

ADVANCED NUCLEAR WASTE MANAGEMENT

MASTER OF SCIENCE

ACCREDITATION

The MSc in Advanced Nuclear Waste Management (ANWM) is accredited by the Ministry of Higher Education and Research. National Accreditation Reference: 1701324R

Mention

Nuclear Engineering

KEY WORDS

Nuclear Technology, Energy, Physics, Waste Management, Dismantlement, Decommissioning

SCHOOL OFFERING THE MASTER

IMT Atlantique, a «Grande Ecole» which is part of the Institut Mines-Telecom, a leading French higher Education and Research Institution in Engineering, with 12,500 students.

LOCATION

This MSc program is offered on Nantes campus. Nantes is France's sixth-largest city and capital of the third-largest industrial region. Nantes lies just 50 km from the Atlantic coast; Paris is 2 hours away by high-speed train. Nantes is a dynamic city, which has been frequently recognized for its quality of life. The campus provides all the students facilities: student's residence, sports facilities, wireless network, library, associations, etc.

INDUSTRIAL PARTNERS

EDF, Areva, Andra, Daher...

LANGUAGE OF TEACHING

100% English

ENVIRONMENT

The MSc ANWM is designed to provide skilled and specialized human resources to the European and international states developing nuclear technology and focusing on Dismantlement and Decommissioning of Nuclear installations and Waste management. The combination of scientific and technical skills with management knowledge and strong safety culture (human factor and organizational safety) is meant to put the human being and environment safety as the priority number one.

COURSE AIMS

The MSc ANWM specializes in nuclear waste management. It develops fundamental scientific, technical and industrial knowledge, has a particular focus on the backend of the nuclear fuel cycle, nuclear waste management, long-term safety and environmental impact assessment and provides strong insights on dismantlement and decommissioning of nuclear installations.

PROGRAM

Scientific and technical modules:

- > Physics of Ionizing Radiation
- > Introduction to Nuclear modeling
- > Introduction to Neutron physics
- > Safety and Radioprotection
- > Physico-Chemistry of Environment
- > Introduction to Nuclear Technology
- > Wastes conditioning and storage
- > Dismantlement and Decommissioning of Nuclear Installations
- > Geological disposal

Management modules:

- > Nuclear: Management, Safety and Society
 - > Energy mix and energetic transition
 - > Environmental Management and Strategy of sustainability
- Company visits, Scientific seminars, Technical projects, Generic methods for Engineers, French language & culture

Professional coaching (Student centred process of reflection on competencies and professional objectives)

- > 6-month MSc thesis in Industry or research lab

ADMISSION REQUIREMENTS

This Master is open to applicants with at least a scientific Bachelor of Science degree in a scientific discipline such as Nuclear, Chemistry, Physics, Electrical, Mechanical, Chemical, Energy, Environmental or Civil Engineering. Possible admission directly in the 2nd year for students who have a 4-year Bachelor degree or first year of Master in Nuclear Engineering or Nuclear Physics.

LANGUAGE REQUIREMENTS

English

- > Mother tongue or
 - > Bachelor degree taught in English or
 - > English test such as TOEFL IBT 80, IELTS 6.0, TOEIC 750, Cambridge
- No prerequisite in French

APPLYING

Apply at
<https://sneam.imt-atlantique.fr>

Applications are opened from October to May each year.

STRONG POINTS OF THE SCHOOL

- > MSc accredited by the Ministry of Higher Education and Research
- > International Faculty
- > Masters taught entirely in English and in small groups
- > Strong links with the industries
- > 6-month master thesis in industry or in a research lab
- > Intercultural seminars
- > Free French language courses
- > Master boosted by a research department
- > An international team for international students
- > A quality chart to welcome international students
- > Nantes airport/train station pick up
- > Accommodation available on campus
- > Scholarship based on excellence.
- > French Summer School program in July and August for students who wish to improve French language and culture skills.

ADVANCED NUCLEAR WASTE MANAGEMENT

MASTER OF SCIENCE

COMPETENCES ACQUIRED

- > The master forms engineers exposed to a highly complex scientific environment where technical expertise is omnipresent in the field of nuclear waste management. The program provides:
- > The scientific knowledge necessary for nuclear waste management and the capability to understand how to assess long-term safety and environment impacts.
- > The competencies to master the operational techniques and strategies for the management of nuclear waste.
- > The appropriate solutions according to the type of waste through project work in industry.
- > possibility to build contacts with a large number of international key players in the field.
- > The competencies to master dismantlement and decommissioning of nuclear installations.
- > Societal considerations in the management of nuclear waste with regard to the public acceptance.

TYPICAL JOBS

- > Project engineer related to Nuclear Energy, decommissioning, nuclear waste processing, conditioning, safe storage.
- > Manager of nuclear waste in industrial, hospitals or research institutions.
- > Research scientist and development engineer.
- > Safety engineer for radioactive waste management solutions.
- > Regulators for governmental control of waste management practices.
- > Engineer of international agencies involved in nuclear waste issues.

COST

Participation cost: 12 000 € / year

SCHOLARSHIPS

Special rates for :

- > European students from the Erasmus zone (6 000 € / year)
- > EU Graduate students from our partner universities (3 000 € / year)
- > EU students met at Education fairs (5 400 € / year)
- > excellent EU applications or recommended EU applications (2 600 € / year)
- > Non-EU students graduated from our partner universities (6 500 € / year)
- > Non-EU students met at Education fairs (9 600 € / year)
- > Non-EU Excellent applications or recommended applications (6 000 to 9 000 € / year)
- > Double-Degree students (4 500 € / year)
- > Possible Industrial sponsorship.

CALENDAR

One intake per year in September.

Year 1: Two academic semesters on Nantes campus

Year 2: One academic semester on Nantes campus + 6 month Master thesis in industry or in a research lab.

LODGING

The student's residence (called «MDE») located on campus offers furnished individual rooms. They are 18m2 and equipped with a private bathroom and a small kitchen.

Some rooms for couples are also available. The standard size is 30m2, including a living room and a separate bedroom.

housing-nantes@imt-atlantique.fr

FOLLOW IMT ATLANTIQUE ON SOCIAL NETWORKS

Facebook IMTAtlantique

Twitter @IMTAtlantique

Instagram @imt_atlantique

DETAILS OF SCHOOL

IMT Atlantique
Nantes Campus
La Chantrerie
4 rue Alfred Kastler
CS 20722
44307 Nantes cedex 3
FRANCE

www.imt-atlantique.fr

Email: sneam-admission@imt-atlantique.fr

Phone: +33 2 51 85 81 50



Institut Mines-Télécom

IMT
International Relations
37-39 rue Dareau
75014 Paris - France
international@imt.fr
www.imt.fr