

## University Bachelor of Technology (B.U.T.)

# Electrical Engineering & Industrial IT (GEII)

The **University Bachelor of Technology in Electrical Engineering and Industrial IT (GEII)** is a three-year degree focusing on innovation and technological development. It trains the IT players of the future in developing the skills required for working within varied fields such as the city and industry of the future, smart and connected networks, transportation and electromobility, aeronautics, renewable energies, energy management and distribution, health, audio-visual, robotics, space, etc.

The B.U.T GEII is a multipurpose degree designed to train the students as middle managers capable of setting up and managing electrical installations, designing, producing, programming and maintaining fixed or embedded electronic boards (automotive, avionics, robotics, etc.), and also implementing the automation and the control of industrial processes. Graduates will also be able to manage and maintain industrial computer networks, analyse and develop data processing and transmission systems.

The course can also lead graduates to **further studies** via enrolment in a Master's Degree

## Study tracks

### • Control Systems and Industrial IT:

This study track focuses on process control, automation and robotics. The objective is to enable the graduates to install and program automated systems (Programmable Logic Controllers, robots and vision) that will ensure the conduct and control of industrial processes.

#### Career prospects:

This track opens up a number of job opportunities as: technical manager in control systems and industrial IT engineering (research and design, automated plant operations, maintenance, quality control testing...); developer in industrial IT, roboticist/automation specialist, systems security specialist; design and development manager in industrial control systems.

### • Electricity and Energy Management:

This study track aims to develop the required skills so as to supervise groups of technicians, collaborate with engineers through the design, development, and test phases, monitor the production of electrical energy conversion systems, and actively participate in maintenance processes.

#### Career prospects:

Technical manager in electrotechnics and energy (research and design, plant operations management, maintenance, quality control testing...); research project manager in electrical systems; Integrator

### • Electronics and Embedded Systems:

This study track aims to develop the required skills to analyse, design and develop electronic systems. On the job, the graduates will be required to supervise groups of technicians, collaborate with engineers in order to program, integrate, install, connect and maintain all electronic equipment related to such fields as robotics, home automation or connected objects.

#### Career prospects:

Technical manager in embedded systems (research and design, integration, maintenance, quality control testing...); design and development manager in embedded systems

## Skills

The University Bachelor of Technology in Electrical Engineering and Industrial IT aims at developing four core skills including a specific one corresponding to the study track chosen:

- Designing the electrical and Industrial IT part of a system.
- Testing the electrical and Industrial IT part of a system.
- Maintaining a system under operational conditions (Live System Support).
- Specific skills to each study track:
  - Installing production, conversion and energy management systems
  - Implementing a hardware/software system.
  - Integrating a command-and-control system in an industrial process

## Entry requirements

Enrolment in this Bachelor of Technology is open to secondary school graduates from **general or technological backgrounds** who have chosen a **science-based educational pathway**, and to **higher education students wishing to change study path**.

Admission is based upon examination of academic records. When considering applications, some departments might require an interview. The B.U.T. can also be prepared within the Lifelong education scheme or on a vocational basis (apprenticeship training or work-based learning). The diploma can also be delivered on Accreditation of Prior Experiential Learning (APEL).

# B.U.T. Electrical Engineering & Industrial IT in France

