MSc in Environmental Meteorology
Double-degree Programme
Master of Science in Environmental Meteorology

The double-degree Master of Science Programme in Environmental Meteorology is jointly offered by the University of Trento and the University of Innsbruck. The courses offered within the programme cover a variety of topics related to atmospheric and climate processes and their connections with environmental systems. Students will be stimulated to get familiar with different ways of approaching the sciences of weather, climate and environment, including experimental techniques, theoretical analysis and numerical simulations.

Graduates in Environmental Meteorology will be enabled to prepare and present weather forecasts, perform atmospheric and environmental measurements, analyze and interpret data from observations and run numerical models for the simulation of atmospheric and environmental processes.

Lectures are given at the University of Trento throughout the first year, and at the University of Innsbruck during the first semester of the second year.

The fourth semester, devoted to the thesis and related activities, may be spent at either of the two Universities, or at another university, or research body, or operational organization (weather service, environmental agency, etc.) upon suitable agreement.
Programme overview

Degree awarded
- Master of Science - “Laurea Magistrale” - in Environmental Meteorology awarded by the University of Trento
- Master of Science awarded by the University of Innsbruck

Workload
The total workload for each student is 120 ECTS (European Credit Transfer System)

Intake
September each year

Duration
2 years full-time

Language
English

Class size
Up to 30 students

Fees and funding (approximate range)
- EU: 340€ - 3.400€ (based on income/merit)
- Non-EU: 1.000€ - 6.500 € (based on merit)
- Income/merit based scholarships and tuition waivers available
Admission

Requirements
- Bachelor degree (or equivalent)
- Strong background in the following areas:
  - Mathematics and Statistics
  - Theoretical and Applied Physics, including Geophysics
  - Chemistry
- English at B2 level of the Common European Framework of Reference for Languages

Selection criteria
- Assessment of previous studies and their coherence with the programme
- Academic curriculum
- English language proficiency
- Motivation letter
- Interview

Application deadlines
(check online for updates)
- February for non-EU citizens living outside Italy
- June for EU citizens and non-EU citizens regularly living in Italy

How to apply
- Access the online application form
- Upload the required documents (CV and motivation letter, Bachelor transcript of records, English language certification, any other useful document)
- Submit your application online by the deadline
- Check online for more information and updates
Study Plan

1st year courses at the University of Trento

- Introduction to meteorology and climatology (6 ECTS)
- Environmental fluid mechanics (9 ECTS)
- Environmental measurements (9 ECTS)
- Environmental physical chemistry (6 ECTS)
- Air pollution modelling (9 ECTS)
- Numerical methods for environmental processes (6 ECTS)
- Hydrology (9 ECTS)
- Hydrology (9 ECTS)
- Biosphere, atmosphere and climate interactions (6 ECTS)
2\textsuperscript{nd} year courses

1\textsuperscript{st} semester: at the University of Innsbruck

- Atmospheric radiation and remote sensing (5 ECTS)
- Reading, writing and presenting scientific contents (3 ECTS)
- Atmospheric chemistry and biogeochemistry (6 ECTS)
- Dynamical and synoptic meteorology (6 ECTS)
- Elective courses (10 ECTS)

2\textsuperscript{nd} semester: either at the University of Trento or at the University of Innsbruck

- Master Thesis (30 ECTS)
Career opportunities

The curriculum of the MSc in Environmental Meteorology aims at preparing highly qualified graduates, who upon specific training will be enabled to exploit their skills and qualifications at an international level as:

- Weather forecasters (in either public or private weather services, or as free-lance professionals)
- Consultants (for engineering firms, farmers’ organisations, insurance companies, law firms)
- Aviation meteorologists
- Experts in the assessment and/or forecasting of solar radiation, wind and precipitation for energy conversion plants from renewable sources
- Experts in air quality monitoring and management
- Researchers, academics
- Experts in education and communication: instructors, media operators, teachers
Environmental meteorologists provide meteorological support and assistance to decision makers in a variety of fields: air quality monitoring and management, civil protection, transport infrastructures management (including aviation, railways, roads and navigation), water resource management, management of systems for energy conversion from renewable sources, agricultural operations, forest management, adaptation and mitigation of climate change impacts.
Students and lecturers of the MSc in Environmental Meteorology on the roof terrace of the Institute of Atmospheric and Cryospheric Sciences (ACINN) at the University of Innsbruck during a visit on 21 November 2018.
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