

Ecole Centrale Marseille

Spirit of Innovation and Sense of Responsibility



Marseille

The second biggest city in France

- 860 000 people
- 3000 researchers
- 2nd pole of public research in France
- 100 000 students
- « La Provence » is the most visited region by French tourists & the 2nd by international tourists



Centrale Marseille

Facts and figures

- Founded in 2006 (but oldest mother school founded in 1891)
- Executive budget : around 17 M€
- Buildings : 30 000 m²



- **1100** Students registered in the engineering program
- **11** Masters with **39** specialities
- **84** PhD students supervised by Centrale Marseille researchers
- **15 000** Alumni throughout the world

- **Staff** : **70** administrative, **85** teachers and researchers and more than **200** instructors

- **8** research laboratories in co-supervision



The Group Ecoles Centrale

a national anchorage

A common way of
thinking regarding
engineer training

The Groupe Écoles
Centrale confers
degrees to around **1500**
engineers

Together, they can be
compared to the MIT
or the Technische
Universität Berlin in
terms of **size and**
potential



Regional anchorage

Cooperation for excellence



Aix-Marseille Idex (A*MIDEX)

Aix-Marseille University

Centrale Marseille

Sciences Po' Aix

Scientific institutions (CNRS, AP-HM,
INSERM, IRD, CEA)



**RÉGION
SUD**

PROVENCE
ALPES
CÔTE D'AZUR



*7th largest region in France : 5 millions inhabitants
Largest cities: Marseille, Nice, Toulon, Aix-en-Provence*



Association Aix-Marseille

Provence Méditerranée

Aix-Marseille University

Centrale Marseille

Sciences Po Aix

Toulon-Var University

Avignon University

Educational system

In France and in Europe

Year	Grandes écoles	University (Fr)	European Higher Education System
8	PhD	PhD	PhD
7			
6			
5	« Grandes écoles » Engineering program 180 ECTS	Master 120 ECTS	Master 90 - 120 ECTS
4			
3	Classes préparatoires aux Grandes écoles 120 ECTS	Licence / Bachelor 180 ECTS	Licence / Bachelor 180 - 240 ECTS
2			
1			
0	Baccalaureate / End of high school		

Generalist Engineer « *à la française* »

Which instrument personifies best the generalist engineer ?



The answer is the conductor !

He plays several instruments,
understands complex pieces of music such as
symphony and opera,
knows how to make all artists play together



From the leader of
a chamber music group ...



... To the conductor of a
small chamber orchestra ...



... Up to the conductor of the
largest orchestras in the world

The Centrale Marseille Engineer

Centrale Marseille engineering skills :

- **generalist and high level** engineer
- expert in launching and piloting **innovative projects**
- with a strong **international culture**
- resolving very **complex** technological and concrete **problems**.

Those abilities are based on :

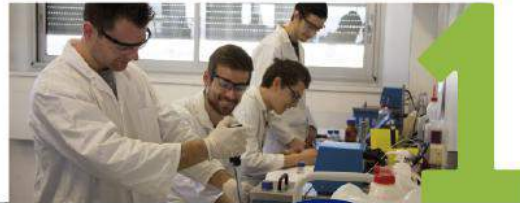
- a body of technical knowledge,
- awareness of economic, social and human issues,
- and a solid training in engineering science

— Because they are able to adapt themselves easily in their career and to be mobile at the functional, geographical or sectoral level, the Centrale Marseille engineer can assume important responsibilities within companies or organizations.

— Finally, they develop during their studies the sense of mutual success and human respect, the determination to initiate solutions and solve problems, the sense of **societal responsibility**.

