

CS 201 – Introduction to Computing

Spring 2015-2016

3 credits, no prerequisites

Description

The objective of this course is to introduce students to the field of computing and problem solving with the help of an object-oriented programming language (C++). Hence the course will cover many C++ features in detail as needed so students will also be learning a structured programming language. It is part of the “core course” pools for all the FENS programs.

Topics Covered

- Introduction to Computer Science, Algorithms, Programs, Computer Architecture
- Basic programming structure and concepts: identifiers, literals, symbols, variables, screen input/output
- Basic data types (int/float/char) and arithmetic operations with their precedence
- Functions with/out return values, function prototypes
- Conditional statements (if-else)
- Loops (while, for, do-while)
- Classes and objects: using existing classes and designing new classes
- Parameter passing (pass by value and by reference)
- File I/O, input and output streams
- Structs, vectors/arrays and simple array operations: search, binary search, sorting (selection and insertion sort)
- Variable scope (global, static, local), typecasting
- Introduction to algorithm complexity analysis, Recursion

Instructor

- **Gülşen Demiröz**, Office: FENS L015, E-mail: gulsend@sabanciuniv.edu

Assistants' Info

http://myweb.sabanciuniv.edu/gulsend/su_current_courses/cs-201-spring-2008/cs201-assistants-website/

Textbook

A Computer Science Tapestry, 2nd Edition (ISBN: 0072322039), Owen L. Astrachan

NOT available in bookstore anymore. The book has a good website where you can access the codes shown in the book as well as partially the book itself in pdf form at <http://www.cs.duke.edu/csed/tapestry/>

We may not stick to the textbook all the time, you are responsible for all material covered in class.

Schedule

Lectures: Monday 13:40 – 15:30 and Tuesday 16:40 – 17:30 in FENS G077.

Recitations:

Sections A1, A2, A3:	Thursday	08:40 – 11:30 (see schedule for places)
Sections B1, B2, B3, B4:	Thursday	13:40 – 16:30 (see schedule for places)
Sections C1, C2, C3, C4:	Thursday	16:40 – 19:30 (see schedule for places)
Sections D1, D2, D3:	Friday	12:40 – 15:30 (see schedule for places)

Homework

There will be 7 programming homework. They will be assigned and collected at **SUCourse**. Recitations will be used for clarification about the homework. Late penalty is 10% of full grade (only 1 late day is allowed). If the homework is not done by you, you will get **-100** (minus 100). If you do it again, you will fail the class.

Grading (might change)

Midterm 1 (23%): March 14th Monday 19:40 – 21:30

Midterm 2 (23%): April 18th Monday 19:40 – 21:30

Final Exam (30%): scheduled by registrar

Recitation Attendance (%4): %1 is left to the TA as “kanaat”

Homeworks (20% total): 7 homework will be assigned and they are not of equal weight

Important Notice about grading: Weighted average is not the only criterion in letter grading; exam average may also be taken into consideration.