Note:

The following curriculum is a consolidated version. It is legally non-binding and for informational purposes only.

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Curriculum for the Joint Study Programme
Master's Programme Environmental Meteorology
of the University of Innsbruck and the University of Trento

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§ 1 Allocation of the study programme

Acc. to §54 par. 1 of the Universities' Act 2002, the Master's Programme Environmental Meteorology is allocated to the group of natural science studies.

§ 2 Qualification profile

(1) Subject-specific competences

1. Graduates have advanced knowledge and methodological knowledge in the fields of meteorology and atmospheric sciences in general, and specifically of environmental aspects such as airborne pollutants, atmospheric chemistry, hydro, agricultural, forest or energy meteorology.
2. Graduates are able to apply the acquired knowledge and skills for developing methodically sound problem-solving strategies, in the commercial private or public/social environment.
3. Graduates are able to apply the acquired knowledge and skills for finding solutions to new problems/tasks that possibly arise only after the completion of their studies. This means that they can locate and analyse new challenges or possibilities on the basis of their knowledge and to work out optimal solutions this way.

(2) Scientific vocational training

1. Graduates are able to assess the foundations and assumptions of various scientific or practical approaches, and can accordingly assess the need for further development of various tools (models, datasets, etc.) on this basis.
2. Graduates are able to further develop certain areas within environmental meteorology. They do this on the basis of accepted scientific practice by scientifically based analysis and hypothesis building.

(3) Interdisciplinary skills

1. The graduates are able to explain and pass on their results and their knowledge to an audience with different educational background (on the topic) and knowledge.
2. Graduates are able to critically questions and evaluate the results of their own work as well as the work of colleagues or publicly made statements.
3. Graduates are able to objectively address problems in their field and to provide objective information for different groups of users.
4. Graduates are in a position to assess the timeliness of their working tools (models, data, procedures) and to promote any necessary further developments.
5. Graduates have sufficient knowledge of neighbouring disciplines (such as statistics, chemistry etc.) for consulting and understanding adequate specialists.
6. Due to the nature of a joint study programme of the University of Innsbruck (Austria) and Trento (Italy), the graduates have acquired particular sensitivity regarding the cultural aspects of scientific or technical solutions and appropriate complementary skills in technical, cultural or social questions.

(4) Career opportunities

1. Graduates of the Master's Programme Environmental Meteorology are qualified for jobs in the public sector (environmental units or respective institutions), in meteorological services, in the private sector (e.g. energy demand analysis, air hygiene, hydrological applications) and in other related sectors with a relevance of aspects of environmental meteorology.
2. The Master's Programme Environmental Meteorology qualifies for a continuing study programme (doctoral programme).

(5) Consecutive character

The Master's Programme Environmental Meteorology aims at advancing the scientific education of students of a Bachelor's Programme in Atmospheric Sciences, Meteorology, Environmental Engineering or similar disciplines.

§ 3 Scope and duration

The joint Master's Programme Environmental Meteorology covers 120 ECTS-Credits. This corresponds to a duration of four semesters. One ECTS-Credit corresponds to a workload of 25 hours.

§ 4 Admission

Admission to the Joint Master's Programme Environmental Meteorology is based on the cooperation agreement between the University of Innsbruck and the University of Trento. The admission and selection process is published by the rectorate.

§ 5 Language of instruction

The language of instruction is English.

§ 6 Types of courses and maximum number of participants

Courses with continuous performance assessment:

1. Lectures with practical elements (VU) focus on the practical treatment of concrete scientific tasks that are discussed during the lecture parts of the course. Maximum number of participants: 25
2. Introductory seminars (PS) introduce students interactively to scientific literature through the treatment of selected issues. They convey knowledge and methods of academic work. Maximum number of participants: 25

§ 7 Allocation of places in courses with a limited number of participants

In courses with a limited number of participants, course places are allocated as follows:

1. Students for whom the study duration would be extended due to the postponement are to be given priority.
2. If criterion no. 1 does not suffice for regulating the admission, then first, students for whom the course is part of a compulsory module are to be given priority, and second, students for whom the course is part of an elective module.
3. If the criteria in no. 1 and 2 do not suffice for regulating the admission, then the available places are raffled.

§ 8 Compulsory and elective modules

(1) The first year of the study programme corresponding to 60 ECTS-Credits is to be passed in Trento according the regulations of the joint Master's Programme Environmental Meteorology. The following courses must be passed: Introduction to Meteorology and Climatology (9 ECTS-Credits); Environmental Fluid Mechanics (9 ECTS-Credits); Environmental Measurements (6 ECTS-Credits); Physical Chemistry of the Environment (6 ECTS-Credits); Air Pollution Modelling (9 ECTS-Credits); Numerical Methods for Environmental Processes (6 ECTS-Credits); Hydrology

(9 ECTS-Credits); Interactions between Biosphere, Atmosphere and Climate (6 ECTS-Credits).

