**Syllabus**

**CS 2123: Data Structures**  
**Spring 2016**

**Instructor:** Ali Şaman Tosun  
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**Office:** NPB 3.310  
**Phone:** 458-7663  
**Class Time:** Monday, Wednesday, Friday 12:00 pm - 12:50 pm  
**Class Location:** NPB 1.202  
**Class Webpage:** http://www.cs.utsa.edu/~tosun/TEACHING/CS2123SP16/index.html  
**Office Hours:** Monday, Wednesday, Friday 1:00 pm - 2:00 pm

**Textbook:** (Optional) Data Structures using C and C++, Y. Langsam, M. Augenstein and A. Tenenbaum  
(Optional) A Practical Guide to Linux, Mark Sobel

**Objectives:** In this course you will learn  
1. Basic data structures: linked list, queue, stack, binary tree, hashing  
2. How to choose appropriate data structure to solve a given problem  
3. How to implement linked structures in C using explicit memory management  
4. Analysis of worst case time complexity of algorithms

**Prerequisites:** CS 1713: Introduction to Computer Programming II

**Topics:**  
Chapter 1: Introduction to Data Structures  
Chapter 2: The Stack  
Chapter 3: Recursion  
Chapter 4: Queues and Lists  
Chapter 5: Trees  
Chapter 6: Sorting  
Chapter 7: Searching  
Chapter 8: Graphs and Their Applications

**Recitation:** You should register for CS 2121 Section 3 or 4

**Grading:** Based on Curve  
Assignments: 20% (7 assignments, first 2 and highest 4 out of last 5 count)  
Midterm 1: 20% Friday, February 12  
Midterm 2: 20% Friday, March 25  
Attendance: 5%  
Recitation: 10%  
Final: 25% Friday, May 6 at 12:30pm  
Extra Credit: 3% Jumpstart or Extra assignment

Make-up exams are given only under certain extenuating circumstances. Late homeworks are not accepted.

This Syllabus is provided for informational purposes regarding the anticipated course content and schedule of this course. It is based upon the most recent information available on the date of its issuance and is as accurate and complete as possible. I reserve the right to make any changes I deem necessary and/or appropriate. I will make my best efforts to communicate any changes in the syllabus in a timely manner. Students are responsible for being aware of these changes.