

2nd level Specializing Master's Programme

CLIMATE CHANGE:

adaptation and mitigation solutions

Programme director
Prof. Marco Piras



Politecnico
di Torino



PoliTO Master School

Under the patronage of





ABOUT US

The world is changing rapidly and the ability to anticipate risks and provide effective solutions to face the effects of climate change is more important than ever. The social and economic impacts of climate change have serious consequences on both human beings and the environment, and the need to understand how to mitigate the damages and adapt to them strategically is nowadays a key issue.

The 2nd level Specializing **Master in Climate Change: adaptation and mitigation solutions** of Politecnico di Torino offers a programme aimed at providing a comprehensive understanding of the climate change impacts and the innovative technologies that will drive the mitigation and adaptation responses to global warming.

Graduates and professionals with a scientific and/or technical background will have the chance to:

LEARN about the underlying dynamics in/of the climate system and the decarbonization process in key sectors (e.g. energy, infrastructures and transport, agriculture) and explore how to apply solutions in real-world scenarios

SHARE SKILLS with fellow students and profit from a think-tank environment promoting the exchange of ideas and expertise with researchers from top-level universities and managers from the private sector

GAIN PRACTICAL EXPERIENCE in a well-established network of outstanding companies engaged in production & processing, and service-provision.

PROGRAMME

1-year programme: October 2024 – September 2025

Full time: Monday - Friday, 20-30h/week

In-class and online*

- 20 courses – (500 hours);
- Internship – (500 hours);
- Extra activities
 - Seminars, site visits and lab activities
 - 1-week workshop with partner companies
 - 1-2 days hackathon about sustainability



Organization of the courses

1

Preliminary Courses

- An Introduction to Climate Change (3 credits)
- Earth Observation and Climate Monitoring (3 credits)
- Climate Policy, Economics and Finance (3 credits)
- Energy Transition and Global Sustainability (2 credits)
- AI for Climate Change (2 credits)

2

Climate Change Mitigation

- Carbon Capture and Negative Emission Technologies (3 credits)
- CO₂ and H₂ Underground Storage (2 credits)
- Carbon Footprinting and Carbon Trading (2 credits)
- Sustainable Transport Systems (2 credits)
- Energy-Efficient Buildings (2 credits)
- Renewables (2 credits)

3

Climate Change Adaptation

- Climate-Resilient Cities and Communities (3 credits)
- Coping with Extreme Events (3 credits)
- Food-Water Nexus in a Changing Climate (3 credits)
- Firms, Climate Change and Sustainable Management (2 credits)
- Resilient Infrastructure Systems (2 credits)

4

Corporate Approaches to Climate Change

- Corporate Social Accountability (2 credits)
- Climate Resilient Supply Chain (2 credits)
- Climate-Change Compliance Reporting and Communication (2 credits)
- Eco-innovation and Social Entrepreneurship (2 credits)

**max 5 non-EU students can request to attend the entire programme online if they cannot attend in-person. The Scientific Committee will evaluate each request. For more info check out Art. 6 of the Call for applications.*

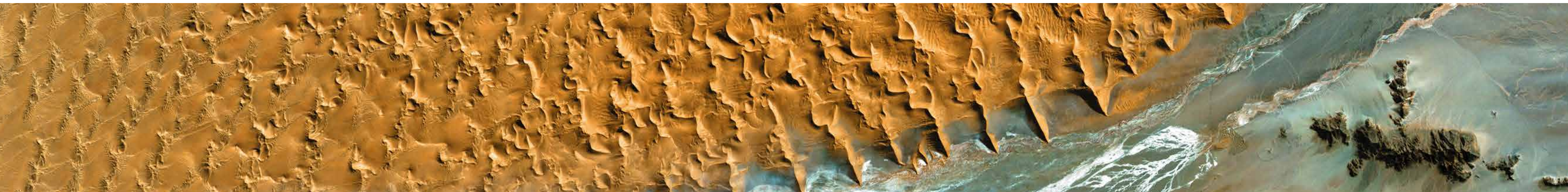
ADMISSION REQUIREMENTS

The programme is open to a maximum of 25 participants. Admission requirements are:

