

A french universities network for engineering



A national NETWORK of 15 Universities

SELECTED ACCORDING TO THEIR:

- High-quality Research Capacities
- Excellence in Learning
- OPENING TO THE WORLD



OBJECTIVES

→ Implement a new « national » Master Program within French Universities dedicated to the training of 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 2012/2013

Aeronautics

- Aix-Marseille
- Bordeaux I

Biochemistry, Biotechnology

- La Rochelle
- Montpellier II

Health, Environment

- Lorraine (Nancy-Metz)

Geology, Hydrogeology

- Avignon
- Franche-Comté (Besançon)

Chemistry

- Montpellier II

Civil Engineering

- La Rochelle

Electronics, Electrotechnics,

Automatics

- Aix-Marseille
- Montpellier II
- Paris VI
- Toulouse III

Mechanics, Energy

- Lyon I
- Montpellier II
- Paris VI
- Poitiers

Computer Science

- La Rochelle
- Montpellier II
- Poitiers
- Toulouse III

Materials Science

- Montpellier II
- Poitiers

Fostering new engineering practices

A FIVE YEARS MASTER'S PROGRAM

Undergraduate: 3 years, « Bachelor of engineering »
Graduate: 2 additional years, « Masters of engineering ».

A PROGRAM PREPARING STUDENTS FOR THE 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

Experimentation, Innovation
Conferences
Research projects, Research Internships

A BALANCED CONTENT SHARED IN 4 PARTS:

20 % Background for Underlying Sciences (mathematics, physics...)

50 % Major Scientific Discipline

10 % Minor Scientific Disciplines

20 % Personal and Professional skills

- Communication
- Teamwork
- Societal and environmental context
- Enterprise and business world



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 has to be reflected in our programmes.

FOR STUDYING, TEACHING, THAT MEANS:

a higher degree of diversity,
More english-language instruction
More Students, teachers, researchers exchanges between international university partnerships
For Masters students, an internship or an academic semester abroad will be part of the mandatory program

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 program, academic semesters or internships
- Teacher exchange program allowing transfer of good practices
- Research collaborations, researchers exchange program 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 with whom we have strong links within education and research programs
- Emerging and Developing countries which have made their priority the training of engineers, as BRAZIL, CHINA, NORTH AFRICA, and many others
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Students have much to gain from any **international experience**:

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

Making easier **worldwide mobilities** and expanding international cooperation will be one of the main strategic objectives of « **FIGURE** » network.