



# Become an engineer in **Electrical Engineering** and **Industrial Computing** through **apprenticeship**

## OBJECTIVES and SKILLS

The ENSGTI Electrical Engineering and Industrial Computing (GEII) engineer is trained to manage organizational, economic, financial, human, and technical aspects in the main fields related to the production, utilization, conversion, and management of electrical energy.

Graduates are able to :

- Develop advanced and innovative industrial electrical systems and devices
- Design and study electrical energy supply and conversion equipment
- Develop, implement, and supervise programmable systems
- Lead and manage multidisciplinary teams involved in electrical engineering and industrial computing projects in collaborative national and international environments

## 3-year apprenticeship program :

- > 57% of the time spent in industry
- > 43% of the time spent at the engineering school (including 312 hours of laboratory work & 228 hours of project-based learning).

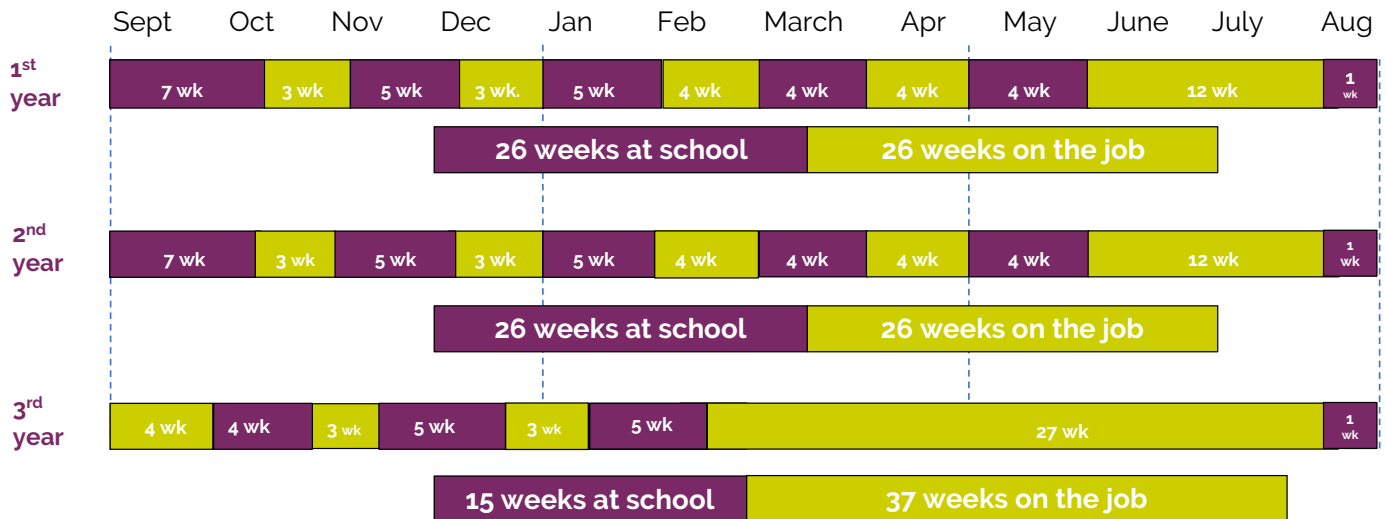
## WHY CHOOSE APPRENTICESHIP ?

- Develop strong professional experience and progressively gain autonomy in a company
- Acquire solid academic and technical skills
- Learn directly in a professional environment while building your career plan
- Benefit from enhanced academic support (both a company mentor and an academic tutor)
- Earn an engineering degree while being employed (monthly salary, paid leave, and social benefits)
- No tuition fees (except the mandatory Student and Campus Life Contribution – CVEC)



## Work-study CALENDAR

**89 weeks at work + 67 weeks at the training center**



*An international mobility program of at least 9 weeks is required during the company periods in the second or third year*

## PROGRAM overview

**119 ECTS credits earned at the training center**

**1586 contact hours**, distributed as follows :

- **Engineering Sciences and Technologies** (16%) : Mathematics, Algorithms and Scientific Computing with Python, Probability and Statistics, Excel and VBA, Signal Processing, Computer-Aided Design (CAD), Optimization Methods, Design of Experiments, Cybersecurity
- **Specialized Engineering Sciences and Technologies** (65%) : Analog and Digital Electronics, Electronic Components, Optronics, Electrostatics and Electromagnetism, Power Electronics, Electrical Converters, Electrical Energy Production, Control Engineering, Industrial Automation, Industrial Computing (Microcontrollers and Interfacing, Programmable Electronics, Linux Systems, C Programming, Real-Time Systems), Electromagnetic Compatibility (EMC), Microwave Electronics, High Voltage Engineering, High-Power Pulsed Systems, Energy Transmission, Railway Traction Systems
- **Languages and Engineering Culture** (19%) : English, Second Foreign Language, Accounting and Financial Management, Sustainable Development and Societal Challenges, Artificial Intelligence, Corporate Responsibility, Project Management, Carbon Footprint and Life-Cycle Assessment, Entrepreneurship, Intellectual Property, Human Resource Management, Career Development

The program also includes 288 hours of Learning and Assessment Situations (SAÉ) through project-based activities designed to develop and assess professional skills

**61 ECTS Credits Earned in Industry**

Each semester includes a company-based training unit entitled "**Apprenticeship**".



