

CSci 133, FALL 2005

Lecturer: Michael Feldman, Professor, Dept. of Comp. Sci.

Office: Academic Center, Room T-715

Office Hours: Tues 4:30 - 6 PM, Wed 2 - 5:30 PM

E-mail: mfeldman@gwu.edu

Lecturer website: <http://www.seas.gwu.edu/~mfeldman>

Course website: <http://www.seas.gwu.edu/~csci133>

Textbooks:

Lewis and Loftus, *Java Software Solutions (3rd ed.)*
Addison-Wesley, 2003, ISBN 0-201-78129-8 or 0-321-19719-4

Lewis and Chase, *Java Software Structures (1st ed.)*
Addison-Wesley, 2004, ISBN 0-201-78878-0

If You Didn't Take CSci 53 Last Semester, Do Immediately

You must arrange a SEAS Computing Facility account for the UNIX server, "hobbes". Make sure you ask for a web site as well as a shell account!

Do this after this class, before you forget!

CSci 133 Frequently-Asked Questions (FAQ)

What is this course about?

This course is about software construction, algorithms, and data structures. The three main "threads" that are intertwined through the course are:

- software construction, with emphasis on reusable software components
- advanced data structures: advanced array structures, stacks & queues, linked lists, and trees
- algorithm performance prediction: "big O" notation

We trust our lives and our businesses to software. Software is important, and we will be emphasizing the importance of good software design. I hope this will be fun for you, and that you'll be proud of your accomplishments here in writing software that doesn't crash.

The prerequisite is CSci 53 or a closely equivalent course.

I didn't take 53 and I don't know any Java. Am I going to be OK in this course?

Probably, depending on the kind of equivalent course you took. If you CSci 51 or CSci 49 here with Ada or C, or took a similar-level course elsewhere with C or C++, chances are you will do fine here, if you're able and willing to switch to Java quickly.

If you choose a career in software development, you'll be learning new languages and tools every few years. You might as well start now!

If you can't finish the first project on time, you'll need to drop and take 53 first. Speak to me if you have any doubt.

HELP! This course uses UNIX. I am clueless about UNIX because all my experience is with Windows!

You'll have to learn some Unix to get through this course, but you can get help on this in the labs!

Is this a "filter course" designed to weed out students?

Absolutely not! Our goal in this course is that every student should succeed here, and we are here to help you do so.

Is this a difficult course?

It's not intended to be difficult. Any course, in any subject, is easier for some students than for others.

Does this course have a heavy workload?

Software development courses usually require somewhat more of your time than liberal-arts "reading" courses. For every in-class hour in this course, you should expect to spend 2-3 hours outside of class. That's 10-15 hours/week homework for this class.

How is grading done?

Your semester grade will be calculated as follows:

- Lecture Attendance and Reading Quizzes 8% max
- Laboratory Assignments 12%
- Midterm Exam 20%
- Final Exam 30%
- Software Projects 30%

Do you grade "on a curve"?

I keep grade records strictly "by the numbers"; at the end of the semester, I compute a final average for each student. I then assign a grade that represents my experienced judgement as to how much you got out of the course. I have no predetermined cutoff points for As, Bs, Cs, etc. If every student does well, every student gets a high grade.

Grade Profiles

	<i>133 Sp2003</i>	<i>133 Sp2004</i>	<i>133 Sp2005</i>
A/A-	21	13	11
B+/B/B-	9	17	8
C+/C/C-	2	6	7
F	4	1	4

Plenty of A's and B's. If they can do it, you can too! These are not "inflated" - students are earning those A's and B's!

I do not give D's. A student who cannot earn a C- or better in 133 is simply not prepared to proceed to 143, and should therefore repeat 133. Therefore I will give such a student an F.

Do I have to do the readings?

The textbook and other handouts are an integral part of the course, not just background material. You are expected to come to class prepared; you must read each lecture's assigned material before you come to that lecture!

What about the reading quizzes?

There may be several short, unannounced reading quizzes. Be prepared for one in each lecture.

Do I have to go to lecture?

GW university policy is that class attendance is *required*. You are expected to be there; you cannot do well in this course if you skip class. Lectures and reading quizzes together count 10% of your grade. Some days attendance is taken even if there is no quiz; other days it isn't. There is, in general, no "excused absence"; you are there or you are not. If you must miss a lecture, you are still responsible for all work covered.

Do I have to go to lab?

Each week's lab session will require (and help) you to do a small assignment that helps you learn that week's material. If you go to the lab and work productively on the assignment, you get credit for that lab; if you don't, you don't. Lab work counts 10% of your grade.

What if I miss a lecture or lab, and therefore don't get a copy of a handout?

Each handout will be distributed in class *once*. All handouts are on the class web site. If you miss a handout -- or lose one -- just visit the web site and get a copy there.

Do you give out lecture notes or put them on the web?

Only sometimes; don't count on it. Occasionally, lecture notes will be posted on the class website.

Tell me about examinations, please.

There will be two one-hour midterms and a two-hour final exam, both strictly timed. These will be open-book, open-notes exams. If you are coming to class regularly, and keeping up with the reading and the projects, you should not need to "cram" for the exams.

