POLYTECH MARSEILLE Aix+Marseille Université

POLYTECH MARSETHLE

French Engineering School

POLYTECH.UNIV-AMU.FR



Polytech Marseille **Engineering School**

Biotechnology Engineering



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Biomedical Engineering	FISE FC	p. 9
Civil Engineering	FISE FC	p. 10
Industrial Engineering	FISE FC	p. 11
Information Technology	FISE FISA FC	p. 12
Material Engineering	FISE FC	p. 13
Mechanics and Energy	FISE FISA FC	p. 14
Microelectronics & telecommunications	FISE FC	p. 15
Numerical systems	FISA	p. 16



FISE

p. 8



Polytech Marseille is a French engineering school located in the city of Marseille, in the south of France. It is one of the 16 engineering schools of the Polytech network, which is part of the University of Aix-Marseille.

Polytech Marseille is Aix-Marseille University's School of Advanced Studies in Engineering, located in one of the largest higher education and research clusters in France, internationally renowned with its 78,000 students and 120 laboratories.

Public school

Polytech Marseille is a member of the French school of engineering network, Polytech network. It includes 16 university schools of engineering sharing the same selective recruitment methods. With more than 1,500 students and 9 specialties, Polytech Marseille is one of the biggest schools in this network.

University School of Engineering

The school operates in a very high level scientific environment. The teaching/ research staff perform state-of-the-art scientific activities within 18 laboratories reporting to national research organizations such as CNRS, INRA, IRD or INSERM. Courses are informed by this environment and students are up-todate with the latest scientific methods, enabling them to disseminate innovation within companies.

Polytech Marseille has nine departments offering masters level professional degrees covering the largest engineering fields. Each course includes professional projects and internships. Engineering professionals from a broad range of firms bring their practical experience and are key contributors to courses.

The majority of students obtain an employment offer at the end of the mandatory final internship lasting 5 to 6 months. On average, students find their first job within two months of obtaining their degree. In all of our specialities, students can attend the 3rd and final year as apprentice.

They can also count on a network of more than 8 000 graduates.

Courses very open to international

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Sophia

Polytech Marseille is located in Marseille's two big scientific and technologic clusters: Luminy's Campus and Etoile's Campus, highly frequented by students and enjoying various infrastructures for student life.

Engineering-students are very involved in various associations coordinated by the Student Council called "Bureau des Eleves" (BDE), offering numerous cultural, sport and festive activities. In this way, students can experiment commitment, sense of responsibilities, event organization and solidarity.

Courses very open to international

To obtain their engineering degree, students must spend at least 12 consecutive weeks abroad in a partner university or as intern in a company or in a reserach laboratory.



Chiffres clés…

specialties

> including 3 apprenticeships

> **1 150** students in the engineering cycle

> 380 students in the preparatory cycle

• **340+** engineers graduate p<u>er year</u>

150 research teachers

200+ externals teachers



Biotechnology Engineering

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Train high-level scientific and technical engineers in the field of biotechnology, specialized in the most advanced applications of microbiology and cell biology (molecular biology, cell culture, genetic engineering, biochemical engineering, genomics).

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> Initial training

- > Option: 5th year with a work-study contract
- > Continuing education with diplomas

Carreers

Health, agri-food, environment and cosmetics

Skills requirements

Life sciences, biology

Professionalization

Projects:

- Bibliographic project with industrial application
- End-of-study industrial project

Internships:

- 3rd year (eq. 3rd year of Bachelor):
 4-6 weeks
- 4th year (eq. 1st year of Master):2-4 months
- 5th year (eq. 2nd year of Master):
 6 months

Double degrees open for the 5th year:

- Master in Research
- Master in Management







Biomedical engineering

.... 🔁 Goal

Train engineers specialized in high technology equipments and machines designed for health infrastructures and health professionnals.



Initial training

- > Option: 5th year with a work-study contract
- > Continuing education with diploma

Carreers

-Companies designing, developing and or commercializing medical equipments and information systems aimed at diagnosis and treatment of patients. -Biomedical services of hospitals and clinics.

Skills requirements

Electronics, Physics, Information Technology

Professionalization

Projects:

- Biomedical project
- Congress project
- End -of-study industrial project

Internships:

- 3rd year (eq. 3rd year of Bachelor):
 1 month from July in a biomedical service in the hospital sector
- 4th year (eq. 1st year of Master): Minimum 3 months abroad in-between May and August
- 5th year (eq. 2nd year of Master):
 6 months from February to August

Double degrees open for the 5th year

- Master in Research
- Master in Management

More information







Civil Engineering

Goal

Train engineers capable of meeting the challenge of modern construction and addressing the needs of the building and public work sectors. Students acquire the specific techniques for buildings and structures and can participate on versatile issues: from sizing calculation to superstructures and infrastructures, and through risk prevention and management or bioclimatic construction.



> Initial training

- > Option: 5th year with a work-study contract
- > Continuing education with diploma

Carreers

Building and public work sectors.

Skills requirements

Mechanics, Physics, Civil Engineering

Professionalization

Projects:

Projects in partnership with building and public work industries are performed during the whole course; in the 4th year: End-of-Year projects; during the 5th year: optionnal practical sessions simulating production planning department and design offices, then during the end-of-study industrial project.

Internships:

- 3rd year (eq. 3rd year of Bachelor)
 4-6 weeks from the beginning of June
- 4th year (eq. 1st year of Master):4-8 weeks in a company or a lab,



from the beginning of June.

 5th year (eq. 2nd year of Master): Minimum 5 months from the beginning of March

Double degrees open for the 5th year

Master in Management

More information on our website

Architect/Engineer: The Civil Engineering course allows the student to obtain an engineer and an architecture diploma, by starting a double degree course from the 1st year of the preparatory classes of the School (eq. 1st and 2nd years of Bachelor) Via Geipi-Polytech) and ENSAM admission exams





Industrial Engineering



Goal

Train engineers in industrial engineering, specialized in scientific organization of work, planning and management of industrial production of goods and services.

