



CALL FOR APPLICATIONS FOR ADMITTANCE TO CA' FOSCARI UNIVERSITY OF VENICE PROFESSIONAL MASTER'S PROGRAMMES A/Y 2024/2025

Art. 1 - Call for Applications

- This Call for Applications governs admission to the 1st and 2nd Level Professional Master's Programmes (from here onwards "Master's") of Ca' Foscari University of Venice for A/Y 2024/2025. The main features of the courses are listed in the attached profiles, which form an integral part of this document.
- The offer of 1st and 2nd Level Master's is divided into two types: "Post Lauream" Master's and "Executive" Master's:
 - a. "Post Lauream" Master's means any Master's which integrates academic work with vocational content in order to help graduates take their first steps in the world of work.
 - b. "Executive" Master's means any Master's with typically more vocational content, aimed at graduates who have already entered the world of work and require more targeted, specialised training.
- 3. The Professional Master's Programmes for A/Y 2024/2025 are currently as follows:

1st level - Post Lauream

- 1. Administration and Management of Wildlife
- 2. Teaching Korean as a Foreign Language
- 3. Environmental and Land Law
- 4. Philosophy and History of Science and Technology
- 5. Luxury, Client Advisory and Store Management (Master's Programme profile in development)
- 6. Management of Local Police Services
- 7. Management of Cultural Heritage and Activities
- 8. Sustainability Management
- 9. Mobility Innovation and Management
- 10. Strategies for Sports Businesses (Master's Programme profile in development)
- 11. Water Resources Protection and Management
- 12. Strategies and marketing for agrifood businesses
- 13. Tourism innovation. Events, hospitality and experience management
- 14. Yoga Studies. Body and Meditation in Asian Traditions

1st level - Executive

- 15. Intercultural Communication
- 16. Corporate Sustainability and ESG Management
- 17. Teaching Foreign Languages
- 18. Teaching and Promotion of Italian Language and Culture to Foreigners (ITALS)
- 19. Employment and Social Security Law
- 20. Fine Arts in Filmmaking
- 21. Global Economics and Social Affairs





- 22. Governance, Innovation and Welfare Management
- 23. Professional Psychomotor Therapist
- 24. Quantum Machine Learning
- 25. Science and Techniques of Prevention and Safety HSE

2nd level - Post Lauream

- 26. Philosophical Consultancy
- 27. Health Economics and Management
- 28. IMEF International Master in Economics, Finance and Data Science
- 29. Risk Management, Internal Audit & Cybersecurity
- 30. Science and Management of Climate Change
- 31. Strategy Innovation

2nd level - Executive

- 32. Direction, management and coordination of social policies: social, social-welfare and social-health services
- 33. Circular economy for the future manufacturing
- 34. Geopolitics and Economic Affairs
- 35. Advanced Planning for Teaching Italian Language and Culture to Foreigners
- 36. Public Administration
- 37. Strategic Studies and International Security
- 4. A Master's Programme will only be activated if the minimum number of enrolled students for each course is reached. For this purpose, students are considered enrolled once they have fully paid their enrolment fees. In the event that a Professional Master's Programme is not activated, any enrolment fees already paid will be fully refunded, except for the €16.00 revenue stamp.

Art. 2 - Admission requirements

- 1. To enrol in a 1st level Master's Programme, candidates must hold at least one of the following university qualifications: university diploma, old system undergraduate degree, degree, 1st level university diploma.
- 2. To enrol in a 2nd level Professional Master's Programme, candidates must hold at least one of the following university qualifications: old system undergraduate degree, specialist degree, 2nd cycle degree, 2nd level university diploma.
- Students who are about to graduate may also be admitted to Professional Master's Programmes. The
 application will generally be accepted provided they gain their qualification within one month from start of the
 course. In this case, enrolment in the Master's Programme may be finalised only after the qualification valid
 for admission has been awarded.
- 4. Simultaneous enrolment in a Master's Programme and additional university courses of study is permitted, subject to verification of compatibility, in accordance with Law No. 33 of 12 April 2022. Students who are already enrolled in university courses of study are required to report them by e-mail to the Master's and Post Lauream Department (postlauream@unive.it) when applying.
 - Please be reminded that simultaneous enrolment in two courses with compulsory attendance is not allowed.





