CMPS 12B/M
Introduction to Data Structures
Summer 2016 (June 20 – August 12)

Description: Teaches students to implement common data structures and the algorithms associated with each data structure, through progressively difficult exercises. Topics include big “O” notation; pointers, recursion (induction), and dynamic allocation; linked lists and list processing; stacks, queues, binary trees and binary search trees; simple sorting techniques and simple search techniques. Students will gain a working knowledge of the elements of the Java and C programming languages. Prior experience with Unix is assumed. Prerequisites: CMPS 11 or 12A or CMPE 13. Concurrent enrollment in CMPS 12M is required.

Time and Place: TTh 10:00-12:30 Thimann Lecture 001
Class Webpage: https://classes.soe.ucsc.edu/cmps012b/Summer16/

Instructor: Patrick Tantalo http://users.soe.ucsc.edu/~ptantalo/
Office: E2 257
Office Hours: TTh 3:00-5:00, W 4:00-6:00, or by appointment
Email: ptantalo@soe.ucsc.edu
Phone: 831-459-3898

Teaching Assistants:
April Grow (agrow@soe.ucsc.edu)
Bharath Nagesh (bnagesh@ucsc.edu)

LSS Tutor:
Olivia Johnson (ocjohnso@ucsc.edu)


Supplementary Texts:

Coursework and Evaluation for CMPS 12B:
• Programming Assignments: Five assignments due at roughly 8 day intervals.
• Midterm Exam 1: Thursday July 7
• Midterm Exam 2: Thursday July 28
• Final Exam: Thursday August 11, 10:00-1:00pm

Coursework for 12B will be weighted as follows:
Programming Assignments 60%
Midterm Exam 1 10%
Midterm Exam 2 10%
Final Exam 20%

Coursework and Evaluation for CMPS 12M:
• Lab Assignments: Eight assignments due at roughly 6 day intervals. Topics covered will include: Makefiles, executable jar files, command line arguments, file input and output, Java generics,
introduction to the C language, data abstraction and information hiding in C. Some of these assignments will build on the 12B programming projects.

- **Final Exam:** The 12B final exam (Thursday August 11, 10:00-1:00pm) will contribute toward your grade for 12M.

Coursework for 12M will be weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Assignments</td>
<td>80%</td>
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<tr>
<td>Final Exam</td>
<td>20%</td>
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Grading scale for both 12B and 12M:

- A+ 97%-100%
- A 93%-96%
- A- 90%-92%
- B+ 87%-89%
- B 83%-86%
- B- 80%-82%
- C+ 76%-79%
- C 70%-75%
- C- 67%-69%
- D+ 64%-66%
- D 61%-63%
- D- 58%-60%
- F 0%-57%

Letter grade boundaries may be lowered at my discretion in order to eliminate some borderline cases.

**Accommodations for Students with Disabilities**

If you qualify for classroom accommodations because of a disability, please get an Accommodation Authorization from the Disability Resource Center (DRC) and submit it to me in person outside of class (i.e. during office hours) within the first two weeks of the quarter. Contact DRC at 459-2089 (voice), 459-4806 (TTY), or [http://drc.ucsc.edu](http://drc.ucsc.edu) for more information.

**Academic Honesty:**

The Baskin School of Engineering has a zero tolerance policy for any incident of academic dishonesty. If cheating occurs, consequences may range from getting zero on a particular assignment to failing the course. In addition every case of academic dishonesty is referred to the students’ college Provost, who sets in motion an official disciplinary process. Cheating in any part of the course may lead to failing the course, suspension or dismissal from the Baskin School of Engineering, or from UCSC.

What is cheating? In short, it is presenting someone else’s work as your own. Examples would include copying another students’ lab or programming assignment, or allowing your own work to be copied. You may discuss programs with fellow students, but your collaboration must be at the level of ideas only. You may freely give and receive help with the computer facilities, editors, the UNIX operating system, and the proper use and syntax of the Java and C programming languages; but you may not copy, paste, email, transfer or in any way share source code. If you do collaborate (legitimately) or receive help from anyone, you must credit them by placing their name(s) at the top of your program. Please go to [https://www.ue.ucsc.edu/academic_misconduct](https://www.ue.ucsc.edu/academic_misconduct) to see the University's policy on Academic Misconduct.

**Some Important Summer Session Deadlines:**

- Last day to drop: Monday June 27 (week 2)
- Last day to withdraw: Friday July 22 (week 5)