

CS 201: Fundamental Structures of Computer Science I

Summer 2015

- Instructor:** Selim Aksoy
EA 422 (Engineering Building), x3405
saksoy@cs.bilkent.edu.tr
Office hours: Tue 13:40-15:30 or by appointment
- TAs:** Hamzeh Ahangari (EA 425, hamzeh@bilkent.edu.tr)
Nabil AbuBaker (EA 525, nabil.abubaker@bilkent.edu.tr)
Noushin Faramarzi (EA 525, noushin.salek@bilkent.edu.tr)
- Lectures:** Mon 8:40-10:30, Tue 15:40-17:30, Thu 10:40-12:30, B-Z08
- Course Website:** www.cs.bilkent.edu.tr/~saksoy/courses/cs201
- Text Books:** *(Required)* F.M. Carrano, *Data Abstraction and Problem Solving with C++, any edition*, Addison-Wesley, 2006 or later.
(Recommended) H.M. Deitel and P.J. Deitel, *C++ How to Program, any edition*, Prentice Hall, 2008 or later.

Course Emphasis and Goals

This course introduces the abstract data types of lists, stacks and queues, and shows how one can implement them in C++ using fundamental data structures. It also introduces recursion and algorithm analysis.

Grading Policy

Quizzes: 15% (closed-book, closed-notes)
Homework: 10%
Midterm 1: 25% (closed-book, closed-notes)
Midterm 2: 25% (closed-book, closed-notes)
Final: 25% (closed-book, closed-notes)

In order to be able to take the final exam, a student must collect at least 26 points (40% of total 65) from the weighted sum of the quiz and midterm grades; otherwise, the student will receive the FZ grade.

The instructor also reserves the right to set other thresholds for passing grades.

Quizzes

There will be several pop-up quizzes throughout the semester. There will be no make-up quiz for the missed quizzes. The quizzes will be closed-book and closed-notes.

Homework Assignments and Late Policy

Homework assignments will be posted on the course web site. Assignments are to be turned in by 23:59 on the due date. For the late assignments, each student will be given a total of two 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 23 hours late, s/he will have used one late day 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://www.bilkent.edu.tr/bilkent-tr/admin-unit/hukukm/lisans_yonetmelik.html#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, quizzes, and homework assignments will be punished according to these regulations.

Schedule

| Week | Mon | Tue | Wed | Thu | Fri |
|------|-------------------------------------------------|----------------------------|-----------------------------------|--------------------------------|-----|
| 1 | | | | Introduction Ch.3 (Deitel) | |
| 2 | Case study Ch.3-5 (Deitel) | Functions Ch.6 (Deitel) | <i>HW 0 out</i> | Functions Ch.6 (Deitel) | |
| 3 | Arrays Ch.7 (Deitel) | Pointers Ch.8 (Deitel) | <i>HW 1 out</i> | Pointers Ch.8 (Deitel) | |
| 4 | Pointers Ch.8 (Deitel) | Pointers Ch.8 (Deitel) | | Case study Ch.9-10 (Deitel) | |
| 5 | Recursion Ch.2 (Carrano) Midterm 1 | Algorithm analysis | <i>HW 1 in</i> <i>HW 2 out</i> | Lists Ch.3 (Carrano) | |
| 6 | Lists Ch.4 (Carrano) | Lists Ch.4 (Carrano) | <i>HW 2 in</i> <i>HW 3 out</i> | Holiday | |
| 7 | Stacks Ch.6 (Carrano) Midterm 2 | Stacks Ch.6 (Carrano) | | Queues Ch.7 (Carrano) | |
| 8 | Review | Review | <i>HW 3 in</i> | Review | |