

Computer Sciences Engineering

Computer Sciences Engineer – 6 years

Objective

To train professionals that will be able to design, develop, plan, run, build, operate and maintain computer systems, including the diverse techniques and activities connected to the handling of information as support of knowledge, of human communications and communication among machines. They will also be able to interpret the new technological developments in the area of computer sciences for the administration of scarce resources that, with economic grounds, orient engineers in their need to achieve optimum results meeting the established deadlines and with a sense of social responsibility. They will be qualified to understand issues regarding legal, economic and financial engineering, carry out arbitrages and research concerning their specialties.

Contents

The course of studies is organized into two cycles: the Initial Cycle, which includes basic subjects about Engineering Sciences, and the Superior Cycle. The subjects on basic scientific training provide the grounds for the subjects that deal with hardware, application techniques, operative systems, application software and software. The orientations that students can choose are the following:

- Industrial Systems Management: provides graduates with skills necessary for obtaining products in which software plays an important role. Striking a balance between theoretical and practical training, the course of study gives priority to the development of projects in realistic contexts, training students to run multidisciplinary human groups, insisting on the understanding of the principles that regulate the manufacturing of software products and training engineers to be updated in the ever changing field where they work.
- Distributed Systems: it is aimed at providing a solid technical training. It trains students for the re engineering and integration of different automated independent fields into a coordinated whole.
- Production Systems: it is aimed at training students in developing their job balancing the software and hardware components necessary for the automation of complex industrial processes.

Job Opportunities

This course of studies contemplates the different professional aspects

- In technical aspects, it provides complete knowledge of the discipline, which is indispensable to prepare engineers for the efficient handling of technological and methodological advances.
 - In the social aspect, given that engineers' activities have a direct impact on the development of companies and that their project require human and economic resources, it provides the necessary knowledge to administrate and run them, including the ethic and legal aspects concerning personnel administration.
- Engineers are qualified to plan, measure and run the implantation of systems according to the orientation chosen.
- One of the main tasks that engineers carry out is the development of algorithms. Another important branch concerns the design and assembly of machines so as to be able to understand the present technology to appreciate its ramifications and its influence in computer sciences development.