



UNIVERSITÀ  
DI TRENTO

**STUDY PLAN MSc IN ENVIRONMENTAL METEOROLOGY AND CLIMATE PHYSICS**  
**A.Y. 2026-27**



universität  
innsbruck

| 1st YEAR                    |     |                                                                       |             |             |     |    |    |    |    |    |   |   |   |       |       |  |
|-----------------------------|-----|-----------------------------------------------------------------------|-------------|-------------|-----|----|----|----|----|----|---|---|---|-------|-------|--|
| I SEMESTER - Trento campus  |     |                                                                       |             |             |     |    |    |    |    |    |   |   |   |       |       |  |
| Code                        | No. | Courses                                                               | SSD         | new SSD     | CFU | B1 | B2 | B3 | B4 | C  | D | E | F | Hours | Notes |  |
| 140531                      | 1   | Introduction to meteorology and climatology*                          | FIS/06      | PHYS-05/B   | 6   |    |    |    | 6  |    |   |   |   | 60    |       |  |
| 140732                      | 2   | Enviromental Fluid Mechanics                                          | GEO/12      | GEOS-04/C   | 6   |    |    |    | 6  |    |   |   |   | 60    |       |  |
| 140733                      | 3   | Environmental measurements                                            | FIS/01      | PHYS-01/A   | 9   | 9  |    |    |    |    |   |   |   | 90    |       |  |
| 140534                      | 4   | Environmental physical chemistry                                      | CHIM/03     | CHEM-03/A   | 6   |    |    |    |    | 6  |   |   |   | 60    |       |  |
| TOT. I sem.                 |     |                                                                       |             |             | 27  | 9  | 0  | 0  | 12 | 6  | 0 | 0 | 0 |       |       |  |
| II SEMESTER - Trento campus |     |                                                                       |             |             |     |    |    |    |    |    |   |   |   |       |       |  |
| Code                        | No- | Courses                                                               | SSD         | new SSD     | CFU | B1 | B2 | B3 | B4 | C  | D | E | F | Hours | Notes |  |
| 140571                      | 5   | Atmospheric boundary layer and turbulence                             | FIS/06      | PHYS-05/B   | 6   |    |    |    | 6  |    |   |   |   | 60    |       |  |
| 140729                      | 6   | Mathematical models and numerical methods for environmental processes | FIS/02      | PHYS-02/A   | 6   |    | 6  |    |    |    |   |   |   | 60    |       |  |
| 140587                      | 7   | Hydrology**                                                           | ICAR/02     | CEAR-01/B   | 6   |    |    |    |    | 6  |   |   |   | 60    |       |  |
| 140730                      | 8   | Advanced topics in modern physics                                     | FIS/02      | PHYS-02/A   | 9   |    | 9  |    |    |    |   |   |   | 90    |       |  |
|                             |     |                                                                       |             |             |     |    |    |    |    |    |   |   |   |       |       |  |
| TOT. II sem.                |     |                                                                       |             |             | 27  | 0  | 15 | 0  | 6  | 6  | 0 | 0 | 0 |       |       |  |
|                             |     |                                                                       | TOT. I year | TOT. I year | 54  | 9  | 15 | 0  | 18 | 12 | 0 | 0 | 0 |       |       |  |

| II YEAR                             |     |                                                     |        |           |     |    |    |    |    |   |   |    |   |       |       |  |
|-------------------------------------|-----|-----------------------------------------------------|--------|-----------|-----|----|----|----|----|---|---|----|---|-------|-------|--|
| I SEMESTER Innsbruck campus         |     |                                                     |        |           |     |    |    |    |    |   |   |    |   |       |       |  |
| Code                                | No. | Courses                                             | SSD    | new SSD   | CFU | B1 | B2 | B3 | B4 | C | D | E  | F | Hours | Notes |  |
| 140734                              | 9   | Atmospheric radiation and remote sensing            | FIS/03 | PHYS-03/A | 5   |    |    | 5  |    |   |   |    |   | 50    |       |  |
| 140542                              | 10  | Reading, writing and presenting scientific contents |        |           | 3   |    |    |    |    |   |   |    | 3 | 30    |       |  |
| 140540                              | 11  | Atmospheric chemistry and biogeochemistry           | BIO/10 | BIOS-07/A | 6   |    |    |    |    | 6 |   |    |   | 60    |       |  |
| 140731                              | 12  | Synoptical-Dynamical meteorology                    | FIS/06 | PHYS-05/B | 6   |    |    |    | 6  |   |   |    |   | 60    |       |  |
| TOT Mandatory CFU I sem.            |     |                                                     |        |           | 20  | 0  | 0  | 5  | 6  | 6 | 0 | 0  | 3 |       |       |  |
| II SEMESTER Trento/Innsbruck campus |     |                                                     |        |           |     |    |    |    |    |   |   |    |   |       |       |  |
|                                     |     | MSc. Thesis and courses                             | SSD    | new SSD   | CFU | B1 | B2 | B3 | B4 | C | D | E  | F | Hours | Notes |  |
|                                     |     |                                                     |        |           |     |    |    |    |    |   |   |    |   |       |       |  |
| 140543                              |     | MSc. Thesis                                         |        |           | 30  |    |    |    |    |   |   | 30 |   |       |       |  |
| TOT Mandatory CFU II sem.           |     |                                                     |        |           | 30  | 0  | 0  | 0  | 0  | 0 | 0 | 30 | 0 |       |       |  |

