

Master of Science and Technology in Complex Systems Engineering

ENVIRONMENTAL ENGINEERING

FULLY TAUGHT IN ENGLISH
EU/FRANCE ACCREDITED PROGRAMME

Centrale 
Méditerranée


unesco
Chair

Innovation
for
Sustainable
Development

 **A*Midex**
Initiative d'excellence Aix-Marseille
.....

MASTER OF SCIENCE AND TECHNOLOGY

IN “COMPLEX SYSTEMS ENGINEERING”

Environmental, biological or human systems lying at the core of the major current challenges, are “complex systems” whose **overall behaviour** is controlled by the interaction of all its multiple elements.

Understanding, modeling and handling such systems requires specific skills that you will acquire through the **exceptional academic and clinical training environment** of this master’s program. It will provide you with a rich **interdisciplinary educational experience in environmental engineering** and prepare you for a professional career in optimal conditions.

Beyond the wide academic knowledge gathered, you will also **enrich yourself with a broad range of experiences:**

- › Labs/companies visits, seminars...
- › Soft-skills and management courses
- › Up to 10 months of work & research placements (projects, clinical/research/ company internships...)
- › Multicultural international experience in southern France & French language proficiency



You will be highly valued by companies looking for bicultural engineers with strong technical skills and work experience

READY TO BECOME A BICULTURAL ENGINEER?

The master’s programme is designed to train future experts in engineering specialities with environmentally motivated applications: **systems engineering, water management, geomatics, land planning, computer & data sciences, renewable energies, economic efficiency**, etc.

This master will **open up numerous employment opportunities**, particularly in R&D, consultant/audit engineering, academic project engineering, management...

You will become a bicultural engineer with strong scientific and technical skills covering the major aspects of environmental engineering.

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

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)

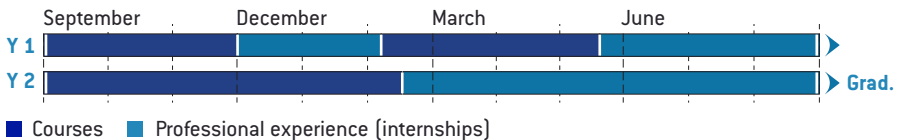
YEAR 2

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)



› **Up to 10 months of lab or company internships**

HOW

TO JOIN US?

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.

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

Direct admission to 2nd year (M2) is possible if you have completed and validated the 1st year of a Master Degree (M1, 60 ECTS) in the fields listed above or if you have significant professional experience.

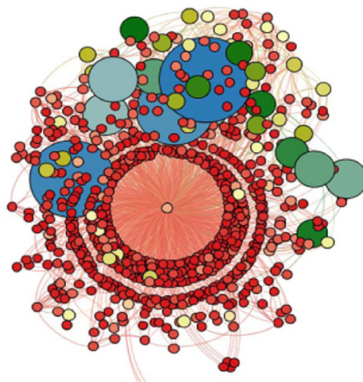
At the end of your course, you will get an accredited Master's diploma and a Centrale Méditerranée certification for the compulsory management and softskills training programme (140 ECTS in total).

ADMISSION PROCESS

The admission 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 (application file, schedules, tuition fees).
- ▶ Your application will be examined by the teaching team, who will inform you of its decision.
- ▶ If your application is eligible, an interview will be organized.

The Master's courses will start on September.

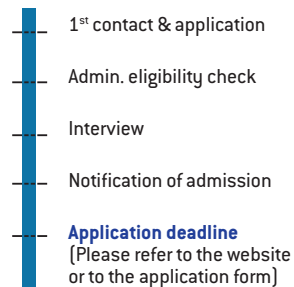


ANNUAL TUITION FEES

Please contact the Admission Office or see the Master's website

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

Fall/winter: opening of applications



Sept.: Starting of the courses

CENTRALE MÉDITERRANÉE

WE HAVE A WORLD TO TRANSFORM

THE "CENTRALE" BRAND

Centrale Méditerranée is one of the most prestigious public engineering schools in France which belongs to the Ecoles Centrale group, an internationally-reputed higher education group with a powerful **global network of 35,000 alumni**.

Employers recognize the strong scientific & technical skills of Ecoles Centrale's graduates and their capacity to **design and lead complex and innovative projects**.

RESEARCH ENVIRONMENT

Centrale Méditerranée's faculty members belong to **8 laboratories in chemistry, physics, photonics, 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.



One of the leading Engineering schools in the heart of the Mediterranean area...

STUDY IN MARSEILLE AND DISCOVER PROVENCE REGION!

- › 300 sunny days per year
- › Second largest city in France (870,000 inhabitants), close to the Parc National des Calanques
- › Experience 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: Paris (3hrs), Lyon (1hr30), Barcelona (5hrs), Madrid, Frankfurt and Brussels among others.



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



CONTACTS

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UNESCO Unitwin 651 Chair holder

Admission Office

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Campus Nice

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06200 Nice

www.centrale-mediterranee.fr

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