CMPS 12B/M
Introduction to Data Structures
Spring 2015

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 6:00-7:45 Thimann Lecture 003
Class Webpage: https://classes.soe.ucsc.edu/cmps012b/Spring15/

Instructor: Patrick Tantalo http://users.soe.ucsc.edu/~ptantalo/
Office: E2 257
Office Hours: TTh 1:00-3:00 pm, or by appointment
Email: ptantalo@soe.ucsc.edu
Phone: 831-459-3898

Teaching Assistants:
Larissa Munishkina (mlarissa@soe.ucsc.edu)
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MSI Tutor:
Kenneth High (khhigh@ucsc.edu)


Supplementary Texts:

Coursework and Evaluation for CMPS 12B:
• Programming Assignments: Five or six assignments due at roughly 10 day intervals.
• Midterm Exam 1: Thursday April 23
• Midterm Exam 2: Thursday May 21
• Final Exam: Wednesday June 10, 4:00-7:00 pm

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:** Seven or eight assignments due at roughly one week 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 (Wednesday June 10, 4:00-7:00 pm) will also figure in the grade for 12M.

Coursework for 12M will be weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<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%
- D  60%-69%
- F  0%-59%

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

Accommodations for Students with Disabilities:
Any student who believes s/he needs an accommodation, based on the impact of a disability, should contact the Disability Resource Center (DRC) at 831-459-2089 in room 125 Hahn Student Services or by email at drc@ucsc.edu to coordinate those accommodations. If you qualify for classroom accommodations, please contact me privately to submit your Accommodation Authorization and to discuss specific needs, preferably within the first two weeks of the quarter. See the DRC webpage 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 student's programming assignment, or allowing your own work to be copied. You may discuss projects with fellow students, but your collaboration must be at the level of ideas only. Legitimate collaboration ends when you in any way share in the act of writing solutions. You may freely give and receive help with the computer facilities, editors, the UNIX operating system, and the proper use and syntax of the C and Java programming languages; but you may not copy, paste, email, transfer or in any way share source code. Please go to http://www.ucsc.edu/academics/academic_integrity/ to see the full text of the University's policy on Academic Integrity.