The Centrale Marseille Engineer

EXCELLENT RESEARCH ENVIRONMENT



1



CLOSE RELATIONS WITH ENTERPRISES

2



100 % INTERNATIONAL MOBILITY

3



SOCIETAL COMMITMENT

4

RICH ASSOCIATIVE LIFE

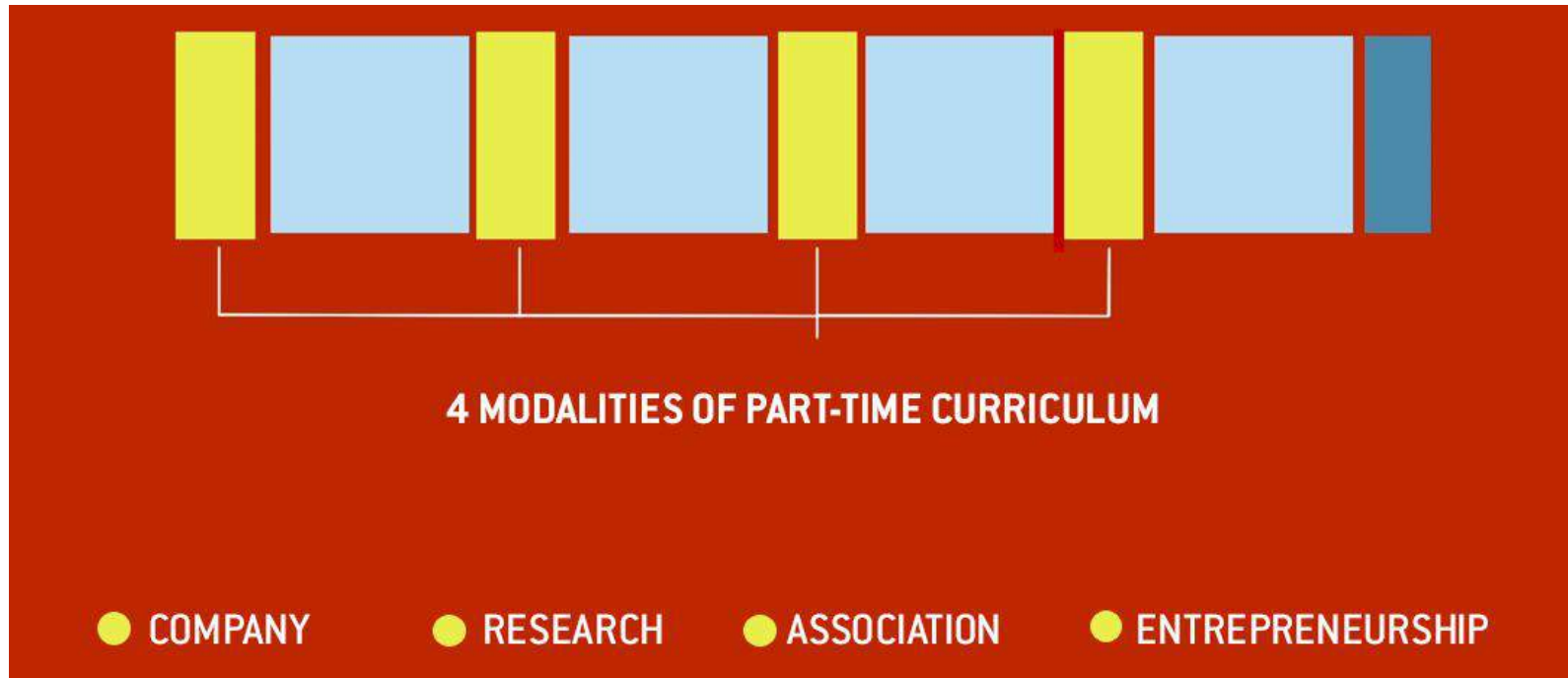


5

The Centrale Marseille Engineer

The Part-time rhythm

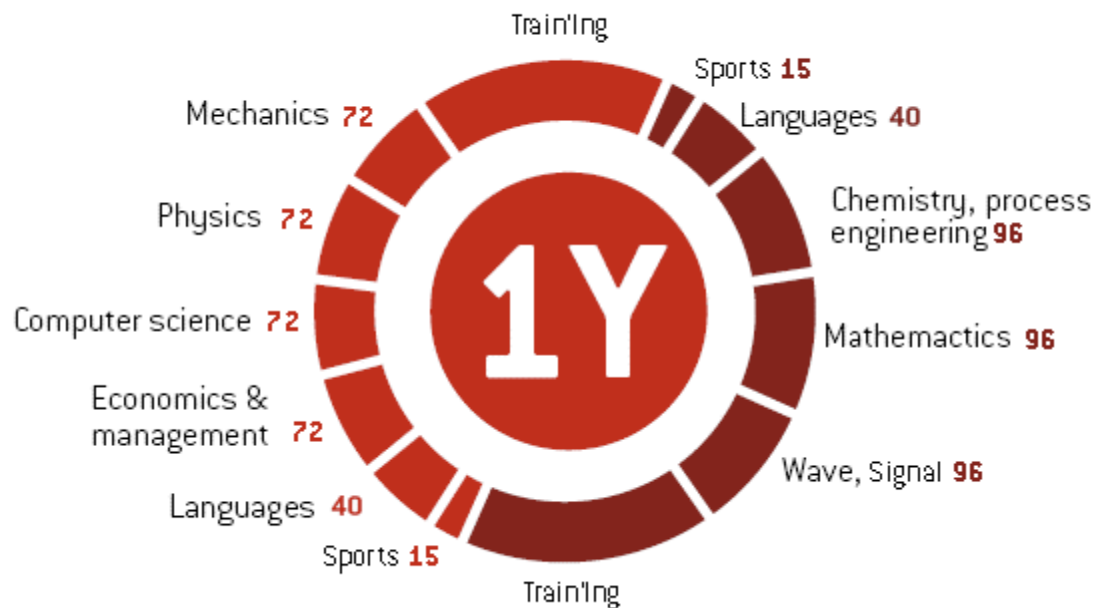
Diagram of each semester : around one « train'ing week » by month



Otherwise during the « Train'ing week » the students take activities about :
serious game, leadership, behavior agility, management, design thinking workshops...

