CSCI 261: Computer Science II
Course Syllabus – Spring 2018

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Office Hours: Open door or by appointment

Meeting Times (Sec A): MWF 11:00-11:50 in TH 409 & Tues 11:00-1:50 in TH 409  
Meeting Times (Sec B): MWF 2:00-2:50 in TH 409 & Tues 2:00-3:50 in TH 409  
Course Page: http://cs.pugetsound.edu/~dchiu/cs261  
Slack: http://univpugetsound.slack.com (signup with your pugetsound.edu address)

1 Course Information

This course is a continuation of the topics introduced in CSCI 161. It provides an introduction to the study of fundamental data structures and their associated algorithms. Students will learn about lists, stacks, queues, trees, sorting, searching, abstract data types, and object-oriented programming using Java, and learn how to choose appropriate data structures and algorithms for particular problems.

Prerequisites

A grade of C- or higher in the following course is required, or with permission from the instructor:

- CSCI 161 - Introduction to Computer Science

Students with transfer credit for CSCI 261 may not take this course.

Textbook

- Koffman and Wolfgang. Data Structures: Abstraction and Design Using Java. 2nd edition or higher. (Required)

Course Topics

- Advanced object-oriented design: inheritance and polymorphism
- Exception handling
- Basic principles of complexity analysis and the big-\(O\) notation
- Data structures, associated operations, and their applications
- Recursion and recursive data structures
- Classical sorting algorithms
Student Learning Outcomes

Upon completion of this course, students will be able to:

• Design and implement reasonably sized Java programs from scratch, maximizing code reuse.
• Gracefully handle error-reporting in Java programs.
• Determine analyze an algorithm using big-$O$ notation.
• Make informed decisions on choosing an appropriate data structure for a given task by understanding their tradeoffs and considering their performance in the common case.

2 Grading

The following grade cutoffs are upper bounds. They might come down, but will not be set higher: $A = 95$, $A- = 90$, $B+ = 87$, $B = 83$, $B- = 80$, $C+ = 77$, $C = 73$, $C- = 70$, $D+ = 67$, $D = 64$, $D- = 60$, $F = < 60$. Your overall grade will be composed as follows:

<table>
<thead>
<tr>
<th></th>
<th>% Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discretionary</td>
<td>3</td>
</tr>
<tr>
<td>Lab Assignments</td>
<td>10</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>35</td>
</tr>
<tr>
<td>Midterm I</td>
<td>15</td>
</tr>
<tr>
<td>Midterm II</td>
<td>17</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20</td>
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</tbody>
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Table 1: Breakdown of Grades

Assignments

• **Lab Assignments (Paired)** – You will pair up with another student and switch roles throughout the lab. Lab assignments are downloadable from the class page and are always due the Friday after lab at 23:59, unless stated otherwise. Labs are graded on a 10/5/0 point scale. 10 = complete, 5 = some effort made, 0 = minimal effort or no attendance.

• **Homework Assignments (In Teams)** – With exception to a few assignments, you will generally be working in teams on all homework assignments. A new team will assigned for each assignment. The most successful teams meet and physically work together at an agreed-upon location and time – that is, *uno animo*, like you do in Labs. Teams that delegate tasks independently (then merging tasks later) are likely to struggle. Each member of the team should contribute equally to the assignment, and every student in a team will receive the same grade.

• **Late Work** – For each day either a homework or project assignment is late (includes weekends), a 10% deduction will be assessed, and no late work will be accepted one week after the due date.

Exams

There will be two midterms and a final exam — all cumulative. They will cover material discussed in lectures, labs, and assignments. You are allowed a calculator and a half page of notes (front and back) on all exams.
**Discretionary**

Discretionary points will be given based on:

- Lecture and lab attendance
- Classroom participation
- Timeliness
- Refraining from activities that can disrupt others, *e.g.*, texting, playing games on your laptop, *etc.*

### 3 Course Policies

#### Class Disruptions

I understand the student’s need to have their phone on them to answer the occasional important call. I do ask that you please have your phones on vibrate and take the call outside the classroom out of respect for your fellow students. For each disruption-free period, I will reward you with bonus problems on the exams.

#### Academic Integrity

You should be aware of the *Student Integrity Code* at the university. Any suspected cheating (*e.g.*, plagiarizing code, copying homework solutions, *etc.*) will be reported to the Registrar, which may result in possible suspension/expulsion. See this link for more info: http://www.pugetsound.edu/student-life/personal-safety/student-handbook/academic-handbook/academic-integrity

#### Student Accessibility and Accommodation

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.

#### Classroom Emergency Response Guidance

Please review university emergency preparedness and response procedures posted at . 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.
Student Bereavement Policy

The University of Puget Sound recognizes that a time of bereavement can be difficult for a student. Therefore, the university provides a Student Bereavement Policy for students facing the loss of a family member. Students are normally eligible for, and faculty members are expected to grant, three consecutive weekdays of excused absences, without penalty, for the death of a family member, including parent, grandparent, sibling, or persons living in the same household. Should the student feel that additional days are necessary, the student must request additional bereavement leave from the Dean of Students or the Dean’s designee. In the event of the death of another family member or friend not explicitly included within this policy, a bereaved student may petition for grief absence through the Dean of Students office for approval.