- **Master's degree** or equivalent by the enrolment deadline in the following areas: Engineering, Architecture, Geography, Science and technology, Agricultural sciences, Mathematics, Physics, Biology, Chemistry, Economics, Geoscience, Computer science.
 - *The Selection Committee has the right, at its discretion, to assess the admission of candidates graduated in disciplines other than those indicated, if they are deemed to have the necessary scientific and cultural background to attend the lessons.*
- Good knowledge of the **English language** (equivalent to level B2 CEFR)
 - *The Selection Committee has the right, at its discretion, to assess the admission of candidates graduated in disciplines other than those indicated, if they are deemed to have the necessary scientific and cultural background to attend the lessons.*

The selection will be based on:

- Motivation letter and academic background, including a summary of the Master Thesis
- Significance and coherence with the Master's topics of the professional and formative experience.
- Online interview of the short-listed candidates.



SINGLE COURSE ENROLMENT

You can enrol in the single courses of this Specializing Master's programme, without enrolling in the entire programme, provided you meet the admission requirements of the programme.

Each single course is open to a maximum of 7 external participants.

Application deadlines and instructions will be available approximately from the end of October on our [webpage](#)

Students enrolled in the single courses can attend in-person or online*

- To receive the **certificate of attendance**, you must attend at least 80% of the course
- To receive **certificates stating advancements, credits and scientific field** you must attend at least 80% of the course and pass the exam

**online attendance is granted only in case of the activation of the virtual classrooms for non-EU students (see Art. 6 of the call for applications) or upon request of the individual. Requests will be considered by and decided upon by the Scientific Committee at its sole discretion.*



PARTNERS

The Master in Climate Change: adaptation and mitigation solutions established a solid corporate partnership through the involvement of relevant stakeholders. Top managers from partner companies are involved in the teaching of several courses and in the training of the students during the internship period.

Corporate partners*



Scientific partners*



**list of partners of the 2023 edition*

PARTNERS TESTIMONIALS



“He is a valuable asset for our company. A great willingness to cooperate, strong sense of relational skills and his technical expertise make him a great candidate in the intelligence and research area of our company.”



“His flexibility to work on different topics and his great education are his strengths. I am very satisfied of his contribution to the company during the months of the internship.”



“She brought and keeps bringing a great contribution to the company, both on a ideational and implementation level. What stands out in her work is the knowledge acquired during her previous studies integrated with the educational path of the Master in Climate Change. I am really happy to work with her and I hope to see her grow professionally in the company.”



“What I appreciated most is her expertise and willingness to get involved in complex situation on both the workplace and construction sites. She joined the working group with extreme ease and seamlessly communicated with business partners.”

Due to privacy concerns, the names of the students and of the partner companies have been removed from the testimonies.

CAREER OPPORTUNITIES

Our Master helps students and professionals to enter the job market offering a specialized training suitable for executive positions as climate change specialists in the innovation and sustainability departments of companies, organizations and research institutes.