1. At risk of exclusion, the admission application must be filled in and submitted online by the deadline indicated in the individual course profiles attached.

The online procedure for admittance to the selection is divided into two stages:

- a) **registration** on the University website (<u>www.unive.it/registrazione</u>), providing your personal data as well as details of your residence and domicile if applicable. Former students who already have access credentials to the Reserved Area do not need to register. If you have forgotten your password or it has expired, you can renew it with immediate effect at the link https://apps.unive.it/newpass/recupera;
- b) access to the Reserved Area of the www.unive.it website; there are three options depending on the candidate's status:
 - former students of the University and therefore with matriculation number and password can log in with these credentials;
 - candidates with Italian nationality, or currently residing in Italy, who do not have a matriculation number and password, must log in with their SPID. To obtain a SPID: https://www.spid.gov.it/;
 - applicants of a nationality other than Italian, who are not currently in Italy and do not have a
 matriculation number and password, may request their access credentials via the link
 www.unive.it/nospidaccess.
- c) filling in the admission application in your personal Reserved Area, click on Menu > Administration > Admission tests (former students: click on: Admission and enrolment > Enrolment for admission tests S3), choose the type of course (1st or 2nd Level Professional Master's Programme) and finally, the course you are applying for. During the online procedure, candidates must attach the following documents in electronic format:
 - self-certification (in accordance with Italian D.P.R. No. 445 of 28/12/2000 and subsequent amendments) of the valid qualification for admission;
 - curriculum vitae;
 - photocopy of a valid ID;
 - any other documents required for admission to the chosen Master's Programme (see attached profiles).

During this stage candidates will be asked to enter only the qualification valid for admission to the chosen Master's Programme (**do not enter any higher qualification you may have**). The information required will include: type of qualification, the University which awarded the qualification, name of the course, date of award, registered grade obtained, the date you registered with the University System (SU) (namely the date when you first enrolled at an Italian University; if you do not remember the exact day, you only need to write the 1st of October of that year). In addition, the details of your high school diploma will also be requested.

The candidate may modify the information entered and/or attach/remove the attached documents even after having filled in the online application, provided that the deadline specified in the attached individual profiles has not expired. Files must be in JPEG or PDF format and must not exceed 5 MB.

- 2. At the end of this procedure, you will receive an email confirming submission of your application for admission to the Master's Programme.
- The version in English can be found on the website https://esse3.unive.it. Click on Menu > eng > Login.
- 4. Payment of a non-refundable selection fee is required. This must be paid through the PagoPA system, by clicking on the "Payments" button displayed at the end of the procedure.
- 5. Candidates will be excluded from selection if they fail to meet the deadline indicated for submitting the admission application. They will also be excluded if they fail to pay the selection fee (where applicable).





number and password) for accessing the University's IT and internet services.

7. If following the enrolment deadline spaces become available due to withdrawal by other applicants, admission may be offered to candidates in the order in which they have been ranked during the admission process.

