

Master of Science and Technology in Complex Systems Engineering

ENVIRONMENTAL ENGINEERING

FULLY TAUGHT IN ENGLISH
STATE ACCREDITED PROGRAMME

Centrale 
Méditerranée

MASTER OF SCIENCE AND TECHNOLOGY

IN “COMPLEX SYSTEMS ENGINEERING”

A “complex system” can be defined as a system including multiple elements with different and variable individual behaviours which interact to produce the **overall system behaviour**. This definition clearly reveals that a large number of environmental, biological and even human systems can be qualified as complex. This **exceptional academic** training will broaden your horizon, provide you with **a rich interdisciplinary educational experience in environmental engineering** and prepare you for your professional career in optimal conditions with **more than 8 months of internship in laboratories or companies**.

ARE YOU READY TO BECOME A BICULTURAL ENGINEER?

You will become a bicultural engineer specialized in environmental engineering and get 140 ECTS credits at the end of your course. You will be highly valued by companies looking for international engineers offering management and technical skills.

During your two years at Centrale Méditerranée, you will discover a broad range of experiences and learn a lot from an academic standpoint but also in human terms:

- soft-skills development,
- work and research placements,
- discovery of France and Europe, French language proficiency.

FOR WHOM?

The Master's programme is designed for undergraduate students with a strong background in sciences: licence/bachelor's degree in physics, mechanics, applied mathematics or engineering sciences, civil engineering.

The master's course is fully taught in English - B2 level (independent user) is required.

Direct entry in M2 is possible with a validated M1 (60 ECTS) or relevant professional experience.



**You will be highly valued
by companies looking
for international engineers**

ENVIRONMENTAL ENGINEERING

PROGRAMME

YEAR 1

1ST SEMESTER PROPAEDEUTICS

- Transport phenomena
- Computer sciences and Numerical methods
- Hydraulics and hydrology
- Introduction to chemical engineering
- Introduction to environmental engineering
- Energy and environment
- Geomatics
- Management
- Project based training
- Language class
- Seminars, conferences
- Winter internship in lab (8 weeks)

2ND SEMESTER IN-DEPTH SCIENTIFIC LEARNING

- Environmental management
- Circular economy and sustainable design
- Pollutants and water waste
- Green chemistry
- Environmental monitoring
- Renewable energies
- Project based training
- Language class
- Summer internship in company (8 weeks)

YEAR 2

1ST SEMESTER KNOW-HOW

- Energy efficiency
- Advanced fluid mechanics
- Coastal engineering
- Bioprocess
- Water management
- Geophysical flows & global change awareness
- Computer sciences & data sciences
- Geographical economics and territory efficiency
- Industrial engineering
- Language class
- Elective courses shared with international academic & research partners
- Lab work, seminars, conferences
- Project based training

2ND SEMESTER MASTER'S THESIS

Paid internship in lab or company (4-6 months)



HOW

TO JOIN US?

WHAT TYPES OF CAREER CAN YOU PURSUE?

Environmental problems are inherently complex and multidisciplinary and most often require a system approach to be solved. You will be expected to bring your expertise from the field to the office and to share your ideas and skills with the other members of your team.

Typical careers involve the provision of high-quality environmental consulting services, performing research for complex planning and development projects, leading the definition and/or execution of environmental strategy, etc. For instance, you may find a job as an engineer **addressing air and water pollution monitoring, control and/or forecasting, landscaping for urban climate control, flood prevention, CFD for environmental/energy analysis**, and more.

You can also pursue your studies with a PhD in a field related to the M2, in academia or jointly with a company.

RECRUITMENT PROCESS

The recruitment process is organized in three stages:

- ▶ Please contact us by email at msct-cse@centrale-marseille.fr We will send you all the relevant information (procedure to apply, schedules, costs).
- ▶ Your application will be examined by the teaching team, who will contact you as soon as possible.
- ▶ If your application is eligible, an interview will be organized.

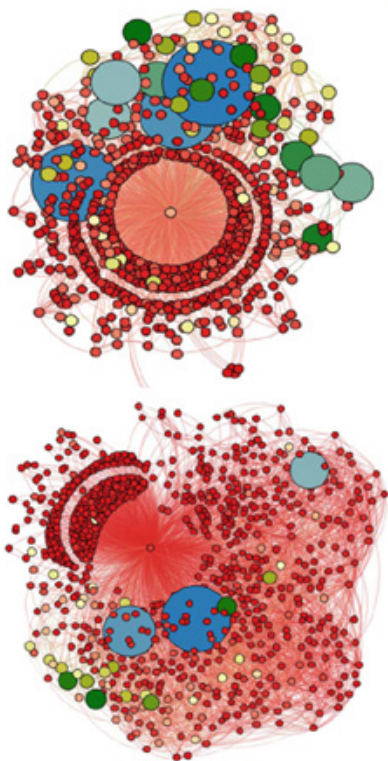
The Master's courses will start on September.

ANNUAL TUITION FEES

6 743 € (EU/EEA citizens)

10 270 € (Non-EU/EEA citizens)

Students enrolled in or coming from either a member institution of the RMEI or a partner institution of the Ecole Centrale de Marseille with which an agreement has been signed: please contact us regarding the tuition fees.



CENTRALE MÉDITERRANÉE

WE HAVE A WORLD TO TRANSFORM

THE “CENTRALE” BRAND

Centrale Méditerranée is a Public Scientific, Cultural and Professional Establishment (EPSCP) that belongs to Ecoles Centrale, an internationally-reputed higher education group with a powerful global network of **35,000 alumni**.

For employers, recruiting graduates of the Ecole Centrale is an assurance that you will be taking on people with strong scientific and technical skills combined with the talent to design and lead complex and innovative projects.

RESEARCH ENVIRONMENT

Ecole Centrale Méditerranée has **8 labs** in chemistry, physics, mechanics, chemical engineering, and computer sciences. These top-ranked laboratories are linked to the national scientific research centre (CNRS) and are renowned for their high-quality scientific research in France and abroad.

STUDENT LIFE

Student clubs are part of the student experience: International Students, Engineers without Borders, Sports & Sailing, Arts, Fablab Marseille, Ginfo (IT) and E-Gab (robotics), among others. During your student life you will develop a spirit of mutual success and human respect, the determination to initiate solutions and solve problems, and a sense of societal responsibility.

STUDY IN MARSEILLE AND DISCOVER PROVENCE!

- › 300 sunny days per year
- › Second largest city in France (870,000 inhabitants), close to the Parc National des Calanques
- › Beautiful Region Sud, with cities such as Arles, Aix-en-Provence, Avignon and Nice
- › Marseille-Marignane Airport, 3rd-largest French airport serving 26 countries
- › High-speed train destinations from Marseille: Lyon (1hr30), Paris (3hrs), Barcelona (5hrs), Madrid, Frankfurt and Brussels among others.

www.centrale-marseille.fr



Please check the Centrale Méditerranée website for the latest information and details about the Master's programmes.

<https://com.centrale-marseille.fr/page/cse/>



CONTACTS

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Campus Nice

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