Computer Science

Instructors

Prof. Andrea Danyluk
TCL 305
597-2178
andrea@cs.williams.edu

Prof. Stephen Freund
TPL 302
597-4260
freund@cs.williams.edu

TA Hours will be posted on web page
Lectures MWF 9–9:50 or 10–10:50 in TCL 202
Labs M 1pm–4pm, M 7pm-10pm, T 1pm–4pm in TCL 217a
Web Page `http://www.cs.williams.edu/~cs134/`

Texts

We will use the following text book, which is available at the bookstore:

Bruce, Danyluk and Murtagh, *Java: An Eventful Approach*, Prentice-Hall, 2006.

Course Objectives

This course introduces fundamental ideas in computer science and builds skills in the design, implementation, and testing of computer programs. Students implement algorithms in the Java programming language with a strong focus on constructing correct, understandable, and efficient programs. Students explore the material through specific application areas. Topics covered include object-oriented programming, control structures, arrays, recursion, and event-driven programming. This course is appropriate for all students who want to create software and have little or no prior computing experience.

Course Work

There will be weekly lab programming assignments. All programs will be graded on design, documentation and style, correctness, and efficiency. Programs should be turned in electronically by the due date. We will go over how to submit work in lab.

Attendance in lab is mandatory. Unapproved absence will result in zero credit for that week's lab.

To accommodate your busy schedules and unanticipated obstacles, you may use a maximum of three free late days during the course of the semester. A late day permits you to hand in a lab up to 24 hours late, without penalty. Once those late days are exhausted, late labs will be penalized one letter grade per day. Programs will not be accepted more than four days late. When using a late day, please email Prof. Danyluk to tell us that you are.

There will also be a midterm exam and a final exam, as well as two larger Programming Projects. The first Project will occur before Spring Break, and the second during the last couple weeks of the semester. Homework exercises (non-programming assignments) may be assigned and collected in class periodically and there may be in-class quizzes.

Grades will be determined roughly as follows:

Labs:	30%
Projects:	10%–15% each
Midterm:	15%
Final exam:	20%
Homework & other:	5–10%

Honor Code

Homework and lab assignments are to be the sole work of each student unless the assignment explicitly states otherwise. Students may discuss issues related to an assignment, provided that such discussions are cited in the material turned in. However, students may not collaborate on designing or writing code. Uncredited collaborations will be considered a violation of the honor code and will be handled appropriately. For a full description of the Computer Science Honor Code, please see `http://www.cs.williams.edu/the-cs-honor-code-and-computer-usage-policy/`. If in doubt of what is appropriate, do not hesitate to ask us.

Tentative Schedule

This will undoubtedly change as we begin to explore these topics.

Date	Mon	Wed	Fri
Feb 6			Introduction *Preface*
Feb 9–Feb 13	Graphics, Events *Chapter 1,2*	Variables, Numbers *Chapter 3*	Conditionals *Chapter 4*
Feb 16–Feb 20	Primitive Types *Chapter 5*	Classes *Chapter 6*	Winter Carnival
Feb 23–Feb 27	Classes *Chapter 7*	Declarations, Scope *Chapter 8*	Loops, Active Objects *Chapter 9*
Mar 2–Mar 6	Active Objects	Images	Interfaces *Chapter 10*
Mar 9–Mar 13	GUIs *Chapter 11*	GUIs	GUIs
Mar 16–Mar 20	Recursion *Chapter 12*	Recursion	Recursion
Mar 23–Apr 3	Spring Break	Spring Break	Spring Break
Apr 6–Apr 10	For Loops *Chapter 13*	2D Arrays *Chapter 14,15*	Arrays
Apr 13–Apr 17	Collections	Inheritance *Chapter 17*	Strings *Chapter 16*
Apr 20–Apr 24	Strings	Exceptions *Chapter 18*	Files, Streams *Chapter 19*
Apr 27–May 1	Networks	Networks	OO Design *Chapter 21*
May 4–May 8	Searching *Chapter 20*	Sorting	Sorting
May 11–May 15	Advanced Topics	Advanced Topics	Wrap Up

The midterm is scheduled for the evening of Thursday, Mar 19, with a review session at 7:30pm on Mar 18.