UNIVERSITÀ
DEGLI STUDI
DI MILANO

Master's degree programme in

Computational social and political science

facoltà di

SCIENZE POLITICHE, ECONOMICHE E SOCIALI

Applications and admissions

Limited enrolment with admission test
For information about the number of available positions and the date of the test: https://csps.cdl.unimi.it/en/application

Admission requirements

1. Curricular requirements:
   Applicants may have different Bachelor's degrees, but they must have obtained at least 30 ECTS in computer science, mathematics, applied physics, statistics or econometrics and/or in the area of political science and sociology. These 30 ECTS must include a minimum of 9 mandatory ECTS in the area of statistics and a minimum of 12 mandatory ECTS in the area of political science and sociology.
   The specific scientific sectors are published on the website https://csps.cdl.unimi.it/en
2. Proficiency in English:
   B2 level or higher CEFR is required for admission.
   The B2-level requirement will be ascertained by the University Language Centre (SLAM) upon admission as follows:
   - Language certificate of B2 or higher level issued no more than three years before the date of admission application, recognized by the University of Milan
   - English level achieved during a University of Milan degree programme and certified by the University Language Centre (SLAM) no more than four years before the date of admission application
   - Entry test administrated by the University Language Centre (SLAM)

   The candidates that do not satisfy the requirement by the deadline will not be admitted to the Master's degree programme and they will not have the opportunity to take further tests.
   Candidates without an Italian degree or diploma must obtain 3 credits in "Additional language skills: Italian" by proving an Italian language proficiency at level A2 within the Common European Framework of Reference for Languages (CEFR). The level of Italian proficiency can be assessed by the end of the degree course according to one of the following ways:
   - by submitting a language certificate at A2 level or higher recognized by the University of Milan and obtained no more than three years earlier to the submission;
   - by passing an entry-level test, organized by SLAM, which can be taken at the beginning of each semester.
3. Personal competences and skills: assessment criteria:
   Admission is conditional and depends on the assessment of the personal competences and skills of the student provided by the Admission Board, whose members are appointed by the Faculty Board (Collegio Didattico).
   The assessment of personal competences and skills for admission to the Programme is conducted through an online written test in English about basic competences in statistics, computer science, sociology and political science. Candidates who do not achieve the minimum score required by the Admission Board on this test will not be admitted to the programme. The test can only be taken once.
   Applicants with foreign qualifications must demonstrate that their academic credentials meet the basic requirements equivalent to those required of students with Italian qualifications.

Objectives

The Master's Degree Programme in Computational Social and Political Science equips students with the knowledge and competences needed to provide empirically-grounded and theoretically-informed explanations of political and social phenomena by applying computational and quantitative methods of analysis to quantitative and qualitative data. Entirely taught in English, the program combines the hypothesis-driven deductive approach typical of the social sciences with the inductive approach of data science, enabling students to develop a robust conceptual, methodological, and practical repertoire for empirically grounded analysis of social and political phenomena. Graduates are able to conduct projects in social and political research, with observational or experimental research designs, with the aim of testing theoretically-grounded hypotheses, exploring aggregate phenomena and trends, and developing evidence-based proposals for political and social interventions. Students work with primary survey data, digital data (including social media data), and secondary data, including numerical and textual data, to be collected, managed and analysed using statistical or computational models, large language models, machine learning, and statistical learning techniques. By integrating attention to theory, qualitative data and factors, and advanced computational techniques, students are stimulated to develop a mindset for causal inference and fine-grained detection of generative, causal mechanisms driving complex socio-political outcomes, including collective opinions, social dynamics, and political trends.

Career prospects

The MSc programme in Computational Social and Political Science trains the following professional figures.

Computational Social Scientist

Its main functions are to design and implement data collection on social phenomena (both offline and online); analyse the resulting data (or supervise and coordinate their analysis); interpret and synthesize the results of these analyses to describe complex social phenomena, map behavioural, attitudinal, or market trends, test theories about the causes of these phenomena and trends, and provide probabilistic forecasts; present the results of this work, along with the information and insights derived from them, in textual, graphical, or audiovisual formats for public or private stakeholders.

Computational Analyst for Public Policy

Its main functions are to design and implement systematic collections of evidence and data on political phenomena, including electoral campaigns and trends, the emergence and evolution of political movements and parties, and public opinion trends; analyse these data (or supervise and coordinate their analysis); interpret and synthesise results to describe complex political phenomena, map political and electoral trends, test theories about the causes of these phenomena and trends, or predict how such phenomena may unfold in the future.

Degree syllabus

Year I

COMPULSORY LEARNING ACTIVITIES	ECTS
Advanced multivariate analysis	6
Data governance: Ethical and legal issues	6
Foundations of statistical modelling for social and political sciences	9
Policy design	6
Programming for social data science	6
Research design and experimental methods in the social sciences	12
Survey methods for public opinion research	9
Elective courses	6

Year II
(to be made available as of academic year 2026/2027)

COMPULSORY LEARNING ACTIVITIES	ECTS
Agent-based modelling	6
Causal inference in social and political science	6
Social network analysis	6
Text analytics, machine learning and large language models	12
Elective courses	6
Internship in the private sector, in government or public administration organisations or in academic institutions	9
Final exam	15

INFO

- *Disciplinary classification:* Political science (LM-62 R), Sociology and social research (LM-88 R)
- *Duration:* 2 years (120 ects)
- *Attendance:* Attendance is strongly recommended
- *Location:*
  - via Conservatorio, 7 - Milan
- *Websites:*
  csps.cdl.unimi.it/en
  www.unimi.it

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For further information: www.unimi.it - Education