Programación de Computadores (Intro to Programming using C++)

Course's credits: 3 (one credit equals **3 hours** of work **a week**)
Instructor: Elkin Cruz, elacruzca@unal.edu.co
Office Hours: Tuesday 14:00-16:00, Wednesday 9:00-11:00. Lab 207 - Aulas de Ingeniería[1]
Webpage: http://helq.github.io/teaching (slides, contents and announcements)
Prerequisites: (high-)school maths

How is the class organized

The class is highly practical. Learning to code is not easy, it will require many hours of individual and, often, lonely work!

There will be homework every week, the homework is mandatory but it will no be graded, I assume you will do it diligently each week. I will take every week some exercises from the homework and I will quiz you on them! All quizzes will be on the second class of the week (either Wednesday or Thursday), please arrive on time.

There will be three (3) exams in the semester, they are mandatory and represent 50% of the final grade. All students of all courses of "Intro To Programming" take the exams on the same week.

All students must present at the end of the semester (on the last week of class) a class project. The topic of the project will be defined at least 5 weeks in advance.

Content (Goals)

The course is divided into three blocks (and one small kickstart block)

0. Structure of class, presentation, Motivation, Examples of Programing in the wild, and some history of programming languages. (about week and a half)
1. Getting C++, how to compile, how to run executables, logic and sets (maths), `if` statement, loops (`while` and `for` statements), and functions. (about 6 weeks)
2. Recursive functions, `do-while` loop input from the user, arrays, and string operations. (about 4 weeks)
3. Pointers (the messy truth behind arrays), `new` keyword, matrices (arrays of arrays), structures, and `std` libraries.

Evaluation of knowledge from content (exams)

Each of the three blocks ends with an exam. The exam will be on the platform http://unmoocs.unal.edu.co (sign up and join to the course's group). The topics to appear on each exam are[2]:

1. Programming Languages basics (history and types), logic and sets (maths), simple programs in C++, and `if` statement.
2. Recursive functions, and loops (`while`, `for`, and `do-while`).
3. Arrays, matrices, and strings.

[1] Attendance to Office Hours only with previous notification. If you are searching me in my office hours, please send an email detailing what is precisely the thing you require assistance on. Emails with descriptions such as "I don't understand anything" will be IGNORED!

[2] Small disclosure, the topics to appear on each exam may change due to changes on the schedule or any unintended problem that may appear on any of the other groups of intro to programming. Any change in the exams' topics will be notified at least a week in advance.

Grades

- 50% Exams (one per block, divided in 15%, 15% and 20%)
- 30% Quizzes and Homework (at least 12)
- 20% Class Project (due to the last week of class)

Code of Conduct

You (the student) must conform to the University's Regulation. If you incur into any kind of plagiarism (that includes quizzes) or misconduct, your grade for the assignment (whichever it is) will be zero!

Repeated infractions may be a causal to be expeled of the institution.

Please, take a closer look at "Concepto 2 de 2015 Oficina Jurídica Nacional"[3]

[3] http://www.legal.unal.edu.co/sisjurun/normas/Norma1.jsp?i=87497