

# CS 201: Fundamental Structures of Computer Science I

## Fall 2019

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**Lectures:** Tue 15:40-17:30, Fri 13:40-15:30, EE-05 (*Section 1*)  
Tue 10:40-12:30, Fri 8:40-10:30, B-Z08 (*Section 2*)  
Wed 13:40-15:30, Fri 15:40-17:30, EE-214 (*Section 3*)

**Course Website:** <http://www.cs.bilkent.edu.tr/~gunduz/teaching/cs201>

**Text Books:** (*Required*) F.M. Carrano and T. Henry, *Data Abstraction and Problem Solving with C++*, any edition.  
(*Recommended*) H.M. Deitel and P.J. Deitel, *C++ How to Program*, any edition.

### Course Emphasis and Goals

Introduction to abstract data types. Lists. Stacks. Queues. Implementing abstract data types in C++. Recursion as a problem solving method for data abstraction.

### Grading Policy

Homework: 10% (3 homework assignments)  
Midterm 1: 30% (closed-book, closed-notes)  
Midterm 2: 30% (closed-book, closed-notes)  
Final: 30% (closed-book, closed-notes)

**Due to the YÖK (Higher Education Council) regulations, we are taking attendance and will report it to the Department at the end of the semester.**

### **Minimum requirements to qualify for the final exam:**

In order to be able to take the final exam, a student

1. must collect at least 21 points (35% of total 60) from the weighted midterm grades, and
2. must submit Part A of the 1st homework and must get at least half of the points for this part, and
3. must submit the 2nd homework and must get at least 30 points (out of 100), and
4. must submit Part A of the 3rd homework and must get at least half of the points for this part.

Otherwise the student will receive the FZ grade.

The instructors also reserve the right to set other thresholds for passing grades.

### **Homework Assignments and Late Policy**

Homework assignments will be posted on the course web site. Assignments are to be turned in by 23:55 on the due date through Moodle. Note that we will use Moodle only for homework submissions.

For the late assignments, each student will be given a total of three grace days (whole or partial) for the whole semester. Once these late days have been exhausted, no late assignments will be accepted. As an example, if Student A submits her/his 1st assignment 29 hours late, s/he will have used two late days and have only one day left. If Student A then submits her/his 2nd assignment 5 hours late, s/he will have used her/his remaining late day. If Student A submits her/his 3rd assignment 1 minute late, this assignment will not be accepted.

### **Academic Integrity**

Please make sure you fully understand the Bilkent University Policy on Academic Honesty (<http://w3.bilkent.edu.tr/www/lisans-ve-on-lisans-egitim-ogretim-yonetmeligi/#madde4.9>, in Turkish) and the Rules and Regulations of the Higher Education Council (YOK) (<http://www.resmigazete.gov.tr/eskiler/2012/08/20120818-12.htm>, in Turkish). Cheating and plagiarism on exams and homework assignments will be punished according to these regulations.

### **Schedule**

Week	Subject	Homework	Exams
1	Introduction <i>Ch.2, Ch.3, Ch. 4, Ch.5 (Deitel)</i>		
2	Functions, <i>Ch.6 (Deitel)</i>		
3	Pointers and arrays, <i>Ch. 8 (Deitel)</i>		
4	Pointers and arrays, <i>Ch. 8 (Deitel)</i>		
5	Pointers and arrays, <i>Ch. 8 (Deitel)</i>		
6	Case study, <i>Ch.9, Ch 10 (Deitel)</i>	HW1 out	
7	Multidimensional arrays, <i>Ch.8 (Deitel)</i>		
8	Recursion Algorithm analysis, <i>handout will be available</i>	HW1 in	Midterm 1 (TBA; tentatively, in the week of 11-17 November)
9	Abstract data types, <i>Ch.8, Ch. 9 (Carrano)</i>	HW2 out	
10	Linked lists, <i>Ch.8, Ch. 9 (Carrano)</i>		
11	Linked lists, <i>Ch.8, Ch. 9 (Carrano)</i>	HW2 in HW3 out	
12	Linked lists, <i>Ch.8, Ch. 9 (Carrano)</i>		Midterm 2 (TBA; tentatively, in the week of 9-15 December)
13	Stacks, <i>Ch. 6, Ch.7 (Carrano)</i>	HW 3 in	
14	Queues, <i>Sec.13-1, Sec.13-2, Sec.13-4, Sec.14-1 (Carrano)</i>		