

A network of French Universities for engineering



A NATIONAL NETWORK OF 16 UNIVERSITIES

LILLE

selected according to their:

- Top Research Capacities
- Excellence in Learning
- Global connections

BREST

CERGY-PONTOISE

LA ROCHELLE

POITIERS

BORDEAUX

TOULOUSE

MONTPELLIER





Objectives

→ Implement a new “national” Master program within French Universities dedicated to the training of future professional engineers.

→ Develop a new syllabus based on the understanding of the needs of the contemporary engineer:

- Disciplinary knowledge
- But also societal, cultural, environmental, entrepreneurial skills.

MASTERS OF ENGINEERING PROGRAMS OFFERED IN 2013/2014

Aeronautics

- Bordeaux 1

Agrosciences

- Avignon

Biochemistry Biotechnology

- Avignon
- Cergy-Pontoise
- Montpellier 2
- Poitiers
- La Rochelle

Chemistry

- Avignon
- Montpellier 2
- Poitiers
- Toulouse 3

Biology, Health, Environment

- Franche-Comté (Besançon)
- Lorraine (Nancy-Metz)

Human Movement Sciences

- Aix-Marseille

Electrical Engineering

- Aix-Marseille
- Bretagne occidentale (Brest)
- Franche-Comté (Besançon)
- Montpellier 2
- Pierre et Marie Curie (Paris)
- Poitiers
- Toulouse 3

Geology, Hydrogeology

- Avignon
- Franche-Comté (Besançon)

Civil Engineering

- Lyon 1
- La Rochelle

Computer Science

- Cergy-Pontoise
- Montpellier 2
- Poitiers
- La Rochelle
- Toulouse 3

Mathematics

- Toulouse 3

Mechanical Engineering, Energy

- Aix-Marseille
- Franche-Comté (Besançon)
- Lyon 1
- Montpellier 2
- Pierre et Marie Curie (Paris)
- Poitiers

Physics

- Franche-Comté (Besançon)
- Montpellier 2

Materials Science

- Montpellier 2
- Poitiers
- La Rochelle
- Toulouse 3

Fostering Innovative Engineering Practices

A five year program

- Undergraduate: 3 years, “Bachelor”
- Graduate: 2 additional years, “Masters of engineering”

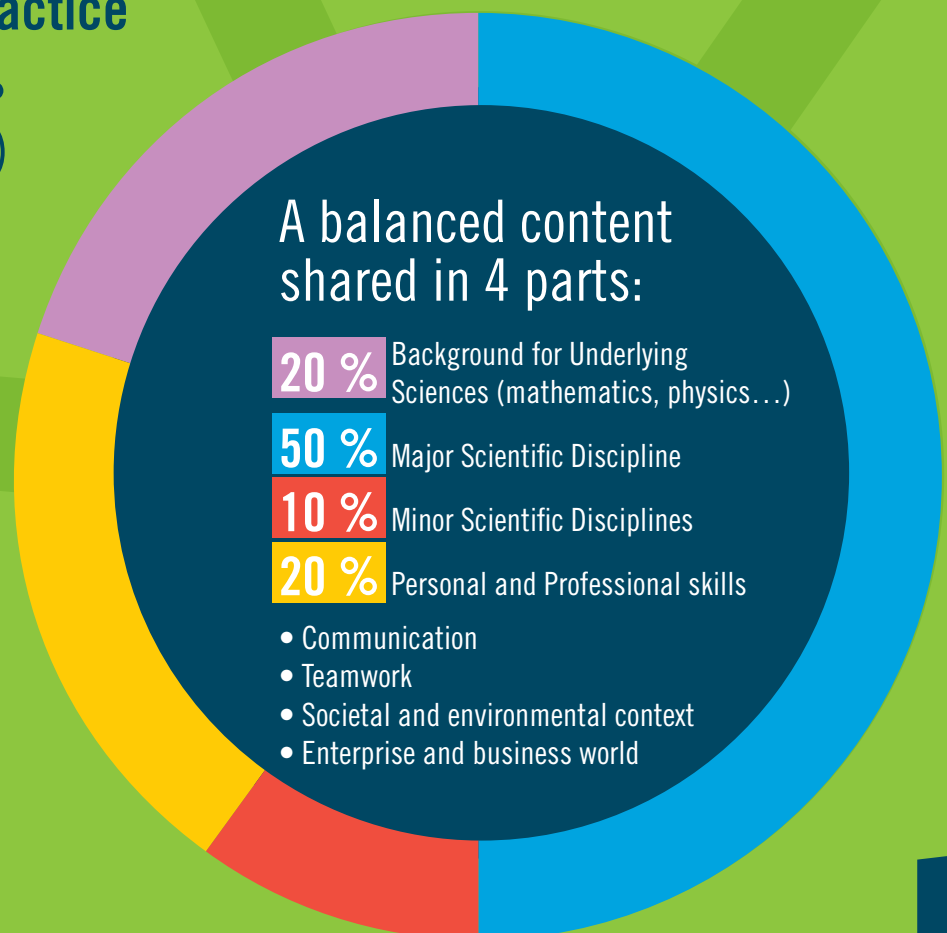
A program preparing students for a professional practice of engineering (25 % of the whole program)

3 projects, 3 internships are part of the mandatory program:

- Engineering discovery
- Practical experience
- Enterprise internships

A program strongly connected to Research

- Research used as a powerful learning tool
- Experimentation, Innovation
- Conferences
- Research projects, Research Internships



PREPARING FOR WORK IN AN INTERNATIONAL CONTEXT

In our globalised world, most of the professional fields for which the “FIGURE” network trains its students are international in nature, that is reflected in our programs.

For studying, teaching, that means:

- A higher degree of diversity
- More English-language instruction (some courses taught in English)
- French language courses
- **International experience with an internship or an academic semester abroad**





Fostering international connections

Using the additional value of a university network, specific partnerships will be set up with international universities or networks promoting all together:

- Student exchange programs, academic semesters or internships
- Teacher exchange programs allowing transfer of good practices
- Research collaborations, researcher exchange programs improving quality and innovation from each side

Our international commitment should be targeted towards:

- Countries where engineering training programs have been put in place successfully:
 - USA, CANADA
 - EUROPEAN countries and their common education and research programs
- Emerging and Developing countries which have made their priority the training of engineers, as BRAZIL, CHINA and many others...

Students have much to gain from any **international experience**:

- Acquire foreign language skills
- Complement academic and professional knowledge
- Increase intercultural experience

Facilitating exchanges worldwide and expanding international cooperation are the main strategic objectives of the “FIGURE” network.