CSE 2017-03 Data Structure and Lab.

Spring 2017

This course is an introductory course in data structures. Topics include arrays, stacks, queues, linked lists, recursion and binary trees. The student will build projects using the data structures taught in class. Proper software engineering techniques are introduced, including object oriented design and programming and unit testing.

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Course Web Page: eclass.dongguk.edu

Office Hours: T 3:00-4:00 PM **Office Location**: Room 10119, New Engineering Bld.

Class Hours: T, Th 1:00-3:00 PM **Class Location**: 3183(Lab), 6114(Lecture) NEB.

Texts: Nell Dale and David Teague: C++ Plus Data Structures, fourth edition, Jones and Bartlett, 2007.
James Roberge: Data Structures in C++: A Laboratory Course, second edition, Jones and Bartlett, 2003.

Prerequisites: Knowledge of C or C++: CSE 2014 or PRI 4035.

Grading:

- Project: 20%
- Labs: 25%
- Midterm: 25%
- Final Exam: 25%
- Attendance and Participation: 5%

Grading Scale: A= 85% B=70% C=60% D=50% F<50%

Exam Failure: The instructor reserves the right to assign a failing semester grade to any student who fails either (or both) exams.

Lateness: All assignments are due at the beginning of class on the due date. Assignments turned in late will automatically have one full grade deducted. No assignments will be accepted one week or later after the due date.

Academic Integrity

Any indication of copying lab or project work or any behavior during exams that could be considered copying or cheating will result in an immediate zero on the assignment/exam for all parties involved. The student's advisor/department and the Dean will be notified. Cheating on assignments is defined to be copying from someone else or providing someone else copies of your answers. Do not show your

assignments to anyone else! You may answer questions on labs or project homework asked by other students.

Schedule for Lecture and Laboratory

Week	Class Topic & Contents	Project	Class Type	Chapter on Text
1	3/2 Lecture 00: Orientation and Introduction to Data Structure		Lecture	
2	3/7 Lecture 01: Introduction to C++(Private, Public, Overloading) 3/9 Lecture 02: Introduction to C++(Inline Member Function		Lecture & Practice	
3	3/14 Lecture 03: Data Abstraction and List(array) 3/16 Lab 01: List(Array)		Lecture & Practice	
4	3/21 Lecture 04:Stack(Array) 3/23 Lab 02: Stack(Array)		Lecture & Practice	
5	3/28 Lecture 05: Stack(Linked) 3/30 Lab 03: Stack(Linked)	Assign Project #1	Lecture & Practice	
6	4/4 Lecture 06: Queue(Array, Linked) 4/6 Lab 04: Queue(Array, Linked)		Lecture & Practice	
7	4/11 Lecture 07: Double Linked List 4/13 Lab 05: Double Linked List		Lecture & Practice	
8	4/18 Midterm exam 4/20 No Lab		Exam	
9	4/25 Lecture 09: Recursion 4/27 Lab 08: Recursion with Linked List	Assign Project #2	Lecture & Practice	
10	5/2 Lecture 09: Tree 5/4 Lab 09: Expression Tree		Lecture & Practice	
11	5/9 Lecture 10: Binary Tree 5/11 Lab 10: Binary Search Tree		Lecture & Practice	
12	5/16 Lecture 11: Heap 5/18 Lab 11: Heap		Lecture & Practice	
13	5/23 Lecture 12: Graph 5/25 Lab 12: Weighted Graph	Assign Project #3	Lecture & Practice	
14	5/30 Lecture 13: Sorting 6/1 Lab 13: Sorting		Lecture & Practice	
15	6/6 No class(Memorial Day) 6/8 Lecture 14: Searching		Lecture & Practice	
16	6/13 Final Exam		Exam	