Syllabus

―― Data Structures and Advanced Programming ――

Instructor (01, 06)	Prof. Bill Jannen
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TAs	Anjali Pai, Mairead Toms, Aria Kim, Julia Goldman, Alex Smith-Bove, Alex Summers, Marcus Hughes, Nick Post, Thomas Ragucci, and Melanie Subbiah
Lectures	MWF 9–9:50am, 10–10:50am in TCL 202
Labs	W 1–4pm (Due M 7PM)
	W 7–10pm (Due M 7PM)
	Th 1–4pm (Due M 10pm)
Web Page	`http://www.cs.williams.edu/~cs136`

―― Texts ――

We will be using the $\sqrt{7}$ edition the following text book:

- *Java Structures: Data Structures in Java for the Principled Programmer, $\sqrt{7}$ E*dition, Duane Bailey.

You must use this edition. A PDF version is available on the course website. To adjust for the declining demand for physical books and to save paper, we have printed 48 copies of the text book as a course reader. You may choose to pick up a copy of the course reader from Lauren Vining in TCL 303; your term bill will be charged only if you take a copy.

―― Course Objectives ――

This course couples work on program design, analysis, and verification with an introduction to the study of data structures. Data structures capture common ways in which to store and manipulate data, and they are important in the construction of sophisticated computer programs. We will use the Java programming language in class and for the assignments.

Students will be expected to write several programs, ranging from very short programs to more elaborate systems. Since one of our goals in this course is to teach you how to write large, reliable programs composed from reusable pieces, we will be emphasizing the development of clear, modular programs that are easy to read, debug, verify, analyze, and modify.

We will use the computers in TCL 216 & 217a for the programming assignments. You will be given door codes to access this room once the semester begins.

Course Work

Labs.   On most weeks, there will be lab programming assignments. **Attendance in lab is mandatory**: there are valid reasons to miss lab, but any unexcused lab absence will result in course failure.

All programs will be graded on design, documentation and style, correctness, and efficiency. Programs must be turned in electronically, and late assignments will not be accepted. To accomodate illness and other unforeseen circumstances, we will drop the lowest lab grade.

Exams.   There will be one midterm and one final exam. The midterm will be scheduled on the evening of Wednesday March 15, and it will replace the lab for that week. The final exam will be self-scheduled.

Grading.   Grades will be determined as follows:

Final exam:	30%
Midterm exam:	30%
Programs/Labs:	35%
Engagement:	5%

Engagement is a subjective evaluation of how you interact with the material and students. We will use the full range from 0 (e.g., submits required work, attends some classes) to 5 (e.g., attends all sessions, asks questions, refers to the readings, raises new topics, shares knowledge with other students). Learning is collaborative; this is our way to reward students who positively affect the experience of fellow class members.

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. If in doubt of what is appropriate, do not hesitate to ask us. 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/`.