85% of our 61 students are employed within 3 months after their graduation

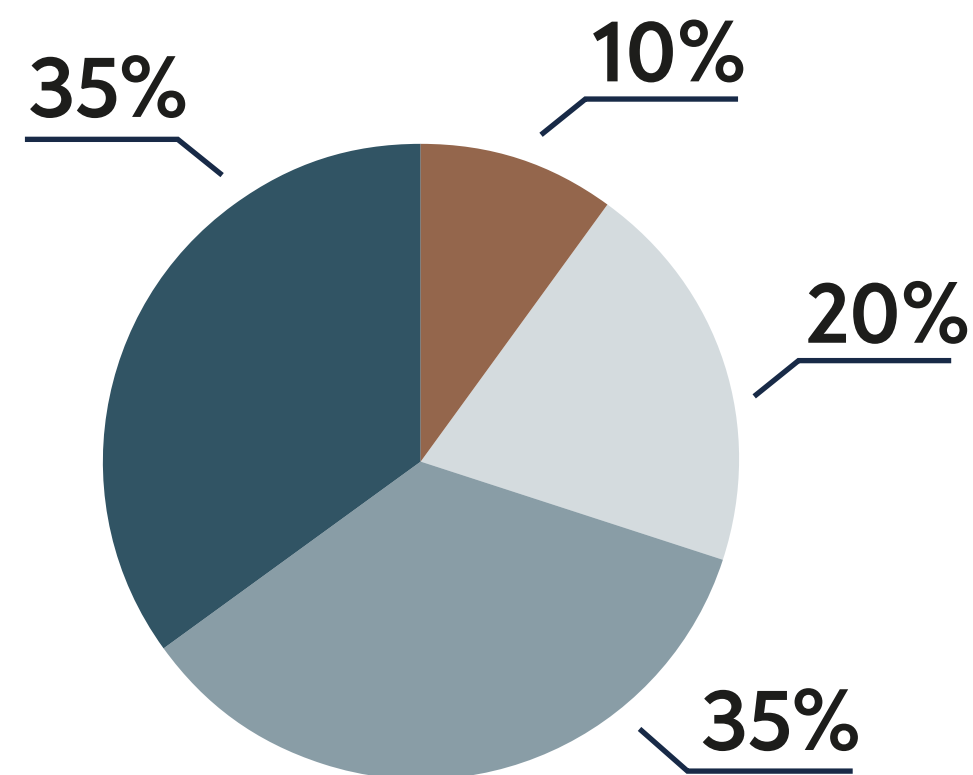
Of which:

46% were hired by the partner companies after their internship

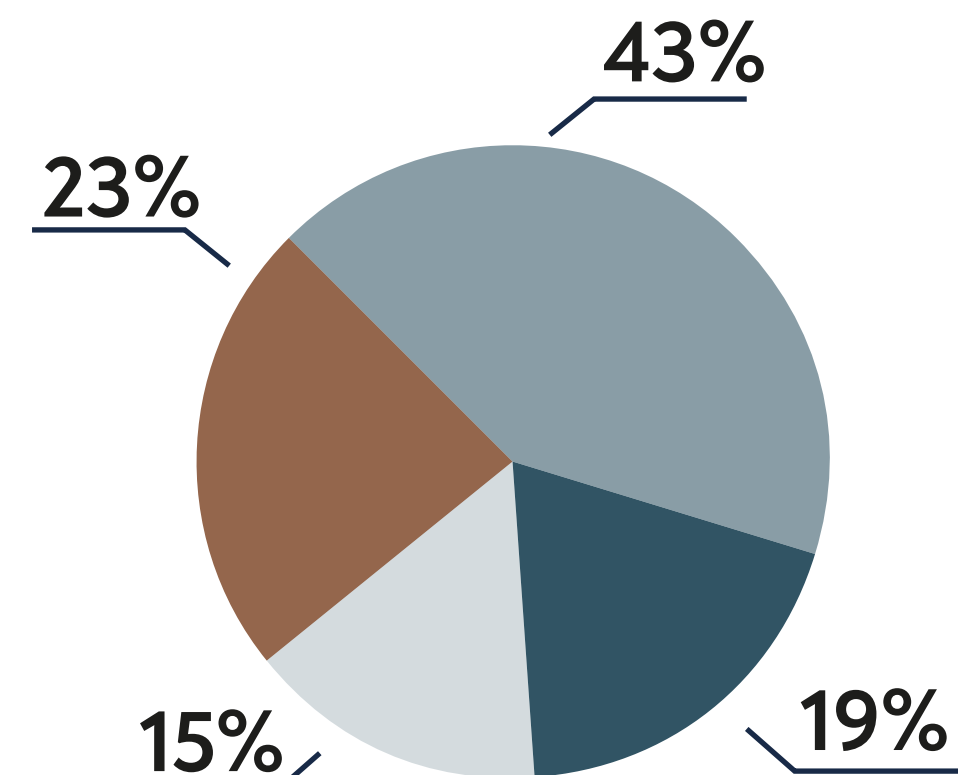
33% are working as climate change specialists in other companies

