

Automation and Industrial Electronic Engineering

www.electronicaindustrialautomatica.udl.cat

SCHOOL

Polytechnic School (www.eps.udl.cat)

BRANCH OF KNOWLEDGE

Engineering and Architecture

DURATION

4 years (240 credits)

CREDITS

Basic training: 66

Compulsory: 120

Optional: 24

Practicum 15

Final project: 15

EDUCATIONAL OBJECTIVES

The main objective is to train students to become industrial engineers in the field of electronics and automatic control. The degree in Automation and Industrial Electronic Engineering fosters the abilities and skills of the industrial engineering profession, paying special attention to the design of industrial electronic systems and industrial control and automation systems. Graduates work in many industrial sectors, in all types of business, or in the public administration. They also work as self-employed professionals who plan, manage and supervise projects.

COMPETENCES ACQUIRED

The ability to analyze and assess the social and environmental impact of technical solutions.

The ability to organize and plan in businesses and in other institutions and organizations.

The ability to solve problems with initiative, decision-making, creativity and critical reasoning, and to communicate and transmit knowledge, abilities and skills in the field of industrial engineering.

The ability to draw up, endorse and develop industrial engineering projects aimed at the construction, conversion, repair, conservation, demolition, manufacture, installation, assembly or use of structures, mechanical equipment, energy installations, electric and electronic installations, industrial installations and plants, and manufacturing and automation processes.

The ability to design industrial control and automation systems.

The ability to design analogue, digital and power electronic systems.

Applied knowledge of electrical engineering.

Applied knowledge of industrial informatics and communications.

Applied knowledge of electronic instrumentation.

Knowledge of the fundamentals and applications of microprocessors.

Knowledge and capacity for systems modelling and simulation and their application to industrial automation.

Knowledge of the principles and applications of robotic systems.

Ability to perform measurements, calculations, assessments, appraisals, valuations, expert reports, studies, reports, work plans and similar tasks.



CAREER OPPORTUNITIES

Public administration, teaching and research.

Analysis and development of electrical and electronic circuits and industrial control and automation techniques.

Technical and management posts in all sectors involving electronic and automatic devices.

Technical and management posts in industrial and service companies.

Development of control and automation systems of factories, robots and artificial vision systems.

Design of electronic circuits, microchips and domotic systems.

Design, construction and supervision of control systems, analogue and digital electronics systems and power systems.

Studies of renewable energies, sustainability and the environment.

Management, organization, planning, quality and environment in the commercial departments of companies dedicated to these activities.

Creation and implementation of projects in the area of industrial informatics, instrumentation and monitoring.