



ENGINEER in Mechatronics & Embedded systems ROBIL

Robots & Mobiles : Mechatronics and Embedded Systems



DEGREE QUALIFICATION BY APPRENTICESHIP in Bordeaux



Training certified by the C.T.I. (Engineering qualification committee) Engineering degree from ESTIA (Institute for Higher Education in advanced industrial technologies) specializing in Mechatronics & Embedded Systems, in partnership with CFAI Aquitaine.

TRAINING OBJECTIVES

ESTIA trains trilingual field engineers, who can be Method & Design office managers, production managers & project managers.

ESTIA trains them to master various skills such as computing, mechanics, energetics and electronics, so that they can be operational in numerous fields like aeronautics, automotive, electronics, agri-food industry, capital goods, I.T....

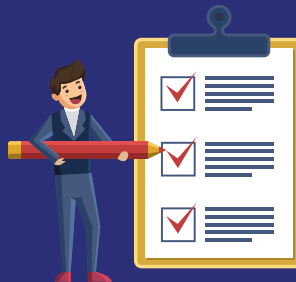
All ESTIA engineers receive a scientific and technological training, combined with a solid industrial culture, that will prepare them for 3 different positions :

- Digital design and innovation : developments and integration in mechanics, electronics, information technology
- Electronics, electrical engineering and embedded systems : processing of image, mobile robots, renewable energies
- Strategy, industrial organization : industrialisation, global logistics, performance management

These industrial engineering and mechatronic's subjects can lead to a very broad range of jobs, which allow the apprentices to get a global vision of a company, while taking into account its permanent need for innovation and evolution.

> ADMISSION

- Be in possession of a **level 2 or 3 qualification**: BTS, DUT, Science or technical degree or equivalent before July
- Be **under 30 years old** when signing the apprenticeship contract
- Pass the **entry tests and interviews**
- Sign an **apprenticeship contract** with a company



MARCH

Deadline for applications

MARCH/APRIL

Interviews and eligibility

MAY > SEPT.

Signing of the apprenticeship contract

SEPTEMBER

Beginning of the training



Application files available at

www.formation-maisonindustrie.com

« CROSS-TRAINING » / MULTIFACETED SYLLABUS in 5 teaching units

UE1

Electronics,
electrotechnics
& automatism

UE2

Maths &
Computer science

UE3

Mechanics &
Mechanical
technology

UE4

Strategy,
organization,
company
procedures

UE5

Approaches &
enhancement of
best practices

1st YEAR

ELECTRONICS, ELECTROTECHNICS & AUTOMATISM

- Principles of electrical engineering
- Electronics
- Continuous-time systems
- Electrical engineering project

MATHS & COMPUTER SCIENCE

- Algorithm et programming
- I.T. systems
- Web technology
- Maths
- Computer engineering project

MECHANICS & MECHANICAL TECHNOLOGY

- Mechanical design and CAD design
- Mechanical engineering project
- Materials, industrial drawing and methods
- Structural mechanics

STRATEGY, ORGANIZATION, COMPANY PROCEDURES

- Product lifecycle
- Organizations & companies
- Seminar about Entrepreneurship

APPROACHES & ENHANCEMENT OF BEST PRATICES

- Professional integration
- Project procedure
- English

2nd YEAR

ELECTRONICS, ELECTROTECHNICS & AUTOMATISM

- Unobtrusive systems
- Automation
- Smart Electric Power Electronics
- Sensor and communication systems (option)

MATHS & COMPUTER SCIENCE

- Object-oriented programming
- Information systems
- Equations (Laplace, Fourier...)

MECHANICS & MECHANICAL TECHNOLOGY

- Composite materials
- Building of complex products
- Energy & liquid-conductive systems
- Advanced simulation in mechanics (option)

STRATEGY, ORGANIZATION, COMPANY PROCEDURES

- Organizations and companies
- Systems engineering
- Lean management
- Industrial organizations management
- Industrial methods and technology
- Marketing and eco-design

APPROACHES & ENHANCEMENT OF BEST PRACTICES

- Employability
- Project
- English

3rd YEAR

ELECTRONICS, ELECTROTECHNICS & AUTOMATISM

- Robot vision
- Sensor and communication systems

MATHS & COMPUTER SCIENCE

- Quick application development

MECHANICS & MECHANICAL TECHNOLOGY

- Mechatronics systems design

STRATEGY, ORGANIZATION, COMPANY PROCEDURES

- Marketing and eco-conception
- Organizations and companies

APPROACHES & ENHANCEMENT OF BEST PRACTICES

- Project
- Employability
- Professional behaviour
- English

ALTERNATING RHYTHM (in Week)

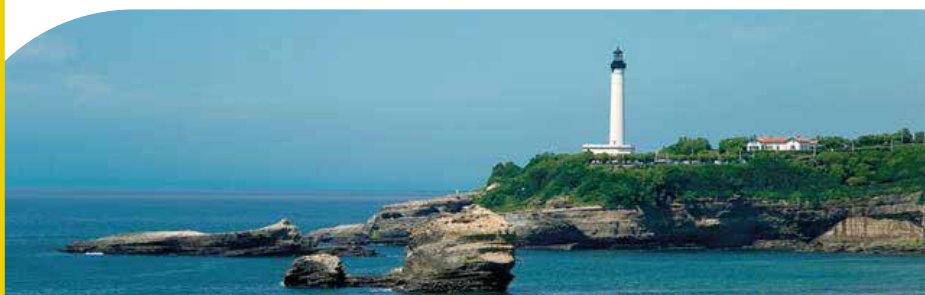
Sept → August



TRAINING LOCATION

2 sites :