The Curriculum

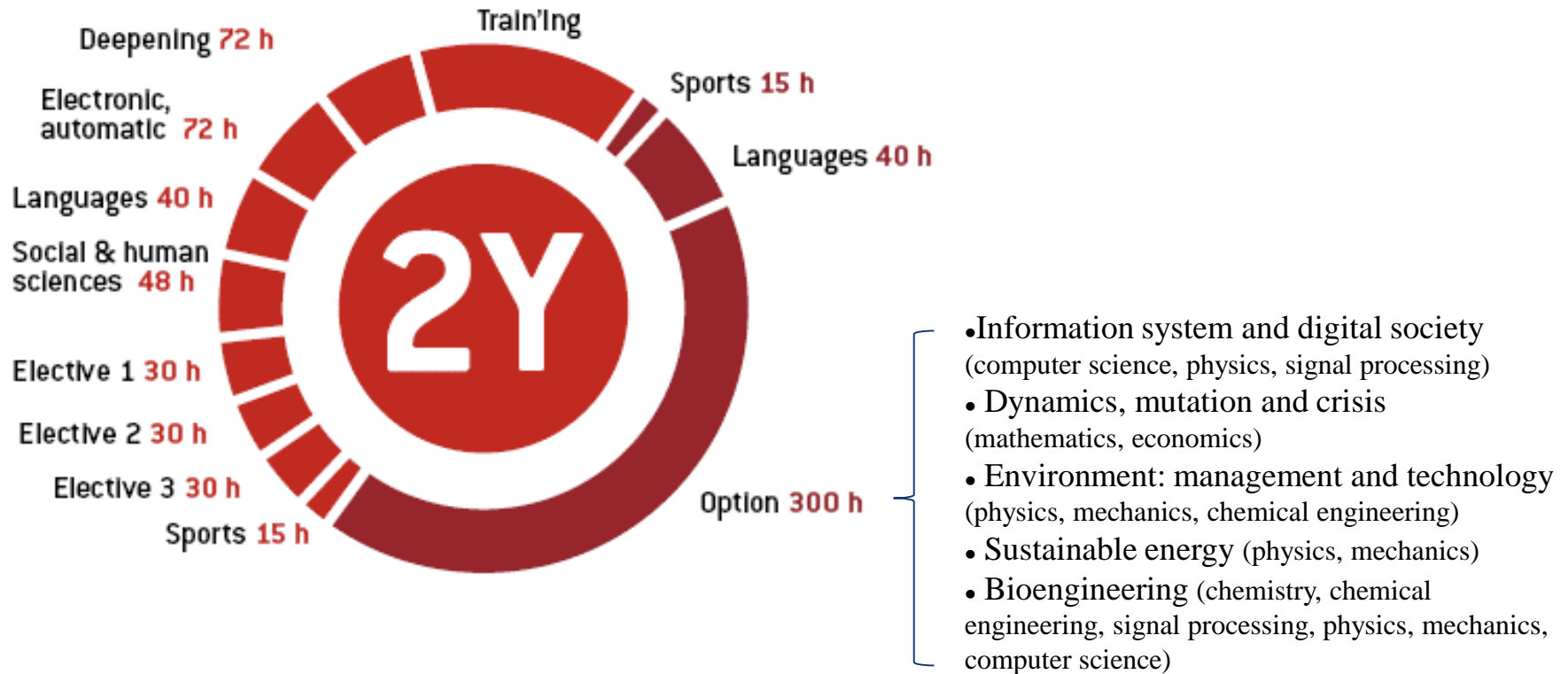
1st year, Discovery



S5 Alpha / S6 Beta

The Curriculum

2nd year, Personalisation

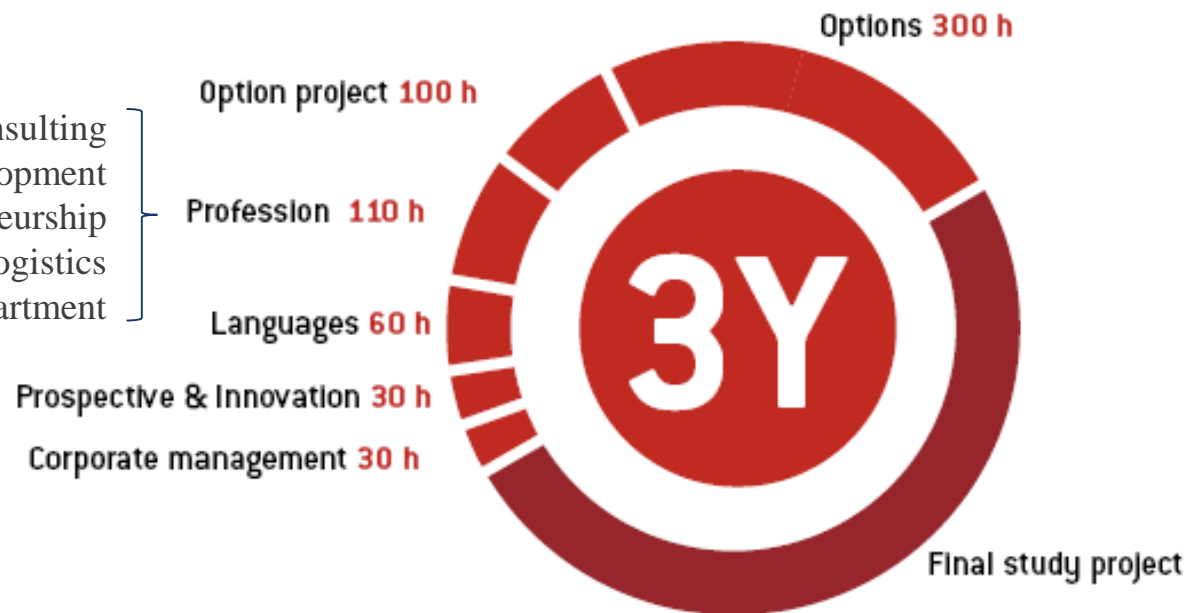


The Curriculum

3rd year, Professionalisation

S9 / S10

- Audit and Consulting
- Research and Development
- Management and Entrepreneurship
- Production and Logistics
- Engineering and Design Department



5 extension courses in 3rd year

Through the development of scientific and technological skills in one or several disciplines, the extension course seeks to train high-level generalist engineers in mastering methods of analysis, control, conception, and optimization of complex systems.