The developped skills are linked to automotion technologies and information and communication technologies applied to companies.



Initial training

- > Option: 5th year with a work-study contract
- > Continuing education with diploma

Carreers

All the economic sectors: from construction, automobile, rail industry, transportation, etc., to computer services, agri-food sector, civil engineering, chemical and heavy industries, paramedical, banking, army...

Skills requirements

Mathematics, industrial engineering, production, automation, IT

Professionalization

Projects:

- Study projects from the 3rd year
- Technical production during the 4th year
- End-of-Study industrial projects during the 5th year

Internships:

- 3rd year (eq. 3rd year of Bachelor):
 4-6 weeks in a company from the beginning of June
- 4th year (eq. 1st year of Master): Minimum 8 weeks in a laboratory from the beginning of June (abroad)
- 5th year (eq. 2nd year of Master) Minimum 5 months in an industrial environment, from March.

Doube degrees open for the 5th year

- Master in Research
- Master in Management







Information Technology

🕤 Goal

Train engineers who master the concepts and technologies of computer science, up to the most advanced applications: mobility, security and cybersecurity, virtualization, AI, machine learning and data science, semantical web, VR and AR, etc.



Computer companies telecommunications operators, audiovisual and multimedia companies, IT users (industrial and tertiary groups, SMEs and administrators).

Skills requirements

Mathematics, IT

Professionalization

Projects:

5 semi-annual projects, including one synthesis project and one End-of-Study industrial project

Internships:

- 3rd year (eq. 3rd year of Bachelor): Minimum 4 weeks from June to August.
- 4th year (eq. 1st year of Master): minimum 8 weeks from June to August
- 5th year (eq. 2nd year of Master): Minimum 6 months

Double-degrees open for the 5th year

- Master in Research
- Master in Management







- > Option: 4th and 5th years with a work-study contract
- > Continuing education with diploma



Material Engineering

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Trains engineers with knowledge and know-how in technologies and nano-technologies, from elaboration and characterization of surfaces and interfaces, to the expertise in solid materials and thin-layers.



- > Initial training
- > Option: 5th year with a
- work-study contract > Continuing education
- with diploma

Carreers

Broad range of industrial sectors: aeronautics and space, automobile manufacturing, nuclear energy, oil industry, plastic industry, chemical industry, metal industry glass and ceramics, building and public works, computers...

Skills requirements

Physics, Chemistry, Materials

Professionalization

Projects: 2 projects with partnership with companies in the 4th and 5th years

Internships:

- 3rd year (eq. 3rd year of Bachelor):
 1 month
- 4th year (eq. 1st year of Master): Minimum 3 months from April
- 5th year (eq. 2nd year of Master): Minimum 6 months from February

Double-degrees open for the 5th year

Master in Management







Mechanics and Energy

Goal

Train engineers who master the elaboration, monitoring and modelling of processes, in the areas of energy, and heat transfer, industrial risks and fluid mechanics.



- > Initial training
- > Option: 5th year with a work-study contract
- > Continuing education with diploma

Carreers

The engineers are involved in the management of businesses and processes in renewable energies (mainly photovoltaics and wind), industrial systems, building and public works (HVAC sizing, refurbishing of building, ecoconstruction...), but also the study and development of energy efficiency of components (buildings, energy production, transportation...).

Skills requirements:

Fluid mechanics, heat transfers, energy, processes engineering

Professionalization

Projects:

One design office project during the 4th year; One week of immersion in a research team of a CNRS laboratory during the 4th year; End-of-Study industrial project during the 5th year

Internships:

- 3rd year (eq. 3rd year of Bachelor):
 4-6 weeks from mid-June
- 4th year (eq. 1st year of Master):
 6-10 weeks in a company or a laboratory, from the beginning of June
- 5th year (eq. 2nd year of Master): Mnimum 5 months, from the beginning of March

Double-degrees open for the 5th year

Master in Research





Microelectronics & telecommunications

Goal

Train engineers that can analyze, design, develop and test any type of electronical system. The areas of applications of those systems cover the on-board electronics, connected objects mobile communication systems, energy monitoring and control, and smart homes.

Carreers

Any type of companies linked to the areas of high-tech, big world groups (STMicroelectronics, Airbus, Thalès, Gemalto, Orange, SFR, Valeo...), SMEs and innovating startups.

Skills requirements

Physics, electronics, telecommunications, optics

Professionalization

Projects:

Projects with partnership with companies dedicated to new technologies (RFID, NFC, chip cards, Android and iOS applications, domotics, photovoltaics) are held during the whole course Internships:

- 3rd year (eq. 3rd year of Bachelor):
 4-6 weeks, from the beginning of June
- 4th year (eq. 1st year of Master): minimum 8 weeks, from the beginning of June, in a company or a laboratory
- 5th year (eq. 2nd year of Master): minimum 5 months from the beginning of March

Double-degrees open for the 5th year

- Master in Research
- Master in Management







- > Option: 5th year with a work-study contract
- > Continuing education with diploma



Numerical systems

Goal

Train engineers that are specialized in the new technologies of information and communication, that can work on the whole ecosystem of Internet of Things.

> Initial training with the status of apprentice

Carreers

The engineers in «numerical system» will work in the areas of on-board electronics the transmission and treatment of data (big data, artifical intelligence...), but also in the development of new uses of connected objects. The positions will be mainly in scientific research and development, consulting and in project management.

Skills requirements:

Physics, Electronics, IT

Professionalization

During the whole course, 50% of the time is spent in a company, an international experience is held during the 4th year







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