Exams will require a mixture of reading and interpreting short program segments, writing short program segments, and short "essay" questions. If you do poorly in one of the midterms, you may choose to replace its grade with your grade on the final exam. You can inform me of your choice at any time before you leave the final exam room.

What about these software projects?

I will assign a project roughly every 2-3 weeks. Each project is "sized" so that you should start on it as soon as it is assigned, and spread your work roughly evenly over the project period. You will not complete it successfully if you leave it until the end of the period.

Projects will often build on the work done in previous projects, so it is in your interest to keep up with the project work. There will probably be 5-6 projects. Unlike in CSci 53, in this course I do not drop the lowest grade!

Each project will be graded on a 0-20 point basis. An incomplete submission is better than none; you will get credit where credit is due. I will accept late projects, subject to a "late fee" of 4 points per week of lateness. Each project is due at the start of the class on the due date; projects submitted after the lecture has begun will be counted as one week late.

Is there extra credit?

Yes. The extra credit assignment is designed to help you gain perspective on your academic life and does not require any programming. It is worth up to 10 project points and will be due on the day of the second midterm.

Unlike in CSci 53, I do not give extra credit for early submission of "frameworks". By now, I hope you have learned that starting early on a project is its own reward, as you are then able to complete it much more comfortably.

Proj. total	Bonus total	Proj. total	Bonus total	Proj. total	Bonus total
157/160	10/12	145	8	128	6
157	10	144	10	121	8
155	10	143	10	110	2
154	8	142	8	110	6
153	10	142	2	98	2
153	10	142	12	92	6
153	12	141	6	88	2
151	10	141	12	81	8
150	12	140	8	51	0
149	8	138	0	47	0
148	2	135	10		
147	12	134	0		
147	12	132	4		
146	12	129	6		
146	12	128	8		

Can I work with a friend on the projects?

Projects must represent the results of your own work.

If you collaborate on the detailed design or coding, or copy a program from an acquaintance, then submit the results as your own work, I will charge you with plagiarism, and I will win.

Please read the handout on Plagiarism and Collaboration, which spells out the rules for getting help from others. *If you have any question about the rules, ASK Prof. Feldman or the lab instructor. Do not take other students' word for it! Do not rely on the rules of other courses!*

Also read the CS Department Policy on Academic Integrity and the GW Code of Academic Integrity.

Getting Your Questions Answered by E-mail

Compilation Errors: Don't waste your time sending messages that won't get you a quick result!

- Send a listing (.txt) file. JUST a listing file.
- NOT a source (.java) file—we need the messages and line numbers!
- NOT a copy/pasted snippet—JUST the file. We need to see the whole context for the message.
- NOT a second note saying "I just sent my listing file". We know that. When we get a listing file with messages, we know what to do with it.
- NOT an attachment!

Execution errors: VERY hard to do by e-mail; that is what office hours are for! If you don't leave it till the last minute, there are plenty of office hours to visit Feldman or the lab instructor.

I have my own computer. Can I use it in this course?

Yes, but the main location of all the programs you will need is on the SEASCF server called "hobbes".

We suggest that you start the semester using your computer as a terminal to log into hobbes over the Internet.

What should I do to get a high grade in 133?

There is no magic formula for a *high* grade, but here are some ways to ensure you will probably get a *low* grade:

- *Skip class repeatedly.* Lectures do not repeat the book, and material covered in class is covered on the exams.
- *Skip lab repeatedly.* This will hurt — lab is 10% of your grade!
- *Start on the projects late.* In this way, you cheat yourself out of asking questions in class. I will discuss project details and trouble spots in class, but *only* in response to your questions.
- *Turn in late projects repeatedly.* Your "lateness fee" is 4/20 points per week late. Each project is about 5-6% of your grade, so each "fee" is about 1%. One or two don't hurt much, but they add up fast!
- *Ignore the reading until it's time to cram for the exam.* Weekly reading quizzes count 10%. If you ignore the reading you are clueless in class and on the projects. You cannot possibly get a good exam grade by cramming the book.

How do I withdraw from the course?

Under University and SEAS regulations, here are the rules for withdrawing from courses:

- During the first four weeks: you can withdraw using a simple Drop/Add (Registration Transaction) form. The course disappears from your transcript.
- After four weeks but before Preregistration begins: you can withdraw using a simple Drop/Add but the grade W appears on your transcript. This has no effect on your grade-point average.
- After Preregistration begins but before the end of classes: this is considered a "late withdrawal." You must complete a SEAS Late Withdrawal form, which requires the signatures of the instructor, your advisor, the CS Department Chair, and the SEAS Associate Dean. I will *always* sign a late withdrawal form, as long as classes have not ended for the semester. I will not sign a withdrawal form after the last class!

Do you give Incompletes?

Under University regulations, and my own policies, here are the rules for Incomplete grades:

A grade of I (Incomplete) may be assigned only when the student has really special circumstances such that (s)he cannot finish the work of the course. I follow the University regulations, and do not give Incompletes unless the situation is truly unusual. Do not ask for an Incomplete just to gain more time to finish projects or raise a low grade. I will almost always say no.

An Incomplete grade is undesirable. Under GW rules, you are required to remove the I by completing the work of the course. Taking the course a second time does not (NOT!) remove the original I. Under SEAS rules, an Incomplete not removed within one year becomes an F.