Syllabus

Introduction to Computer Science

Instructors

Prof. Andrea Danyluk
TCL 305
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Office Hours M 1:30–3:30, Th 1:30–2:30

Prof. Stephen Freund
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W 2:15–3:45, Th 2:30–4:00

TA Hours	will be posted on the course webpage
Lectures	MWF 9–9:50 or 10–10:50 in SSL 030A
Labs	M 7pm-10pm, T 8:30am–11:20am, 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 doing so.

There will also be a midterm exam and a final exam, as well as two larger Programming Projects. The first Project will occur around Reading Period, 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
Sep 9			Introduction *Preface*
Sep 12–Sep 16	Graphics, Events *Chapter 1,2*	Variables, Numbers *Chapter 3*	Conditionals *Chapter 4*
Sep 19–Sep 23	Primitive Types *Chapter 5*	Classes *Chapter 6*	Declarations, Scope *Chapter 8*
Sep 26–Sep 30	More Classes, Loops *Chapter 7*	Loops, Active Objects *Chapter 9*	Active Objects
Oct 3–Oct 7	Images	Interfaces *Chapter 10*	GUIs *Chapter 11*
Oct 10–Oct 14	Reading Period	GUIs *Chapter 11*	GUIs
Oct 17–Oct 21	GUIs	Recursion *Chapter 12*	Recursion
Oct 24–Oct 28	Recursion	For Loops *Chapter 13*	2D Arrays *Chapter 14,15*
Oct 31–Nov 4	Arrays	Collections	Inheritance *Chapter 17*
Nov 7–Nov 11	Strings *Chapter 16*	Strings	OO Design *Chapter 21*
Nov 14–Nov 18	Exceptions *Chapter 18*	Files, Streams *Chapter 19*	Networks
Nov 21–Nov 25	Networks	Thanksgiving Recess	Thanksgiving Recess
Nov 28–Dec 2	Searching *Chapter 20*	Sorting	Sorting
Dec 5–Dec 9	Advanced Topics	Advanced Topics	Wrap Up

The midterm is scheduled for the evening of Thursday, October 27, with a review session at 7:00pm on October 26.