Art. 7- Re-opening of selection

- 1. If the deadline for presentation of the admission applications is reached without sufficient candidates to achieve the minimum number of students specified for activation of the Master's Programme, the selection procedure may be re-opened immediately.
- At the end of the enrolment process, if the minimum number of students required for activation of the Master's as specified in the Call for Applications has not been reached, the selection procedure may be re-opened once only, without prejudicing the start of the course.
- At the end of the enrolment process, if the minimum number of students required for activation of the Master's has been reached, but a number of places are still available, the selection and enrolment procedure may be re-opened once only, without prejudicing the start of the course.
- 4. If the Call for Applications is re-opened, when the deadline for applications is reached, further candidates will be selected and new public rankings will be drawn up.
- 5. Those admitted must abide by the terms and conditions indicated in the selection in which they have taken part, at risk of exclusion from said selection.
- 6. If a candidate admitted during the first selection fails to enrol within the specified deadline and the Call for Applications is re-opened, the candidate may enrol on the Master's Programme during the second selection, provided that he or she is in an eligible position in the new rankings.
- 7. Activation of the Master's Programme is conditional on reaching the minimum number of enrollees indicated in the individual presentation profiles attached to this Call for Applications.

Art. 8 - Qualifications obtained abroad and rules for foreign citizens

- 1. Italian and foreign citizens holding qualifications obtained abroad are also eligible to submit applications for Professional Master's Programmes, provided that their qualification is equivalent to the level, nature, duration and content of the Italian academic qualification required for admission to the course. Enrolment is, however, subject to assessment of the suitability of the qualification for enrolment onto the Master's Programme.
- 2. In order to submit an application, as referred to in the previous art. 3, citizens holding a qualification obtained abroad must attach:
 - a) a diploma (translated into English or Italian) certifying that their qualification is equivalent to a 1st level (for access to a 1st level Master's Programme) or 2nd level (for access to a 2nd level Master's Programme) university diploma;
 - b) a certificate (translated into English or Italian) released by the competent University certifying the examinations passed (transcript of records);
 - c) a diploma supplement or, if the qualification was obtained outside the EU, a "declaration of equivalence" of the diploma, drawn up by the competent Italian diplomatic-consular representative based in the country in which the qualification was obtained;
 - d) curriculum vitae;
 - e) photocopy of a valid ID;
 - f) any documents required for admission to the chosen Master's Programme (see attached profiles).
- 3. For students who have not yet been awarded a qualification, it is sufficient to attach a certificate of enrolment (translated into English or Italian) for examinations, in addition to the documents specified in the previous points d) and e). During the admission phase only, students who have been awarded a qualification, but are not yet in possession of the final diploma, may attach the provisional diploma issued by the University of origin. For enrolment purposes, the documentation must, however, be as specified in paragraph 6 below.
- 4. Non-EU citizens residing abroad must submit the application for admission to the Master's Programme directly to the University following the procedure and within the deadline indicated in the individual profiles attached and providing the above-mentioned documents.
- 5. The International Office Welcome Unit will notify the competent agencies of the result of the selection for the purposes of issuing the necessary entrance visa and, where applicable, finalising the required documentation





for enrolling in the Master's Programme.

- 6. If admitted, citizens as per paragraph 1 of this article must complete the pre-enrolment procedure within the deadlines specified, attaching:
 - a) a diploma (translated into English or Italian) certifying that their qualification is equivalent to a 1st level (for access to a 1st level Master's Programme) or 2nd level (for access to a 2nd level Master's Programme) university diploma;
 - a diploma supplement or, if the qualification was obtained outside the EU, a "declaration of equivalence" of the diploma, drawn up by the competent Italian diplomatic-consular representative based in the country in which the qualification was obtained;
 - c) copy of a valid ID;
 - d) study visa (if possessed);
 - e) residence permit (if possessed).
- 7. If not in possession of the documents indicated in paragraph 6, b) above, candidates admitted to the Professional Master's Programme will be provisionally enrolled on condition they submit the above-mentioned documents within the deadline for applying for the final examination; otherwise they will not be eligible to sit said examination and will not be awarded the qualification.
- 8. Enrolment will be completed by the Wecome Unit. In the case of students residing in non- EU countries, enrolment will not be completed until the student has obtained an entrance visa. Students enrolled in online Professional Master's Programmes are exempted. Each student will receive confirmation of the successful enrolment via email, together with new credentials (matriculation number and password) for accessing the University's IT and internet services.
- The Welcome Unit will also provide support for procedures to obtain a visa, residence permit and tax code and will help the candidate settle into the University in general. The same office may also contact candidates to verify the original documents.
- 10. At any time, candidates may be asked to supplement their submitted documentation in order to verify their eligibility.