(2) The following compulsory and elective modules corresponding to 30 ECTS-Credits are to be passed at the University of Innsbruck:

1.	**Compulsory Module: Atmospheric Physics and Chemistry**	**h**	**ECTS-Credits**
a.	**VU Atmospheric Radiation and Remote Sensing** Radiation, radiation transfer, remote sensing of the earth-atmosphere system	3	5
b.	**VU Atmospheric Chemistry and Biochemistry** Stratospheric and tropospheric ozone chemistry; trace gases and aerosols - their transformation in the atmosphere and exchange between the earth's surface and the atmosphere	3	5
c.	**PS Atmospheric Chemistry and Biochemistry** Advanced practical study and examining new literature on ozone chemistry, trace gases and aerosols	1	1
	Total	**7**	**11**
	Learning Outcomes: The students can characterise the physical and chemical processes in the atmosphere. They can apply theory and observation methods that describe or observe the physical and chemical state of the Earth's atmosphere.		
	Prerequisites: none		

2.	**Compulsory Module: Meteorology and Scientific Communication**	**h**	**ECTS-Credits**
a.	**VU Dynamical and Synoptic Meteorology** The basic concepts for the treatment, diagnosis and prognosis of atmospheric currents and weather phenomena are introduced and discussed based on examples.	3	6
b.	**PS Reading, Writing and Presenting Scientific Contents** Approaches to reading and communicating results of subject-specific research	2	3
	Total	**5**	**9**
	Learning Outcomes: Students can characterise weather situations, identify the determining factors, evaluate the results of weather forecasting models and create forecasts from them. They master the techniques for analysing and discussing scientific literature as well as presenting scientific results in written and oral form.		
	Prerequisites: none		

3.	Compulsory Module: Master's Thesis Defense	h	ECTS-Credits
	Oral defense of the Master's Thesis before an examination board to finalise the studies		2.5
	Total		**2.5**
	Learning Outcomes: Reflection of the Master's Thesis in the overall contexts of the Master's Programme; The focus is on theoretical understanding, methodological foundations, imparting the results of the Master's Thesis as well as presentation skills.		
	Prerequisites: positive completion of all other compulsory and elective modules as well as the Master's Thesis		

4.	Compulsory Module: Advanced Topics in Environmental Meteorology and Gender Aspects	h	ECTS-Credits
	Providing the availability of places, courses corresponding to 10 ECTS-Credits may be taken from the curriculum of the Master's Programme Atmospheric Sciences at the University of Innsbruck. It is also possible to select a course in the field of women's and gender research from the curricula of the Master's and Diploma Programmes at the University of Innsbruck.		10
	Total		**10**
	Learning Outcomes: This module serves to expand the study programme and to the acquisition of additional qualifications.		
	Prerequisites: The requirements specified by the respective curricula must be met.		

§ 9 Master's Thesis

(1) The Master's Thesis can be either written at the University of Trento or the University of Innsbruck. If it is written at the University of Trento, it corresponds together with the Master's Thesis Defense to 30 ECTS-Credits. If it is written at the University of Innsbruck the following applies:

(2) A Master's Thesis corresponding to 27.5 ECTS-Credits must be written. The Master's Thesis is a scientific piece of work that proves the ability to work on a scientific topic independently and in a justifiable way in terms of content and methodology.

(3) The topic of the Master's Thesis must be taken from the compulsory and/or elective modules of the curriculum.

(4) The topic will only be awarded after positive evaluation of the module from which the topic is taken.

(5) Students have the right to suggest the topic for their Master's Thesis or to select from a number of suggestions.

(6) Students are entitled to write their Master's Thesis in another language than English, if the supervisor agrees to it.

§ 10 Examination regulations

(1) Courses of modules are evaluated by course examinations. Course examinations are

1. examinations that assess the knowledge and skills covered in the lectures in which course assessment is based on a single examination at the end of the course. The course instructor has to define and communicate the method of examination (written or oral) and the evaluation criteria before the course begins.
2. Courses with continuous assessment, for which course assessment is based on regular written and/or oral contributions by participants.

(2) The course instructor has to inform the students on the objectives, contents and methods, as well as the contents, methods and evaluation criteria of the course examinations in a suitable manner before the start of the course.

(3) The compulsory module “Master’s Thesis Defense” is evaluated by an oral examination before an examination board. The examination board consists of three persons.

§ 11 Academic degree

Graduates of the Joint Master’s Programme Environmental Meteorology are awarded the academic degree “Master of Science”, abbreviated “MSc” at the University of Innsbruck.

§ 12 Coming into force

This curriculum comes into force on 1 October 2018.