



UNIVERSITY OF
MESSINA
| founded in **1548**

Master's Degree in **CIVIL ENGINEERING**

(Curriculum in Sustainable Engineering for
Water-related Risks)



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Department
Engineering



Duration
2 years



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(Curriculum in Sustainable
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→ Programme overview

The Master's Degree in Civil Engineering - curriculum in Sustainable Engineering for Water- related Risks prepares professionals with advanced expertise in land protection, sustainable development, and hydrometeorological risk management. It provides a multidisciplinary approach integrating urban and coastal planning, river and floodplain engineering, transportation and earthquake engineering, and climate change adaptation. The curriculum blends a strong foundation in physics and mathematics with applied engineering solutions, ensuring students develop both theoretical knowledge and practical skills through hands-on learning.

Key competencies include:

- 1) Design, construction, and management of civil works, urban infrastructures, and transportation systems, with a focus on sustainability and resilience.
- 2) Planning and implementation of projects focused on water resource management, coastal defence, erosion control, urban and regional regeneration.
- 3) Disaster risk assessment and adaptation strategies, enhancing infrastructure resilience against hydrogeological and seismic hazards and climate change impacts.

The program offers international perspectives, research opportunities, and industry collaborations, preparing graduates for careers in engineering firms, environmental agencies public administration, and academia. With a global approach to sustainable engineering, the program equips graduates for leadership roles in tackling water-related challenges worldwide. Additionally, students can pursue further specialization through PhD programs and advanced master's courses.

→ Minimal entry requirements

A Bachelor's degree or a three-year university diploma obtained in Italy, or an equivalent qualification obtained abroad and recognised as suitable, in the following fundamental scientific disciplinary fields: Civil Engineering, Architecture and Building Engineering.

Scan the QR Code for further admission requirements criteria.



→ Further entry requirements

Minimum number of 42 ECTS credits in the following fundamental scientific disciplinary fields:

Geometry, Mathematical Analysis, Mathematical Physics, Experimental Physics, Chemical Foundations of Technology. Additionally, a minimum of 54 ECTS credits must be obtained in the following core scientific-disciplinary fields: Hydraulics, Roads, Railways, and Airports, Surveying and Cartography, Geotechnics, Structural Mechanics, Structural Engineering, Applied Physics, Architectural Engineering, Urban and Regional Planning. If the number of credits obtained in fundamental fields is lower than 42 but at least 36, admission is subject to evaluation by the competent Master's Degree Committee. Similarly, if the number of credits obtained in core fields is lower than 54 but at least 48, including credits from other core fields within class 08 or class L-7 admission is also subject to evaluation by the Master's Degree Committee. The assessment of the student's academic preparation is conducted before enrolment, following the procedures outlined in the programme's academic regulations.

→ Language requirements

International English Certificates accepted by UniME, B2 level of the Common European Framework of Reference. Scan the QR Code for further information.



→ Study programme

The Master's Degree in **Civil Engineering** (Curriculum in Sustainable Engineering for Water-related Risk) belongs to the Degree Class **LM-23**.

YEAR 1

- 1. Integrated urban and coastal zone planning and management
- 2. Design of earthquake-resistant structures
- 3. Geotechnical earthquake engineering
- 4 Sustainable water systems
- 5. Integrated building design
- 6. Computational mechanics
- 7. hydrometeorological risk and climate change*
- 8. Elective course

YEAR 2

- 1. Road design and construction management
- 2. River and drainage engineering*
- 3. Sustainable water resources management*
- 4. Slope stability and stabilization methods*
- 5. Further linguistic skill
- 6. Final project

*Internships and training in public or private entities and companies, and professional engineering bodies



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→ International opportunities

UniME students have the opportunity to participate in the Erasmus+ Mobility programme both for study and training. Calls are published on the site twice per year. Another opportunity for students is the UniME Funded programme "Students Around the World" (SAW) call for scholarships for study at the extra-European universities in the context of international cooperation agreements.

For further information please visit our site.

→ Tuition fees

UniME tuition fees for international students are calculated by country group.

Scan the QR Code for further information.



→ Job opportunities

Graduates in Civil Engineering are highly skilled professionals who apply advanced technical and scientific knowledge to design, plan, and manage infrastructure and civil works, ensuring safety, functionality, and environmental sustainability. Their roles range from designing projects and supervising construction sites to planning land development, managing complex infrastructure networks, and evaluating environmental impacts. Civil engineers develop strategies to protect territories from natural risks, optimize resource use, and ensure compliance with regulations while maintaining high quality standards. They can pursue careers in design firms, construction and maintenance companies, public administration, research and academia, as well as in organizations dedicated to infrastructure management, environmental assessment, and land monitoring.



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