Art. 9 - Attendance and withdrawal from studies

- Attendance by enrolled students of the various didactic activities of the Professional Master's Programmes is compulsory; justified absences are only permitted within the limits of each course (see the individual profiles attached). Non-fulfilment of attendance obligations will result in exclusion from the final test and will preclude awarding of the qualification.
- 2. Students may apply to withdraw from their studies at any time by notice to the Master's and Post Lauream Department (postlauream@unive.it);
- 3. Withdrawal of students from outside the European Union invalidates the residence permit for study purposes.
- 4. Withdrawal from the course or exclusion does not exempt students from paying any further instalments owing. A student may be exempted from payment of the second instalment only if the request for withdrawal is presented within one month from the start of the course.
- 5. Under no circumstances will enrollment fees already paid be refunded.

Art. 10 - Issue of qualification

- 1. Students who have attended the didactic activities, completed the internship and passed the mid-term and final tests will be awarded the qualification of 1st or 2nd level Professional Master's and the relative diploma will be issued.
- 2. Students not qualifying within the sessions established in that Professional Master's Programme will be declared lapsed. Lapsed students are not exempted from paying any further instalments due.

Art. 11 - Recognition of credits

1. Following verification of the eligibility of the contents, students who enrol in undergraduate degree or second-





- cycle undergraduate degree programmes after having obtained a 1st or 2nd level Professional Master's qualification may be awarded university credits, substituting modules included in the degree programme.
- 2. The maximum number of credits (CFUs) recognised is regulated for each course and in any case cannot be higher than 60 credits for both undergraduate and second cycle undergraduate degrees. It is, however, the responsibility of the competent academic body to evaluate case-by-case the consistency of the contents of the academic activities completed in the Master's with the course for which recognition of credits is requested.

Art. 12 - Enrolment in individual modules

- 1. Certain Master's Programmes offer a limited number of places for students who wish to enrol for individual modules (see attached profiles).
- To enrol for individual modules, students must meet the same requirements as those needed for eligibility for the relevant Master's Programme.
- 3. Enrolment can be completed by filling in the form which can be found on the University website and following the instructions. The form and related documentation may be sent by e-mail, attaching a copy of an identity document, to the Master's and Post Lauream Department (postlauream@unive.it).
- 4. Attendance is compulsory. Only students who have attended at least 70% of the academic activities of the individual module will be admitted to the final examination, unless otherwise indicated.
- 5. Students enrolled for the module who pass the final examination will be awarded a certificate stating the number of acquired credits and relative SDS (scientific disciplinary sector).
- 6. Enrolment for individual modules will remain open until the maximum number of participants is reached.
- 7. If candidates enrolled for individual modules wish to complete the course and obtain the diploma by attending future editions of the Master's Programme, the course Board of Professors will evaluate case-by-case possible exemption from attending the modules already successfully completed.

Art. 13 - Privacy

- Pursuant to EU Regulation 2016/679 ("General Data Protection Regulation GDPR") and relative Italian
 national legislation (Legislative Decree No. 196/2003 and subsequent amendments), you are informed that
 personal data voluntarily provided to Ca' Foscari University of Venice will be processed by said University
 adopting appropriate measures to guarantee its security and confidentiality, in accordance with the above
 Regulation.
- 2. The privacy notice is available at: https://www.unive.it/pag/36550/

Art. 14 - Final provisions

1. For all matters not expressly covered by this Call for Applications, reference should be made to the rules contained in the "Master's and Lifelong Learning University Regulations" as per Rector's Decree No. 893 of 19/10/2011 and subsequent amendments, available for consultation at: http://www.unive.it/pag/8253/.