- 3 semesters in Bidart
- 3 semesters in Bruges



IN COMPANY TRAINING

ADVANTAGES

A TRAINING COURSE WHICH IS BOTH FREE AND REMUNERATED

AN INTERNATIONAL DIMENSION



The compulsory foreign internship is a rewarding experience, essential both for obtaining the degree and for pursuing a career in engineering. It must last at least 12 weeks and can be split up, for example, into 2 different periods of six weeks each.

PERSONAL PROJECT

ESTIA offers all its engineers fantastic opportunities to develop and value their creativity :

- Innovation days « Les 24h de l'innovation »
24h.estia.fr



- Summer Design Summer Camp :
www.designsummercamp.com
- Participation in several national competitions :
Aerospace challenge, Robotics French Cup...



INDUSTRIAL PROJECTS CARRIED OUT IN THE COMPANY

A FEW EXAMPLES

POMA COLOMBIA

- Travel measurement & acceleration at the head of cable cars towers

GETRAG FORD TRANSMISSIONS

- Re-tooling and installation of 5 shock detection scanning machines

THALES AVIONIC

- Development of a virtual keyboard for a cockpit
- 3D representation of an aircraft trajectory

IK4-IDEKO

- Integration of a robot arm manipulator used as a machine tool assistant

GRADEL

- Development of an automated system for the deployment of a satellite's zero gravity solar panels

AIRBUS HELICOPTERS

- Virtual hydraulic test bench to define distributors' performances

www.usinenouvelle.com

**L'USINE
NOUVELLE**

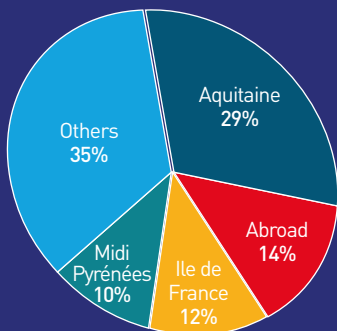
ESTIA

20th in the 2017 overall ranking for
« Usine Nouvelle » Engineering Schools

WHAT HAPPENS NEXT ?

NUMEROUS CAREER POSSIBILITIES FOR OUR APPRENTICES

- Within any industrial sector, thanks to their broad skills in engineering, project management and innovation, combine with ESTIA's systemic approach to the syllabus.
- In any country thanks to their language skills in French, English and Spanish.



Source : enquête CGE 2016

INFORMATION AND APPLICATION

Information & application files available on the following websites

formation-maisonindustrie.com

40, av. Maryse Bastié - BP 75
33523 BRUGES CEDEX

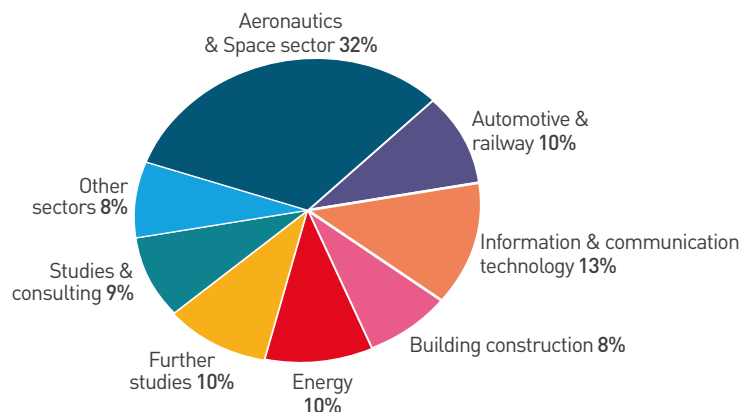
A FEW EMPLOYERS' NAMES

AIRBUS • ALTEN • ALYOTECH • AREVA • ASTRUM • CAPGEMINI • CS COMMUNICATION & SYSTEMES • DASSAULT AVIATION • DASSAULT SYSTEMES • DERICHEBOURG • EDF • EUROCOPTER • GDF SUEZ • GECI INTERNATIONAL • HELILEO • INEO • LATECOERE • LA POSTE • LEGRAND • LYONNAISE DES EAUX • RENAULT • PSA • DAHER SOCATA • TECHNOFLEX • TEUCHOS • THALES AVIONICS • THALES AIR SYSTEMS • SAFRAN TURBOMECA • ZODIAC AEROSPACE • TOTAL • SNCF • SOGETI HIGH TECH • FLEXLINK... and hundreds of others companies...

Young graduates can quickly reach managerial positions with their first job :

- 25% are in charge of other people
- 40% are responsible for a budget
- 20% manage a team
- 80% are project leaders

EMPLOYABILITY - PER INDUSTRIAL SECTOR - FOR THE APPRENTICES WHO GRADUATED AT THE END OF 2015



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