Digitale → Mathematics, Data science, Computer science

Green → From resource to product, Chemistry and sustainable processes

Mechanics → Industrial Acoustics, Modelization of Structural and Material Mechanics, Fluids: energy, transport, environment, health, Marine Engineering

MMEFI → Mathematics, Management, Economics, Finance

PicseI → Photonics and Innovative Systems



Pedagogical features

Team Projects:

- Undergraduate project : develop creativity, learn the basics of team work and management
- Multidisciplinary and specialized graduate projects : develop creativity, application of project management, deal with a client

Continuous assessment:

- competency-based approach : problem-based learning, peer learning, flipped classroom

Student tutoring:

- personal development
- professional project
- curriculum coaching

Masters

Centrale Marseille co-supervises Masters in Research in the following fields

- Law, Economics, Management
- Chemistry
- Process engineering
- Nuclear energy
- Computer science
- Instrumentation
- Materials
- Mechanics, physics and engineering
- Mathematics and applications
- Microelectronics & nanoelectronics
- Physics

Corporate relations

59 partner companies which are the main actors of the territory are actively involved in Centrale Marseille's life :

Internships (28 weeks minimum), projects, visits, conferences, teaching, major sponsorship, research contracts, technology transfer, entrepreneurship...



Enterprise in Centrale Marseille

Projects

Performed in small groups, they allow students to learn the requirements of their future professional environment, the projects proposed by a laboratory or a company allow to integrate the constraints (cost, time, risk, follow-up ...) and to develop the capacity of central authorities to solve complex problems.

Internships

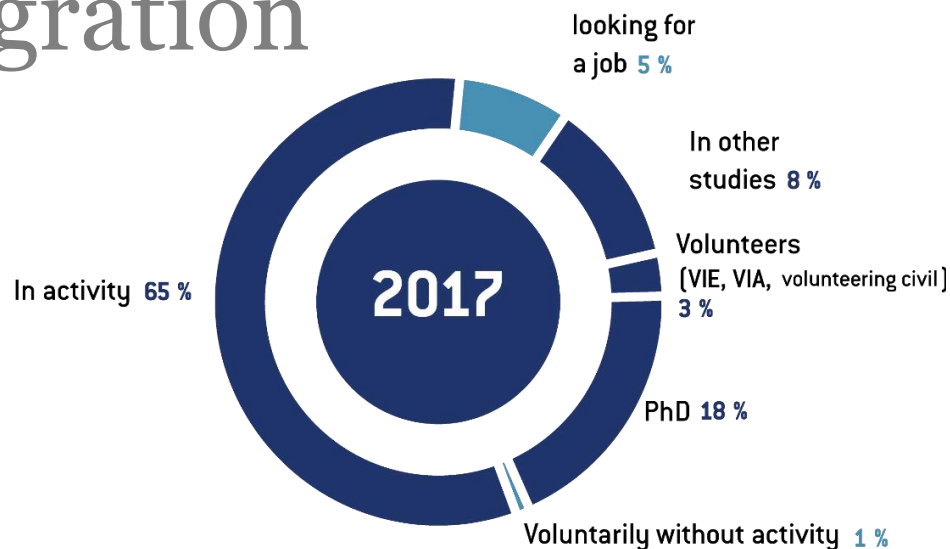
1st year internship (1 to 2 months): introduction to professional life and discovery of the world of the company.

2nd year internship (2 to 3 months): lead an engineer assisting mission using the acquired theoretical knowledge.

3rd year final study project (end-of-studies work) (4 to 6 months) : place students in a real professional position of engineer in industry or research.

Professional integration

Average gross salary
6 months after graduation
39 094 €



22%

Consulting company,
engineering office

21%

Computer and digital

11%

Automotive (motorcar),
aeronautics, naval,
railway, Industries

5%

Energy

11%

Financial engineering

8%

Building, public works,
constructions

3%

Culture

2%

Trade and distribution

3%

Human health and
social actions

3%

Research and scientific
development

2%

Pharmaceutical
industry

9%

Various Industries

International Mobility



100% Mobility Out

+20% Foreign students (more than **20** different nationalities)

- Erasmus Charter
- Member of the T.I.M.E. network
- Label “Bienvenue en France”

