CSCI 261: Computer Science II

Professor  
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Thompson 390E  
Office Hours MTuW 1:00-2:00  
x3557

Meetings  
MWF 11:00-11:50 in McIntyre 202, Tu 11:00-12:50 in Thompson 409. The final will be on May 13th at 12:00.

Course Description  
And now we get serious.

The main subject of CS II is the “data structure” (sometimes called a “complex data type”). It is a complicated, abstract collection of data that includes primitive data, specialized functions to work on that data, and other data structures. It lies at the core of what is known as “object-oriented programming”, which is the major paradigm of modern software development.

We will be using the Java programming language (with which most of you are already familiar). Java is a modern, high-level language that is suitable for a wide variety of tasks. Almost anything that can be programmed, can be programmed in Java. It is also similar to many other programming languages, including C++, JavaScript, Perl, Python, PHP, and C#. The skills you learn here will be easily transferable to them.

The class will start with a review of Java and object-oriented programming. From there, we will cover many of the most common data structures used in modern programming. You will program many of these on your own, from scratch.

Topics Covered  
(“Learning Outcomes”)

The specific topics we will cover include:

- Object-oriented programming.
- Recursion.
- Sorting algorithms.
- Stacks & queues.
- Linked lists & trees.
- Hashing.

Web Page  
The class web page will be located at http://mathcs.pugetsound.edu/~aasmith/cs261/. Valuable info and links will be posted there.

Text  
Most readings will be online, posted to the web page. In addition, your textbook from CS I may be of use for supplementary readings.

Prerequisites  
You should already have taken CSCI 161, or its equivalent.

Course Policies  
There will be twelve assignments over the course of the class—usually one each week. You are free to talk to others in the class about them, but I expect what you finally turn in to be 100% your own work. Assignments will be penalized by 20% for each working day (or fraction thereof) they are late, down to 40%. However, you will have five “extension days” during the semester to extend a deadline by one working day. They will be used automatically, unless you specify otherwise.
There will also be weekly lab assignments done in small groups. If your work compiles properly and appears to be a good-faith attempt, you will be given either 50% or 100%. Otherwise you will get 0%. You may keep trying so long as you have less than 100%.

You all should be aware of the Honor Code at the college. Please do not cheat—it will not go well for you. Any suspected cheating will be immediately reported.

Exams are closed book, and will be cumulative. You are allowed a calculator (or your phone, so long as it is in “airplane mode”) and one two-sided, letter-sized page of notes.

Grading
Final grades will be determined as follows:

<table>
<thead>
<tr>
<th>Homeworks</th>
<th>Labs</th>
<th>Midterm 1</th>
<th>Midterm 2</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>10%</td>
<td>20%</td>
<td>20%</td>
<td>25%</td>
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</tbody>
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In particular, notice how heavily weighted assignments are. Missing assignments is the easiest way to get a lower grade. Please be sure you do them, and on time.

Tests will be cumulative. They will be graded on a curve, with the highest score considered to be 100%. In addition, class participation and effort may help bump you up, if your final grade is borderline.

Tutoring
The department offers a drop-in tutoring session in this room most evenings. Please take advantage of this if you feel yourself dropping behind!

Attendance
I will not be keeping attendance (except on the first day). However, odds are that your attendance will correlate highly with your final grade.

Boilerplate
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Peggy Perno, Director of the Office of Accessibility and Accommodation, 105 Howarth, 253.879.3395. She will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Please review university emergency preparedness and response procedures posted at www.pugetsound.edu/emergency/. There is a link on the university home page. Familiarize yourself with hall exit doors and the designated gathering area for your class and laboratory buildings. If building evacuation becomes necessary (e.g. earthquake), meet your instructor at the designated gathering area so she/he can account for your presence. Then wait for further instructions. Do not return to the building or classroom until advised by a university emergency response representative. If confronted by an act of violence, be prepared to make quick decisions to protect your safety. Flee the area by running away from the source of danger if you can safely do so. If this is not possible, shelter in place by securing classroom or lab doors and windows, closing blinds, and turning off room lights. Lie on the floor out of sight and away from windows and doors. Place cell phones or pagers on vibrate so that you can receive messages quietly. Wait for further instructions.

Miscellany
If there are any special holy days that you will be taking off, please let me know as soon as you can so that we can work around them.

Please consider getting a flu shot. Influenza kills, and disease can spread rapidly in the dorms. (And you really don’t want to miss a week of class. Trust me.)

Finally...if there’s anything else I can do to help you, please let me know. I’m willing to go out of my way to make this a valuable class for you, but I can’t do that unless you talk to me.