CS 201 - Introduction to Computing
Fall 2015
3 credits, no prerequisites

Description

This course is intended to introduce students to the field of computing (concepts, algorithmic thinking and problem solving), as well as giving them intermediate level programming abilities in an object-oriented programming language (currently C++). It is a required course for all the FENS programs.

Topics Covered

- Introduction to computer science, algorithms, programs, computer architecture and components (CPU, RAM/ROM,...)
- Components of a program (object code, header files, libraries, executables; compiling/linking/debugging)
- Basic programming structure and concepts: identifiers, literals, symbols, variables, assignment, screen input/output
- Basic data types (char/int/float/double) and their representations, arithmetic and logical operators, precedence rules
- Functions (void)
- Function prototypes, intro. to classes and objects, class usage
- Conditional execution (if)
- Functions returning values, string as a class
- Loops (while, do-while, for)
- Parameter passing (by value and by reference)
- Object oriented design with classes (public and private parts, member functions, constructors)
- File I/O, input and output streams
- structs and arrays/vectors, array operations (searching, simple sorting)
- Variable scope (global,static...), typecasting
- Introduction to algorithm analysis and complexity, recursion

Instructors

Prof. Dr. Albert Levi, FENS 1091, ext. 9563, levi@sabanciuniv.edu

Caution: There is another Albert Levi who is a SU graduate, but his name and email may still appear in some databases. Check the email address while you are writing!

Office Hours: whenever I am in my office (I am generally in my offices :)
Assistants: TBD - Detailed assistant information (offices, office hours, etc.) will be available soon on the website.

Textbook


May not be available in bookstore, but the book has a good website where you can access the codes shown in the book as well as the book itself in pdf form at http://www.cs.duke.edu/csed/tapestry/

We may not stick to the textbook; you are responsible material covered in class too.

Schedule

Lectures: Monday 13:40 – 15:30, Tuesday 09:40 – 10:30, FENS G077 (Auditorium)

Labs/Recitations: Sections A1 .. A4: Thursday 14:40 – 17:30, see schedule for the places
Sections B1 .. B4: Friday 08:40 – 11:30, see schedule for the places
Sections C1 .. C3: Friday 12:40 – 15:30, see schedule for the places
Sections D1 .. D3: Friday 15:40 – 18:30, see schedule for the places

Homework

There will be 7 programming homework. They will be assigned and collected at SUCourse. Recitations will mostly be used for clarification about the homework. Late penalty is 10% of full grade for each day (only one late day is allowed). You have to submit your own work! If the homework is not done by you, you will get -100 (minus 100) on the first incident. If you do it again, you will fail the class.

Grading (subject to change)

Midterm 1 (23%): November 7, 2015, Saturday, 14:00 – 16:00.
Midterm 2 (23%): December 5, 2015, Saturday, 10:00 – 12:00.
Final (34%): will scheduled by SR

Homework (20%): There will be 7 homework assignments (not of equal weight) and all of them will be considered in grading.

We are not planning to give any quizzes, but depending on your attendance, we may start quizzes with prior notice.
Weighted average is not the only criterion in letter grading; exam average may also be taken into consideration.

See Class Website at http://people.sabanciuniv.edu/levi/cs201 for other, but important, details

Plagiarism and Cheating will not be tolerated

See the policy on plagiarism at http://people.sabanciuniv.edu/levi/cs201/policy_plagiarism.html