+140 agreements with international partners (Double Degree, International Exchange Semester, Research Partnership)

Partners in Brazil :

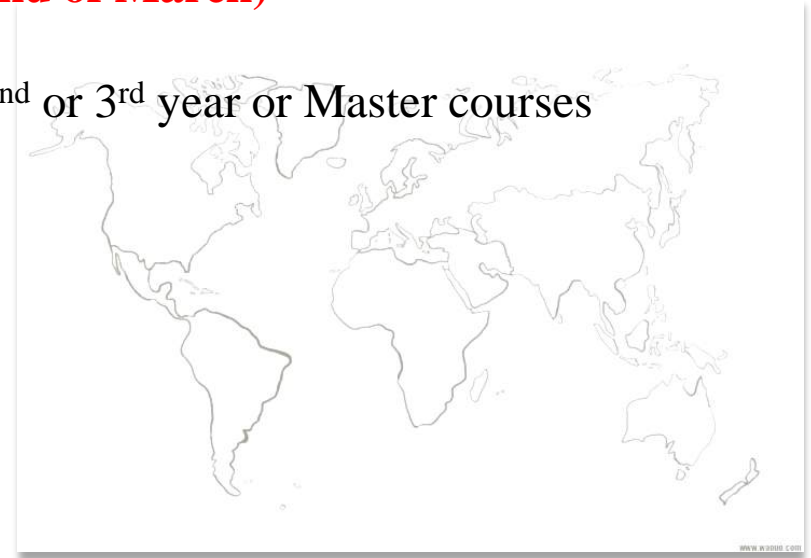
PUC-Rio, UFC, UFRGS, UFRN, UFRJ, UnB, UNESP, Unicamp, USP



Mobility IN

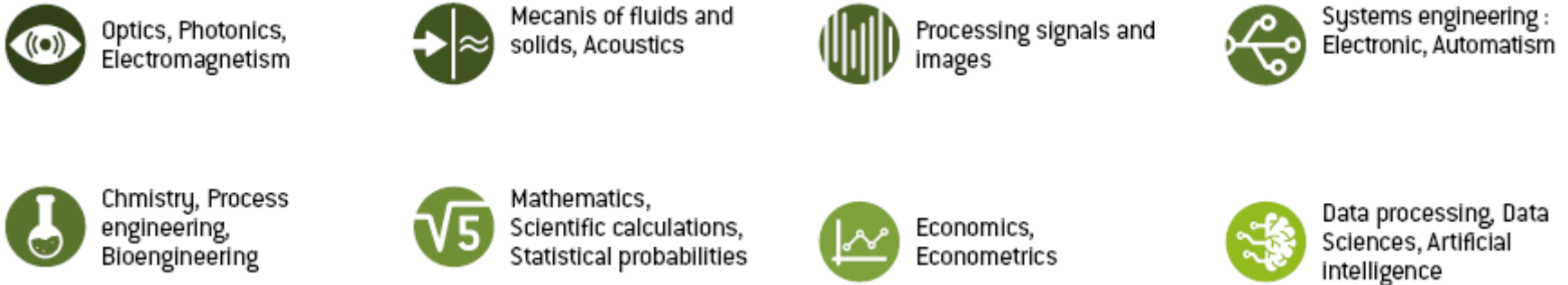
Different mobility options

- Double Degree Students (1Y-2Y or 2Y-3Y)
- International Exchange Semester Students :
2nd semester of the 2nd year **(February to end of May or end of July/August)**
1st semester of the 3rd year **(September to end of March)**
- International Exchange Year Students : 2nd or 3rd year or Master courses
- M.S. or International Masters

