



DATA STRUCTURES

FALL 2009 #ICE2002 - 41

TUE/THU 4:30-5:45PM (ROOM 26312)

Course Description: One of the most important entry level courses for computer science and engineering major students. Design and analysis of data structures are discussed in terms of the efficiency for better programming. The purpose of this course is to introduce data structures which are essential for solving computer-oriented problems, basic principles, and techniques for easier creation of efficient algorithms. Classical data structure design techniques are mostly discussed. Sorting, searching, trees, graphs and other operations on them include arrays, stacks, (circular) queues, linked lists, hash tables, trees, graphs, and strings.

- **Instructor:** Prof. Hyunseung Choo, Engineering Building I Room 23434, FON (031)290-7145
URL: <http://monet.skku.ac.kr> (course pages), E-mail: choo@ece.skku.ac.kr
- **Graduate Teaching Assistants:** Sang-Hun Cho(doctoral), Hyunjin Kong(master), FON (031)299-4620
- **Textbook:** Horowitz, Sahni, and Anderson-Freed, Fundamentals of Data Structures in C, 2nd, 2008.
- **References:**
 1. Nell Dale, C++ plus Data Structures, 4th, Jones and Bartlett, 2007.
 2. A. Aho, J. Hopcroft, and J. Ullman, Data Structures and Algorithms, Addison-Wesley, 1983.
 3. A. Berman, Data Structures via C++, Oxford, 1997.
 4. T.H.Cormen, C.E. Leiserson and R.L. Rivest, Introduction to Algorithms, McGraw-Hill, 2001.
- **Grading Policy:**
Seven programming assignments (20%), Quiz (10%),
Attendance (10%), midterm #1 (10/22, 30%), and midterm #2 (12/10, 30%)
- **Prerequisites:** C/C++/Pascal programming and Discrete Structures.
- **Course Details:**
 1. Assigned readings are from the textbook and suggested to complete before each class. At least, you should read the introductory material at the beginning of each chapter.
 2. Assignments must be submitted at the beginning of the class on the due date. Late submissions will be accepted with 10% penalty each day.
 3. All exams are closed-book, closed-notes cumulative exams and cover the material up to the point mentioned one week prior to the exam date.
 4. Basically all works in this class must be done individually. Anyone cheating on work assigned in this class will receive a zero for that assignment, i.e. submitting the same programs with slight changes of variable names and tab sizes, etc.



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5. You **MUST** have a computer access such as an account offered by SICE, or your own PC.
 6. Anyone who misses an exam *without prior approval of the instructor* will have **-30 points** instead of 0, and there will be no makeup exams.
 7. Hand phone rings during the lecture cost the weight of one absence, and two lates for the lecture cost one absence.
 8. Accidental class omission will be announced through the web page 3 hours before the class.
- **Tentative Subject:** Contents of lecture notes are partially selected from several references given, and most of them are directly from the textbook.

Tentative Course Schedule: Fall 2009

Week 1	9/1	<u>9/3</u>	C language overview	<u>HW#1</u>
Week 2	9/8	9/10	Chapter 1. (1.1, 1.2, 1.3, 1.4)	
Week 3	<u>9/15</u>	9/17	Chapter 1. (1.5)	<u>HW#2</u>
Week 4	9/22	<u>9/24</u>	Chapter 2. (2.1, 2.3, 2.5)	<u>HW#3</u>
Week 5	9/29	10/1	Chapter 3. (2.6, 3.1, 3.3, 3.4)	
Week 6	<u>10/6</u>	10/8	Chapter 3. (3.6, 4.1)	<u>HW#4</u>
Week 7	10/13	10/15	Chapter 4. (4.3, 4.4)	
Week 8	10/20	<u>10/22</u>	Chapter 4. (4.5) + Midterm #1	<u>HW#5</u>
Week 9	10/27	10/29	Chapter 4. (4.8, 5.1)	
Week 10	11/3	<u>11/5</u>	Chapter 5. (5.2, 5.3, 5.4)	<u>HW#6</u>
Week 11	11/10	11/12	Chapter 5. (5.6, 5.7)	
Week 12	11/17	<u>11/19</u>	Chapter 6. (5.9, 6.1)	<u>HW#7</u>
Week 13	11/24	11/26	Chapter 6. (6.2, 6.3)	
Week 14	12/1	<u>12/3</u>	Chapter 7. (7.1, 7.2, 7.3, 7.4)	
Week 15	12/8	<u>12/10</u>	Chapter 7. (7.6, 7.7) + Midterm #2	
Week 16	12/15	12/17	No lecture and having a nice vacation	

NOTE: All exams (10/22, 12/10) will be scheduled at 4:25am-5:55pm!