



MASTER OF SCIENCE AND TECHNOLOGY IN COMPLEX SYSTEMS ENGINEERING ENVIRONMENTAL 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**.

The “Environmental engineering” track provides a sound background in basic sciences and their application to address the main environmental problems related to climate change and how to relate particularly these problems to spatial planning, urban engineering and policy making. It focuses mainly on: **urban warming – energy efficiency – water management – aridity, soil and desertification – air pollution**.

This Master gives you **140 ECTS**.

**Engineering
for land-use planning**

Year 1

1ST SEMESTER – PROPAEDEUTICS

Transport phenomena – Computer sciences – Numerical modeling – Hydraulics and hydrology – Introduction to chemical engineering – Introduction to environmental engineering – Energy & environment – Management – Language

2ND SEMESTER – IN DEPTH SCIENTIFIC LEARNING

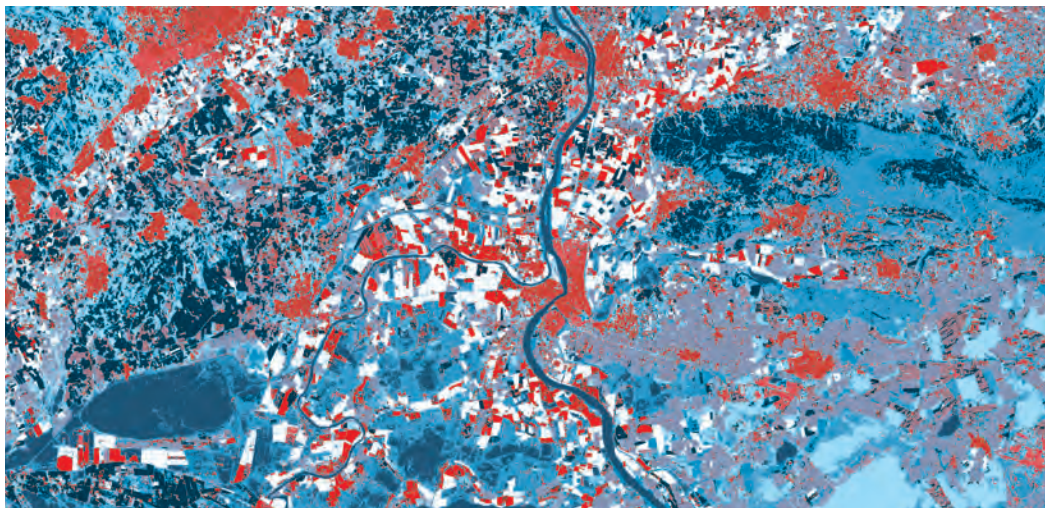
Environmental management – Circular economy and sustainable designed – Pollutants and water waste – Green chemistry – Environmental monitoring – Renewable energies – Industrial eng. – Language

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 – Geomatics – Geographical economics and territory efficiency – Elective courses shared with international academic & research partners – Industrial eng. – Language

2ND SEMESTER – MASTER THESIS
(4-6 months)



Careers

Research & development engineer –
Consultant eng. – Audit eng. – Academic.

Academic requirements

Bachelor's degree in applied mathematics,
mechanics, physics, engineering sciences.

Centrale Marseille

RESEARCH ENVIRONMENT

Chemistry, physics, mechanics, chemical
engineering, computer sciences. Its 8 top
ranked laboratories, which are linked to CNRS,
are known for their high-quality scientific
research in France and abroad.

24 %
INTERNATIONAL STUDENTS

**Master of science and technology
in Complex Systems Engineering
Environmental engineering**
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CONTACTS

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Secretariat Training

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