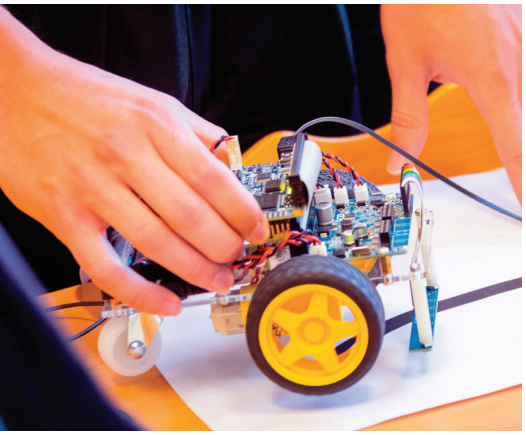
ELECTRONICS & ROBOTIC SYSTEMS



The aim of the course is to train general engineers in the field of electronics where powerful digital components and software engineering are used to create multiphysics systems which interact with the environment.
The new challenges which future engineers will face will call for broad skills which can be applied in areas such as electronics, computer science, signal and image processing, data processing and artificial intelligence. As robotics is one of the basic building blocks of Industry 4.0, it is the educational channel in the training through which all the disciplines of these new challenges are brought together.
This course places future engineers at the heart of technological innovation thanks to our teachers who are experts in cutting-edge technology and who come from the world of research and industry.

AREAS OF TRAINING

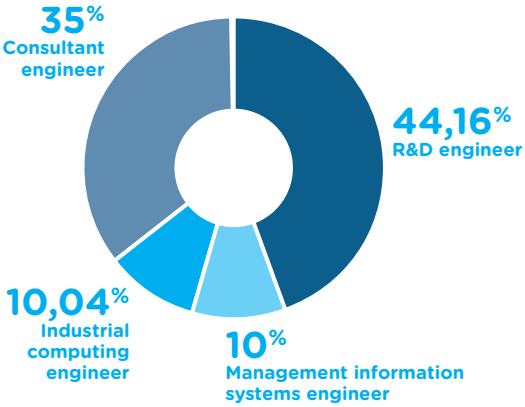
- Embedded and mobile systems
- Industrial and real time computing.
- Networks and communicating systems.
- Signal and image processing.
- Software/material co-design.
- Electronics and energy.
- Control/Command
- Mechatronics & digital systems.
- Electronic interfaces.
- Application to robotic systems.

AREAS OF APPLICATION

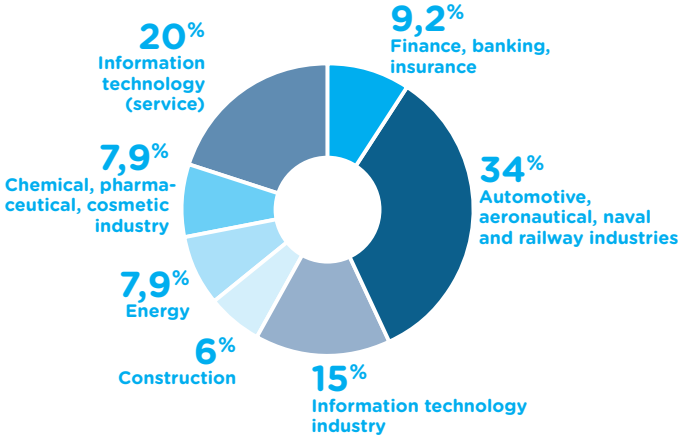
- Electronic systems engineering.
- Electronics, sensors, computers, actuators.
- Signal and image processing.
- Automation and robotic systems.
- Industrial computing and embedded systems.

SCHOOL'S FIGURES FOR INTEGRATION INTO THE WORKPLACE

GRADUATES' OCCUPATIONS*



AREAS OF ACTIVITY*



PERCENTAGE EMPLOYED

Since 2017, over 90% in employment within 6 months of graduating.

*From the 3-year average of the professional integration surveys.

POLYTECH®
PARIS-SACLAY

LEARN
TO BECOME
AN ENGINEER

ELECTRONICS & ROBOTIC SYSTEMS

THE MAIN COURSES

Apprentices

Years 1 2 3

Languages and communication
English, a second foreign language, theory and practice of communication.

Professional project and professional integration

Management of projects, information, people and economic factors
Economics, strategy, marketing, project management, cost management, business games, law, sustainable development, entrepreneurship, business creation, human resources management, Innovation management:

Basic sciences
Analysis, probability, electromagnetic waves, engineering physics.

Electronics and signal processing
Functions of electronics, tools for signal processing, sensors and acquisition systems, image processing for robotics.

Computing for robotics
Industrial computing, CAD/EDA robotics, robotics project, computer engineering, processor architecture, communicating systems.

Electronics and energy
Power electronics, energy conversion, industrial electromechanical systems, electromagnetic compatibility.

Robotic systems
Artificial intelligence for robotics, industrial and real-time computing.

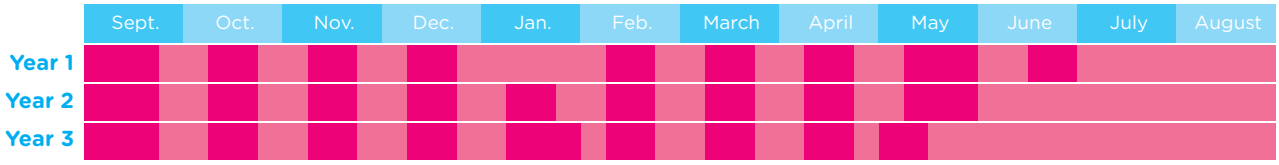
Digital systems
Digital electronics, co-design (software/hardware) on FPGA, design on DSP, Android mobile applications, programming for communicating systems.

Tasks
Systems-on-Chip (SoC), GPU acceleration techniques, acquisition system design, parallelism and video, mechatronics, system reliability.

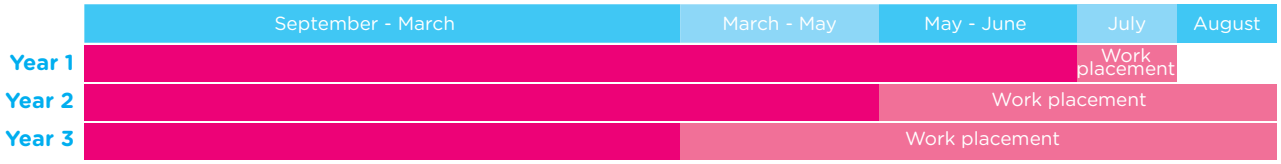
Projects
Robotics mini projects, systems and robotics projects, inter-speciality projects.

THE ENGINEERING CYCLE TIMETABLE AT POLYTECH PARIS-SACLAY

Apprenticeship in 3 years and continued education in 2 years. At Polytech / In a company



Students



Our students benefit from an international work placement (or exchange) with our partners (12 weeks for students and 8 for apprentices).

POLYTECH PARIS-SACLAY

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