Bachelor’s Degree in Electrical Engineering

Introduction to the degree

The aim of the studies of Electrical Engineering is to provide future professionals with scientific and technical training, so that they can meet the needs of the industry and the Government in this field. These studies consist of a basic training module, for acquiring a sound scientific basis adapted to electrical engineering; a training module which is common with the industrial branch, for developing general skills in industrial engineering; a specific training module in electricity, for developing specific skills related to the various fields of electrical engineering; and a final module, for developing different skills chosen by the student.

The Bachelor’s Degree in Electrical Engineering qualifies students for practising the profession of industrial engineering. The curriculum includes 48 ECTS of optional subjects, which are grouped into two itineraries; one is taught at the Polytechnic School of Alcoi and the other one is taught at the School of Design Engineering.

International mobility

There are numerous possibilities to complete your studies and do your bachelor’s thesis abroad at universities in the European Union, the United States, Latin America, Japan, Australia and several African countries.

Continuation of studies

With this degree, you will be able to access to:

- MD in Industrial Engineering
  - MD in Automation and Industrial Informatics
  - MD in Industrial Constructions and Installations
  - MD in Project Management
  - MD in Integrated Computer-Aided Design and Manufacturing
  - MD in Business, Product and Service Management
  - MD in Design Engineering
  - MD in Maintenance Engineering
  - MD in Occupational Risk Prevention
  - others MD + levelling subjects

Professional opportunities

With this degree, you will be able to take up numerous professional activities, such as designing (thermal, water, wind, solar, etc.) power production plants and all sorts of electrical and energy transport installations.

You will also be able to give advice on the acquisition and use of electrical equipment; to design, monitor and program equipment used for the regulation and control of electrical installations and machines; to do electricity management tasks; to maintain industrial facilities; to sign certificates and surveys; to manage industrial companies in the field of electricity; and to pursue a career in teaching and research.

Internships

Students of the Bachelor’s Degree in Electrical Engineering can do internships in companies belonging to various sectors, especially the electrical sector, which will help them get acquainted with professional reality, under the tutelage of a company technician and a professor of the degree.

The internship tasks will include designing and calculating electrical installations for the production, transport, distribution and utilization of electric power: power plants, power lines, high and low voltage installations, lighting systems, industrial process control by means of electrical machines and their automation.

To access exchange scholarships, a basic knowledge of the target country language, curiosity about other cultures and an interest to know about engineering elsewhere are needed.

Enjoy our huge campuses with spaces designed for you such as the Student Recreation House. You can do up to 70 sports in our facilities. You will find many services at your disposal: language classes, discounts in public transport, counselling, employability support…
Bachelor's Degree in Electrical Engineering

Credits for obtaining the degree

<table>
<thead>
<tr>
<th>Course Type</th>
<th>Basic</th>
<th>Compulsory</th>
<th>Elective</th>
<th>Internship</th>
<th>T.F.G.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60.00</td>
<td>120.00</td>
<td>48.00</td>
<td>0.00</td>
<td>12.00</td>
<td>240.00</td>
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</tbody>
</table>

The subjects that you will be able to take

### Basic courses
- Business Administration (T11)
- Chemistry
- Computer Science
- Electricity
- Mathematics I
- Mathematics II
- Physics
- Statistics
- Technical Drawing

### Compulsory courses
- Advanced Electrical Machines
- Business Organization (IT1)
- Control of Machines and Electrical Devices
- Control Systems (T11)
- Electrical Circuits
- Electrical Machines
- Electrical Power Systems
- Electronics
- Environmental Technology
- Fluid Mechanics
- High-voltage Electrical Installations
- Industrial Automation and Control
- Low-voltage Electrical Installations
- Machines and Mechanisms (IT1)
- Manufacturing Systems
- Material Science
- Power Electronics (IT1)

### Elective courses
- Power Lines and Transport of Electricity
- Project Development and Execution
- Renewable Energy
- Strength of Materials
- Thermal Engines and Hydraulic Machines
- Thermodynamics and Heat Transfer
- Three Phase Electrical Systems and Transitional System
- Academic Writing Skills for Final Degree Projects
- Basic Mathematics for Engineers
- Basic Physics for Engineering
- Business Quality Management
- B2 Level English
- Electrical Drive
- Electrical Measurements and Home Automation
- Electrical Technology
- Electromechanical Drives Technology
- Electronic Systems for Energy Efficiency
- Electronic Systems for Renewable Energies
- Energy Efficiency in Thermal Power Plants
- European Project Semester (EPS)
- French - B2
- German - B2
- History of Electrical Technology
- Industrial Automation
- Industrial Computing
- Exchange
- Italian I - II

Internationally accredited bachelor’s degree (EUR-ACE)