21% are working as researchers in universities and research institutes

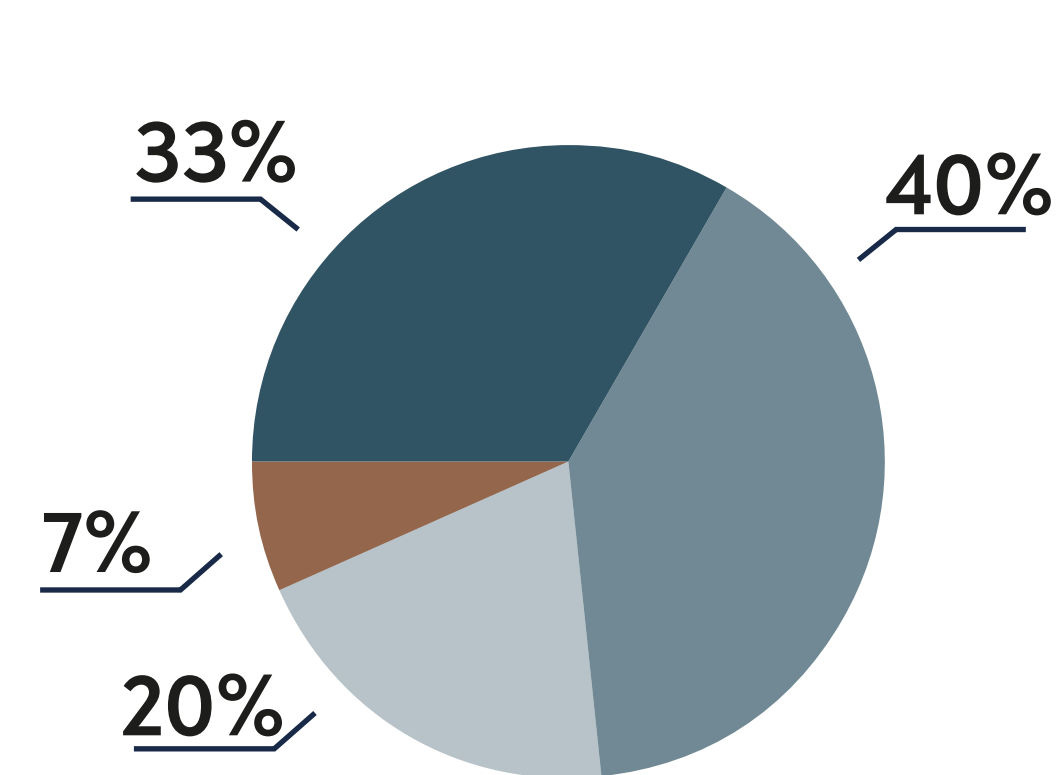
2020



2021



2022



Legend

- Employed in a partner company
- Employed elsewhere
- Employed in research
- No data



TUITION FEE AND WAIVERS

The participation fee for the entire year is 4.000,00 euro + 21,00 Euro for the enrolment fee.

The participation fee includes lectures, didactic materials, and technical visits and field trips.

Politecnico di Torino offers to the programme's participants the opportunity to benefit of 5 full participation fee waivers and of 10 partial participation fee waivers based on merit:

- 5 waivers of 4,000 euro each (covering 100% of the participation fee).
- 5 waivers of 3,000 euro each (covering 75% of the participation fee).
- 5 waivers of 2,000 euro each (covering 50% of the participation fee).