Attachments: 37

1-37 Master's Programme Profiles





Environment

MASTER IN SCIENCE AND MANAGEMENT OF CLIMATE CHANGE

SEVENTH EDITION A.A. 2024-2025

Presentation

Climate change is one of the key challenges for the present and the future posing major risks to modern societies at large. Its negative consequences affect not only the welfare of households, with a disproportionate impact on weaker social groups, but also, as stated by the reports from the to the World Economic Forum in the last years, industry, and business. Indeed, they consider the failure to implement effective mitigation and adaptation policies as one of the top-five economic risks.

The Master of Research in Science and Management of Climate Change is a 1-year program aimed at preparing professional leaders capable of managing the complex and multi-faceted risks posed by climate change, as well as the opportunities that might arise. It features the collaboration of an increasing number of partners from the business, NGO, and policy sectors. It shares the 1st year of didactical activities with the homonym PhD Program in science and management of climate change.

Objectives

The goal of the master is to form experts with a multidisciplinary set of knowledges enabling a systemic understanding of pressures triggered by climate change. In particular it aims to:

- a) Provide high-level academic training about the physical basis and the socio-economic aspects of climate change;
- b) Prepare scientists who can understand, synthesize, and communicate the biophysical and socio-economic nature of climate change, evaluate the socio-economic implications of climate change impacts and risks, and design innovative policy solutions and risk management strategies;
- c) Acquire solid quantitative modeling and statistical skills to i) assess the socio-economic impacts of climate change, their costs and benefits, ii) evaluate and manage climate change







physical and transition risk, iii) analyze, evaluate, and design innovative climate policy solutions, iv) conceive transformational pathways in the context of sustainable development.

Didactical Activities

In the first year Master students will follow 11 compulsory courses (66 CFU). Didactical activities will consist of frontal lectures, seminars, hands-on sessions, group activities, presentation of group/individual projects. Guest lectures and seminars from international experts will be offered throughout the year. Additional 75 hours of optional courses and practical, hands-on sessions will be available to all students. Master students end their program with a 250-hour internship.

TEACHINGS

FIRST TERM

The first term will build the foundations and will be articulated into five common, compulsory courses: Mathematical Modeling and Programming, Statistics, Introduction to Programming and Machine Learning, Earth System Dynamics, Environmental and Climate Economics and one optional course, Climate of the Past. In the second term, students will choose one of the two streams articulated in 4 courses each.

- 1- Climate Economics and Finance: CGE and Integrated Assessment Modeling of CC Impacts and Policies; Applied Environmental Economics and Policy Evaluation; Domestic and International Climate Policies; Climate Finance.
- 2- Climate Modelling and Impact Assessments: Chemodynamics, Climate Change and Environmental Quality; Climate Modeling and Monitoring; Risk Assessment and Decision Support System for Environmental Impacts of Climate Change; Climate Damage Modeling and Assessment.

All students will be offered three optional LABS: Data, Tools and Methods for Earth Sciences (introduction and practicals, 15 hours each); Topics in Science and Management of Climate Change (15 hours). They will also follow 2 out of 3 common courses: Energy Systems and Technologies; Adaptive Management of Natural Resources and Agricultural Systems; Decision Theory and Multicriteria Analysis.

Mathematical Modeling and Programming

Objective

Understanding of dynamic systems and preliminary concepts such as linear algebra, eigenvalues, complex numbers. Introduction to mathematical instruments for dynamic systems and applications to environmental problems. Lectures will focus on theory as well as on applications through handson sessions.