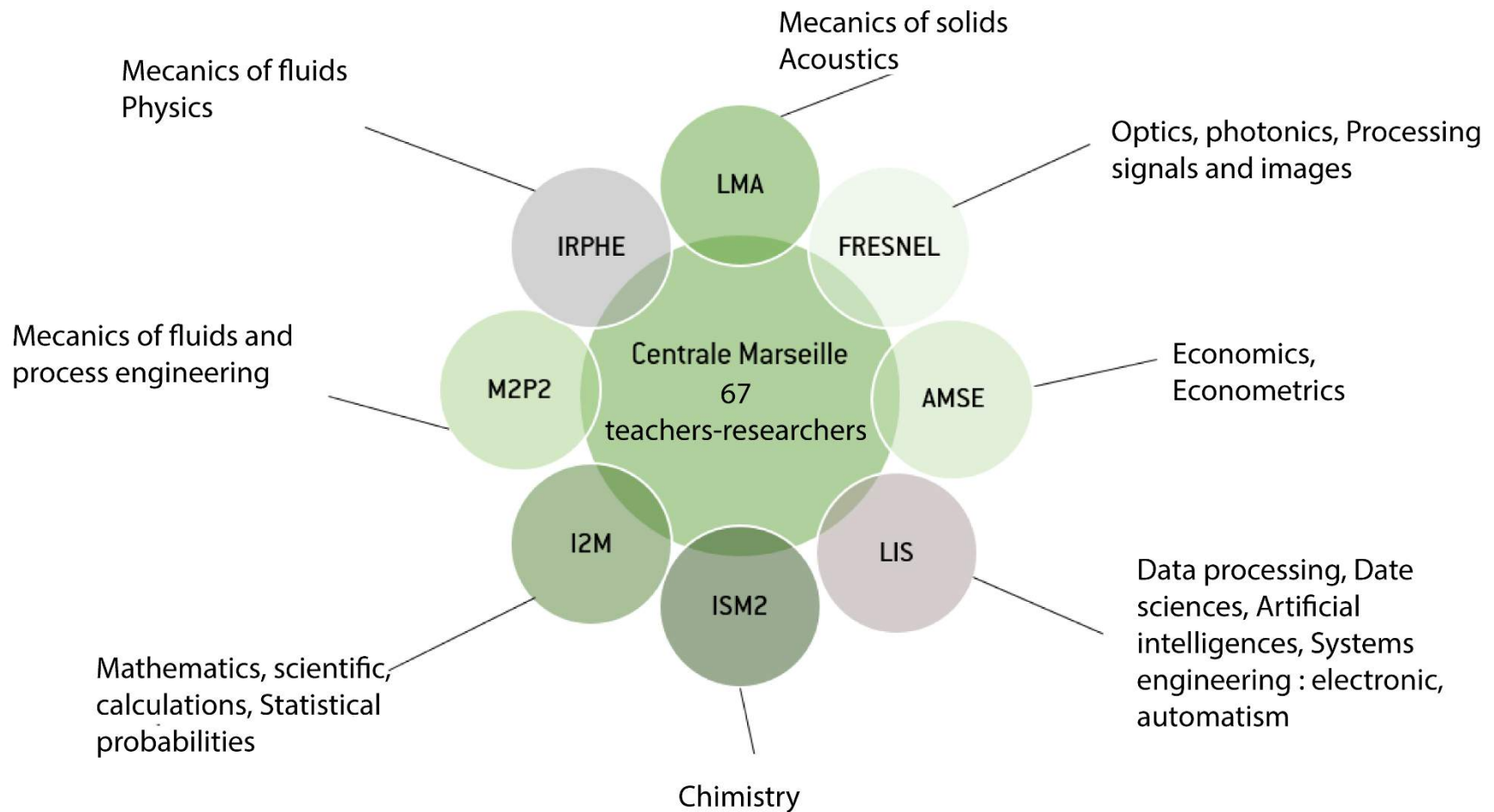


The Research

Centrale Marseille benefits from an exceptional laboratory environment wherein students can be accepted for internship, projects, Masters, or three years of research on a personal PhD project. Its laboratories, which are linked to CNRS, are known for their high-quality scientific research in France and abroad.



Research Laboratories



Many students clubs

Business / Innovation / Citizenship / Sport /
Culture / Student life

Total : **19** associations



iCM: International Centrale Marseille

Fablab Marseille

ISF (Engineers Without Borders)

FOCEEN: jobfair

Echanges Phocéens: social responsibility

KSI: junior enterprise operated by students

A campus in transformation



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ESPRIT D'INNOVATION & SENS DES RESPONSABILITÉS