For further details on waivers please refer to the Call for applications.



FACULTY



Lorenzo Chelleri
Universitat Internacional de Catalunya
Climate-Resilient Cities and Communities



Alessandra Colombelli
Politecnico di Torino
Eco-innovation and Social Entrepreneurship



Stefano Corgnati
Politecnico di Torino
Energy-Efficient Buildings



Ericka Costa
Università di Trento
Corporate Social Accountability



Valeria Costantini
Università Roma Tre
Climate Policy, Economics and Finance



Manlio Coviello
Pontificia Universidad Católica de Chile
Energy Transition and Global Sustainability



Paolo D'Odorico
UC Berkeley
Food-Water Nexus in a Changing Climate



Bruno Dalla Chiara
Politecnico di Torino
Sustainable Transport Systems



Luciano De Propris
Consorzio ELIS
Climate-Change Compliance Reporting and Communication



Marco Piras
Politecnico di Torino
Earth Observation and Climate Monitoring

FACULTY



Rajandrea Sethi
Politecnico di Torino
Carbon Capture and Storage



Francesca Verga
Politecnico di Torino
CO2 and H2 Underground Storage



Pietro Salizzoni
Ecole Centrale de Lyon
An Introduction to Climate Change



Riccardo Arena
DNV
Carbon Footprinting and Carbon Trading



Davide Poggi
Politecnico di Torino
Renewables



Alberto Viglione
Politecnico di Torino
Coping with Extreme Events



Lucia Tsantilis
Politecnico di Torino
Resilient Infrastructure Systems



Marco Formentini
Università di Trento
Climate Resilient Supply Chain



Michele Ronco
Joint Research Centre - European Commission
AI for Climate Change



Chiara Ravetti
Politecnico di Torino
Firms, Climate Change and Sustainable Management

STUDYING AT POLITO

For more than 150 years, Politecnico di Torino (PoliTO) has been an Italian and world-leading institution in education, research, technological transfer, and services in all sectors of architecture and engineering.

Currently, PoliTO ranks among the top 20 European technical universities for education and research in engineering and architecture.

For additional information please visit:

<https://www.polito.it/>

For financial support for accommodation and living expenses, please check the EDISU website, the Piedmont Regional Agency for the Right to University Study that offers scholarships, grants, accommodation and food services: <https://www.edisu.piemonte.it/en#>





LIVING IN TURIN

Turin is a lively and elegant city in north-west Italy. The city is in a strategical position, as it is close to airports, ski resorts, natural parks, and mountains. With a population of around 870.000 inhabitants and 113.000 students coming from all over the world, the city offers high and affordable living standards, with a city centre buzzing with live-concerts, exhibitions, and events. Turin has a rich culture and history, as it was the first capital of Italy. It is known for its royal residences, palaces, art galleries and museums, monuments, tree-lined avenues, and historic restaurants and cafés. Turin is also renowned for its food and picturesque countryside.

<https://www.turismotorino.org/en>

CONTACTS

For questions regarding application procedure, admission requirements and scholarships:
master.universitari@polito.it

For enquiries on the educational programme and partnerships:
mastercc@polito.it .



CAMPUS LOCATION

Turin, Italy

LANGUAGES

English

STUDY FORMAT

In-class lectures

* online classes available

ECTS

67

DURATION

Entire programme: 1 year (Oct 2024 - Sept 2025)

Single course enrolment: 1 week

PACE

Full time: Mon-Fri 20-30h/week

TUITION FEES

4.000 €

FEE WAIVERS

5 full fee waivers (100%)

5 partial fee waivers (75%)

5 partial feewaivers (50%)

CONTACTS

mastercc@polito.it

master.universitari@polito.it

[Our website](#) [Polito website](#)

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***“THOSE WHO HAVE THE PRIVILEGE
TO KNOW HAVE THE DUTY TO ACT”***

ALBERT EINSTEIN



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