Lecture hours 30







Statistics

Objective

Introduction to the statistical methods useful to quantify changes in climate variables and the impacts of climate change on human activities. Students will choose two modules, 15 hours each, for a total of 30 hours (6 credits), from the following four 15-hour (3 credits) modules:

- Introductory Statistics: Exploratory data analysis and descriptive statistics, probability basics (distributions and sampling), basic inference (testing for the mean in one sample and two sample problems);
- Regression Models and Distribution Fitting: Estimation procedures for univariate distributions (distribution fitting). Simple and multiple linear linear regression: estimation, model building and evaluation, inference for linear models, prediction;
- Statistical Models: Generalized Linear Models and Extensions: Logistic regression and generalized linear models. Non-parametric/non-linear regression (loess, splines, generalized "additive" models);
- Spatio-temporal Statistical Models: Introduction to time-series data and models (ACF, PACF, decompositions and ARIMA models). Spatial data (variogram, ordinary kriging).

Lecture hours 30

Introduction to Programming for Statistics

Objective

Introduction to the R and Python statistical softwares. Lectures will focus on imparting data handling and analysis skills utilizing various commonly used scientific data formats (e.g. netCDF, ascii etc). Students will also be introduced to geo-spatial mapping routines in R to facilitate rapid spatiotemporal aggregation and mapping of environmental and socio-economic data.

Lecture hours 15

Machine Learning

Objective

Introduction to the principles and elements of machine learning. Application of commonly used neural networks and other machine learning approaches with focus on climate science will be a central theme of the course. Lectures will include hands-on machine learning algorithms using Python programming language. Students will get an overview and experience in data science, a hot topic having wide-ranging applications in environmental studies

Lecture hours 15.

Earth System Dynamics

Objective

Introduction to climatology. Basic understanding of how Earth's climate operates and how it is investigated by contemporary and pioneering climate research, with focus on the physical components of climate. Students will become familiar with the main modern tools used for characterization, understanding and prediction of climate and learn fundamentals of anthropogenic climate change and natural climate variability. Lectures will be frontal.

Lecture hours 30

Environmental and climate economics

Objective







Introduction to the concept of market failures and the role of climate policy. Climate-economy tools to simulate and evaluate climate policy instruments. Lectures will focus on theory and applications through hands-on sessions, group discussion, and students' presentations. Students will learn to compare costs and benefits of climate change, analyze, evaluate, and design climate policy solutions, and conceive transformational pathways in the context of sustainable development.

Lecture hours 30

Climate of the Past

Objective

Introduction to paleo-climate, time scales of climate change, and climate in human history. Methods for detecting climate change, including proxies, ice cores, instrumental records and time series analysis. Lectures will focus on the physical and chemical processes in climate, including primordial atmosphere, ozone chemistry, carbon and oxygen cycles, and heat and water budgets. Students will learn about the internal feedback mechanisms in earth's climate system, including ice, aerosols, water vapor, clouds and ocean circulation.

Lecture hours 30

SECOND TERM

Students can choose to follow Stream 1 or Stream 2 during the second term, 2 of the common courses and any lab they wish.

STREAM 1: CLIMATE ECONOMICS AND FINANCE

Students in Stream 1 take all these courses.

CGE and Integrated Assessment Modelling of CC Impacts and Policies

Objective

Introduction to macroeconomic approaches used to study the socio-economic impacts of climate change and the policy responses. Introduction to four key-topics related to modeling aspects: discounting, uncertainty, impacts assessment, mitigation, and adaptation policy assessments. Focus on Computable General Equilibrium (CGE) models. Lectures will offer theoretical insights as well as applications with hands-on sessions. Students will learn the theoretical foundations of those models and learn how to apply them for the analysis of the socio-economic impacts of climate change.

Lecture hours 30

Applied Environmental Economics and Policy Evaluation

Objective

Introduction to econometric methods to evaluate historical environmental and climate policies, with an empirical focus on their impacts on innovation and employment.

Lecture hours 30

Domestic and International Climate Policies

Objective

Introduction to the recent history of international negotiations on climate change and to the main factors that prevent countries from achieving a widespread and effective agreement. Lectures will focus on the economic theory of climate negotiations using a quantitative approach based on game







theory. The course will also review the main climate policy instruments with particular emphasis on the design of emission permits schemes both nationally and internationally.