## ADMISSION REQUIREMENTS



Recruitment for the GEII specialization is open to students who hold the following diplomas :

- **BUT GEII** (Electrical Engineering and industrial Computing)
  - **BUT GIM** (Industrial Engineering and Maintenance)
  - **BUT MP** (Physical Measurements)
- **Licence degree in the « Science and Technology » field**

2 other paths are possible:

- Through validation of acquired experience (VAE)
- Through the admission under Interuniversity Cooperation Agreements

The course is accessible to people with disabilities. For further information, contact the «Mission Handicap» team at the Université de Pau et des Pays de l'Adour ([handi@univ-pau.fr](mailto:handi@univ-pau.fr)), which provides support throughout the curriculum.



## ASSESSMENT Methods

Assessment is based on continuous evaluation throughout the program.

The detailed assessment regulations (number, type, duration, weighting, and balance between written and oral examinations) are published annually within 30 days following the start of the academic year.

They are also available in the official curriculum documents.

To monitor and assess competencies acquired in the workplace, an electronic apprenticeship portfolio (LEA) is used throughout the three-year program.

### The candidate must have :

- Under 30 when signing apprenticeship contract
- Signed a 3-year apprenticeship contract with a company (if possible before the start of training and no later than 3 months after the start of the school year)

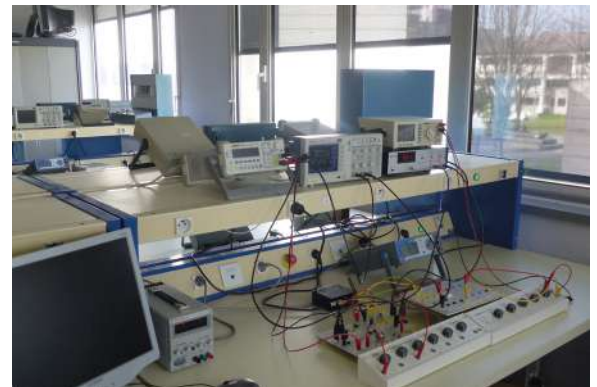
### Cost of the training for the company :

- Please contact the apprentice-training center (contact details on the back)

## Recruitment PROCEDURES

Applications submitted through the eCandidat platform from the end of January

Rolling academic admissions between March and June



## Academic MOBILITY and REORIENTATION

Should a student need to change academic direction, the ECTS credits earned may facilitate transfer to equivalent university programs.

Applications are reviewed individually on a case-by-case basis.

## SECTORS of ACTIVITY and PROFESSIONAL OPPORTUNITIES



### TRANSPORTS

-> Design of on-board electronic and computer systems (navigation systems, autopilots, instrumentation)

Careers : Aeronautical electrical systems engineer, Power electronics engineer, System integration engineer



### ELECTRICAL ENERGY AND ENVIRONMENT

-> Electrical power generation, transmission and distribution / Distribution substation design / Network management / Building electricity

Careers : Electrical project manager, Electrical and control design engineer, Building environmental quality project engineer



### INDUSTRIAL COMPUTING

-> Electronic board programming / Industrial and IT network management / Automation / Industrial process control

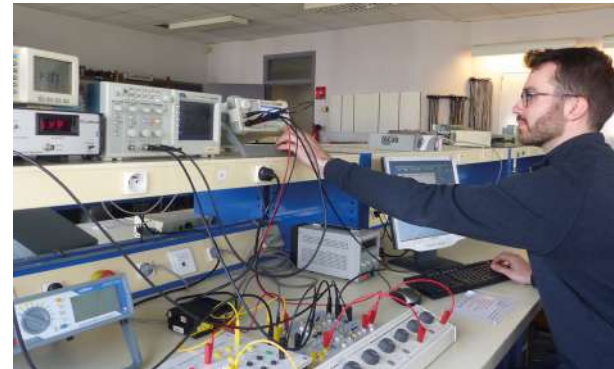
Careers : Industrial supervision and automation engineer, VHDL/FPGA development engineer, Industrial IT engineer



### HIGH-VOLTAGE ELECTRICAL SYSTEM

-> Design and sizing of HV installations / Design and construction of HV systems / HV instrumentation

Careers : Electrical engineer, High current electrical engineer, High voltage electrical test engineer



## Our privileged PARTNERS



## EMPLOYMENT Outcomes

**80%**

of graduates secure employment within two months of graduation

**44 300€**

Average starting salary

## Useful LINKS

- [Ville de Pau](#) [Pau Pyrénées Tourisme](#)
- [Université de Pau et des Pays de l'Adour](#)
- [Food service / Accomodations](#)

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### Contacts

Education manager : Thierry REESS [ensgti.scol@univ-pau.fr](mailto:ensgti.scol@univ-pau.fr)

Direction FTLV (Continuing education and apprenticeship) : 05.59.40.78.88 [accueil.forco@univ-pau.fr](mailto:accueil.forco@univ-pau.fr)

CFA (Apprentice training center) : 05.59.40.76.75 [alternance@univ-pau.fr](mailto:alternance@univ-pau.fr)

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