Prácticas de Estructura de Computadores (42510)
Computer Architecture Lab with Nintendo DS
2.5 ECTS
Lecturers: Xavier del Toro-María José Santofimia
Prerequisite: None

Lab Sessions Objective
The Computer Architecture course is mainly devoted to the internal organization and operation of the constituent functional modules of a computer. The lab sessions of this course are intended to reinforce the comprehension of the concepts presented in the lectures, as well as to enhance students with hands-on experience, essential for their career development.

Lab Sessions Contents
The course focuses on the following aspects:
1. Introduction to the C Programming Language.
2. Deep understanding of the ABI, and how it is related to the ISA.
4. 2D graphics on Nintendo DS and case studies.

Teaching disposition
The principal methods of instruction are lectures, and hands-on experience. Lectures are mainly intended to introduce students into the C programming language, since it will be the main tool used to explore the architecture. Lectures will be combined with practical exercises where students are prompted to test the acquired concepts. The hands-on experience sessions are mainly intended to explore the Nintendo DS architecture, focusing on the specific aspects of it. Along these sessions, students will be solving exercises devised to acquire the basic background knowledge. These exercises are the mean to lead students into experience the concepts presented during the lab and lectures session.

Examination
The evaluation of the students will consist of a term project built as a sequence of small subprojects. For the project to be evaluated, it is a mandatory requirement for the student to have passed a short lab test. Those students who fail the project will be prompted to accomplish a different one with a similar level of difficulty.

Readings and other material
- The tutorial documents, prepared for each lab session. Available on the course web.