*Lecture hours 30**

Climate Finance

Objective

Introduction to the new scientific approaches required to describe and manage climate-related risk, a topic of increasing interest for practitioners of both public and private financial institutions. Students will learn: i) the main theoretical notions of climate financial risk (in class) and ii) practical know-how for the computation of metrics of climate financial risk on empirical data (hand-on sessions). *Lecture hours 30*

STREAM 2: CLIMATE MODELING AND IMPACT ASSESSMENTS

Students in Stream 2 take all these courses.

Chemodynamics, Climate Change and Environmental Quality

Objective

Introduction to environmental chemistry and thermodynamics. Climate system under a chemical and thermodynamic perspective. Impacts of climate change on environmental chemical pollution. Environmental risk assessment by exposure to chemicals. Lectures will focus on the behavior of environmental pollutants having different lifespans, with emphasis on the feedback cycle under climate change. Students will learn of the overall framework of contaminants' management, and to estimate and manage climate change risk.

Lecture hours 30

Climate Modelling and Monitoring

Objective

Introduction to climate modeling and monitoring, the science of remote sensing, with a particular focus on its viability for recognition of environmental problems, as well as different applications to issues related to climate variability and its management. Overview of key aspects of climate modeling, including the numerical implementation of different physical and dynamical processes and the evaluation and assessment of simulation outputs. Particular attention will be given to international climate simulation activities, like CMIP6.

Lecture hours 30

Risk Assessment and Decision Support System for Environmental Impacts of Climate Change

Objective

Introduction to the tools and methods for assessing environmental hazards, vulnerability, and risks posed by climate change in the context of global environmental changes. Decision Support System for climate change risk assessment and management. Lectures will focus on theory as well as on applications through hands-on sessions, students' presentations, and group discussion. Students will learn to define and implement environmental risk analysis, impacts and vulnerability assessment, and use related specific decision support systems.

Lecture hours 30







Climate Damage Modelling and Assessment

Objective

Introduction to the theoretical and practical understanding of the methods and tools to assess climate change risk and the economic benefits of climate adaptation. Analysis of climate policies and management of risks deriving from climate change and variability. Lecture will focus on methods as well as applications in R and QGIS. Students will learn to estimate and manage climate change risk utilizing current geospatial modeling tools and practices.

Lecture hours 30

COMMON COURSES

Students choose 2 courses.

Decision Theory and Multi-criteria Analysis

Objective

Introduction to decision theory under uncertainty, utility theory, decision tree, group decision, weighted averaging, ordered weighted averaging. Methods for optimization problems, in particular Linear Programming approach and some extensions. Lectures will focus on methods as well as hands-on exercises in R. Students will learn how to understand, specify, describe some problems in this field, and to implement a resolution strategy.

Lecture hours 30

Energy Systems and Technologies

Objective

Introduction to the basic energy principles and laws (thermodynamics principles), and overview of the energy system, generation and conversion technologies, with particular attention to low-carbon and renewable technologies, as well as the relationship between climate change and the built environment.

Lecture hours 30

Adaptive Management of Natural Resources & Agricultural Systems

Objective

Introduction to the principles of natural resources management. Lectures will focus on the interactions between natural and human elements of socio-ecosystems and agroecosystems in particular. Sustainability and sustainable development will be central themes of the course. System dynamics will be the most widely used approach. Spatial and temporal dynamics are explored with concrete examples and case studies. Students will be involved in individual and group case-studies and learn methods and tools for problem-solving approaches.

Lecture hours 30

LABS

Students choose which lab to attend.







Data, Tools and Methods for Earth Sciences - Introduction

Objective

The lab will introduce students to recent tools, methodologies, data repositories and advancements in computing infrastructures applicable in Earth Sciences, with special emphasis on climate impacts and risk assessment.