|  |  |                      |  |     |    |    |   |    |    |    |    |   |  |  |  |
|--|--|----------------------|--|-----|----|----|---|----|----|----|----|---|--|--|--|
|  |  | Elective courses     |  |     | 16 |    |   |    |    |    | 16 |   |  |  |  |
|  |  |                      |  |     |    |    |   |    |    |    |    |   |  |  |  |
|  |  | <b>TOT. II Year</b>  |  | 66  | 0  | 0  | 5 | 6  | 6  | 16 | 30 | 3 |  |  |  |
|  |  | <b>Total Program</b> |  | 120 | 9  | 15 | 5 | 24 | 18 | 16 | 30 | 3 |  |  |  |

| ELECTIVE COURSES                                   |             |                                                         |            |           |     |    |    |    |    |   |   |   |   |       |       |  |
|----------------------------------------------------|-------------|---------------------------------------------------------|------------|-----------|-----|----|----|----|----|---|---|---|---|-------|-------|--|
| 1st Year - II Semester - Trento campus             |             |                                                         |            |           |     |    |    |    |    |   |   |   |   |       |       |  |
| Code                                               | No.         | Courses                                                 | SSD        | new SSD   | CFU | B1 | B2 | B3 | B4 | C | D | E | F | Hours | Notes |  |
| 140585                                             | II Semester | Air pollution modelling                                 | FIS/06     | PHYS-05/B | 6   |    |    |    |    |   | 6 |   |   | 60    |       |  |
| 140586                                             |             | Hydrological modelling                                  | ICAR/02    | CEAR-01/B | 6   |    |    |    |    |   | 6 |   |   | 60    |       |  |
| 140607                                             |             | Introduction to climate change                          | FIS/06     | PHYS-05/B | 6   |    |    |    |    |   | 6 |   |   | 60    |       |  |
| 140575                                             |             | Tropical meteorology and climate                        | FIS/06     | PHYS-05/B | 6   |    |    |    |    |   | 6 |   |   | 60    |       |  |
| 2nd Year - I and II Semester - Innsbruck campus*** |             |                                                         |            |           |     |    |    |    |    |   |   |   |   |       |       |  |
| Code                                               | No.         | Courses                                                 | SSD        | new SSD   | CFU | B1 | B2 | B3 | B4 | C | D | E | F | Hours | Notes |  |
| 140564                                             | I Semester  | Physics of the Climate System                           | FIS/06     | PHYS-05/B | 5   |    |    |    |    |   | 5 |   |   | 50    |       |  |
| 140566                                             |             | Numerical Modelling of Weather and Climate              | MAT/08     | MATH-05/A | 6   |    |    |    |    |   | 6 |   |   | 60    |       |  |
| 140714                                             |             | Advanced weather forecasting course                     | GEO/12     | GEOS-04/C | 5   |    |    |    |    |   | 5 |   |   | 45    |       |  |
| 140574                                             |             | Scientific Programming                                  | ING-INF/05 | IINF-05/A | 5   |    |    |    |    |   | 5 |   |   | 50    |       |  |
| 140565                                             |             | Mountain Meteorology                                    | FIS/06     | PHYS-05/B | 5   |    |    |    |    |   | 5 |   |   | 45    |       |  |
| 140606                                             |             | Advanced Topics: Aviation Meteorology (alternate years) | FIS/06     | PHYS-05/B | 4   |    |    |    |    |   | 4 |   |   | 30    |       |  |
| 140735                                             |             | Advanced Topics: Snow and Avalanches (alternate years)  | ICAR/01    | CEAR-01/A | 6   |    |    |    |    |   | 6 |   |   | 60    |       |  |
| 140568                                             | II Semester | Geostatistics                                           | GEO/12     | GEOS-04/C | 5   |    |    |    |    |   | 5 |   |   | 45    |       |  |
| 140572                                             |             | Cryosphere in the climate system                        | ICAR/02    | CEAR-01/B | 5   |    |    |    |    |   | 5 |   |   | 50    |       |  |
| 140716                                             |             | Advanced Topics: Visualizing scientific data            | FIS/06     | PHYS-05/B | 3   |    |    |    |    |   | 3 |   |   | 30    |       |  |
| 140718                                             |             | Advanced Topics: Urban Meteorology                      | FIS/06     | PHYS-05/B | 3   |    |    |    |    |   | 3 |   |   | 30    |       |  |

\* Students holding a BSc Degree in Ingegneria per l'Ambiente e il Territorio from the University of Trento who have taken "*Fondamenti di meteorologia e climatologia*" may substitute this course with one of the FIS/06 elective courses, i.e. either "*Air pollution modelling*", or "*Introduction to climate change*", or "*Tropical meteorology and climate*". This option is offered also to students holding other BSc who have taken basics of meteorology at BSc level: the study plan changes request needs to be approved upon checking the contents of meteorology exams taken at BSc level (send the request to supportostudentimesiano@unitn.it)

\*\* Students holding a BSc degree in Ingegneria per l'Ambiente e il Territorio from the University of Trento will have "Hydrology" by default substituted with "Hydrological modelling" in their study plan. This option is offered also to students holding other BSc who have taken basics of hydrology at BSc level: the study plan changes request needs to be approved, upon checking the contents of hydrology exams taken at BSc level (send the request to supportostudentimesiano@unitn.it)

\*\*\* the list of elective courses at the University of Innsbruck may be subject to changes from one Academic year to the other. When submitting the choice of elective courses in their study plan, students are recommended to check the most updated list of available courses at the web-page [https://ifonline.uibk.ac.at/public/ifonline\\_iv.home](https://ifonline.uibk.ac.at/public/ifonline_iv.home) [path: Faculty of Geo- and Atmospheric Sciences/Master's Programme Environmental Meteorology according to the curriculum 2018 (120 ECTS-Credits)/2nd Year of Study (University of Innsbruck)/Compulsory Modules (30 ECTS-Credits)]