Lecture hours 15

Data, Tools and Methods for Earth Sciences - Practicals

Objective

Students will develop an understanding of various observational/model simulated data sources, scope and limitations of usage, and tools to access and process Earth Sciences' data on cloud computing infrastructures such as the Copernicus Data Store.

Lecture hours 15

Topics in Science and Management of Climate Change

Objective

Every year this course will cover a specific topic within the field of science and management of climate change. The contents will be communicated at the beginning of the academic year. *Lecture hours 15*







Duration and summary of didactic activities and university credits (CFU)

The Master's lasts for one year. It foresees:

- 330 hours of compulsory didactic activities (66 CFU),
- additional 75 hours of optional courses and practical, hands-on sessions.
- A 250-hour internship (10 CFU) forms an integral part of the course and represents an excellent opportunity for a real-life on-the-job experience. The internship is mandatory. For students already working professionally in the sector, the same activities, accompanied by the drafting of a project work (2CFU), will be recognized as valid for the completion of the internship.

Qualification

Students attending the didactic activities, completing the internship and passing the intermediate verifications and final examination will be awarded the Master of Research's Diploma (2nd level) in Science and Management of Climate Change

Course Period

September 2024 - June 2025

Teaching Methods

Frontal lectures, hands-on-sessions, discussion groups, labs, seminars, guest lectures from international experts

Language

English.

Attendance

Attendance will be monitored through a register. Regular attendance in the classroom is compulsory to passing the individual modules. **Absences must not in any case exceed 20% of teaching hours for each individual module**. Credits are assigned with completion of the individual modules and internship/project work activities and passing of the final examination. Students employed in a professional activity coherent with the Master's course can replace the internship with the working activity.

Course Location

Scientific Campus Via Torino, Mestre (VE) / Economic Campus San Giobbe, Venezia / VEGA Scientific Park, Mestre (VE).







Admission Requirements

To enroll in the Master's, candidates must be in possession of at least a second cycle, specialization or pre-reform (Italian Ministerial Decree no. 509/99) title. English language to proficiency level of at least B2 level is required, and it will be evaluated during the interview; no official certificate is required. Notions of calculus and linear algebra are required. Master's applicants interested in the Deloitte scholarship need to explicitly mention that in the cover letter and will be interviewed by a company representative as well. Only applications accompanied by all the required documentation will be considered.

Selection Procedure

A selection committee will be appointed to assess candidates based on their CV and a remote interview. The oral admission test, in English, will assess: candidate's motivations, quantitative mathematical and statistical skills and fluency in English.

Graduate Eligibility

Students about to graduate may also be admitted to the course, provided they qualify within one month from the start of the course. In this case, enrolment to the Master's program may be finalized only after the valid qualification for admission has been awarded. Non-enrolled people may attend as auditors and will be awarded a certificate of attendance.

Available Places

Maximum number of available places: 15.

Course Fee: € 6.000

- > 1st installment by 09/08/2024: € 3.016 (including € 16 stamp duty, not refundable, to be paid through PagoPA)
- > 2nd installment by 10/01/2025: € 3.000

Enrolement

- ➤ ADMISSION APPLICATION SUBMISSION (online procedure, Call for Applications, art. 3): June 2024, updated dates will be published here
- ➤ SELECTION AND RESULT ANNOUNCEMENT by July 29, 2024
- ➤ ENROLMENT COMPLETION (online procedure, Call for Applications, art. 6) by August 9, 2024 START of courses: September 2024. See: https://www.unive.it/data/en/165/courses.

Study Support

Loans are available from the University's partner banks (for more information: http://www.unive.it/pag/8560/).







A full waiver for the fees will be granted to the most deserving student. Another full grant will be funded by Deloitte for a student interested in carrying out the 250-hour internship within the company in Italy.

Coordinators

- > Coordinator prof. Francesco Bosello
- > Deputy coordinator prof. Enrica De Cian

Website

www.unive.it/pag/39158/

Contacts

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