UNIVERSITA' DEGLI STUDI DI MILANO
MANIFESTO DEGLI STUDI A.A. 2026/27
LAUREA MAGISTRALE IN
HUMAN-CENTERED ARTIFICIAL INTELLIGENCE (Classe LM-55 R)
Immatricolati nell'a.a. 2026/2027

GENERALITA'

Classe di laurea di appartenenza:	LM-55 R Scienze cognitive
Titolo rilasciato:	Dottore Magistrale
Curricula attivi:	HYBRID AI / NEURO-AI / AI AND LAW
Durata del corso di studi:	2 anni
Crediti richiesti per l'accesso:	180
Cfu da acquisire totali:	120
Annualità attivate:	1°
Modalità accesso:	Libero con valutazione dei requisiti di accesso
Codice corso di studi:	CBK

RIFERIMENTI

Presidente Collegio Didattico

Giuseppe Primiero

Docenti tutor

Academic guidance tutor for specific majors:
HYBRID: Giuseppe Primiero (UNIMI)
NEURO-AI: Claudia Casellato (UNIPV) e Eduardo Caverzasi (UNIPV)
LAW & AI: Lorenzo Giasanti (UNIMIB)

Erasmus and international mobility tutor:
John Andrew Michael (UNIMI)

Study plan tutor:
Pierluigi Perri (UNIMI)

Internship tutor:
Eduardo Caverzasi (UNIPV)

Seminar and workshop tutor:
Alessandro Raganato (UNIMIB)

Dissertation tutor
Hykel Hosni (UNIMI)

Master's degree admission tutor:
Claudia Casellato and Danilo Benozzo (UNIPV)
Marco Briziarelli (UNIMIB) and Anna Caterina Dalmasso (UNIMI)
Nicola Canzian and Ludovica Tavassi (UNIMIB)

Sito web del corso di laurea

https://hcai.cdl.unimi.it/en

Student registrar

Via S. Sofia 9/1 - 20122 Milano https://www.unimi.it/en/node/359/

Teaching Office

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Tutor for students with disabilities and for students with Specific Learning Disabilities (SLD)

Caterina Marchionni (UNIMI)

Vice-Presidents of the Degree Course's Teaching Board

Claudia Casellato (UNIPV), Lorenzo Giasanti (UNIMIB)

CARATTERISTICHE DEL CORSO DI STUDI

Obiettivi formativi generali e specifici

Human-centered artificial intelligence is a new paradigm that is now the focus of the research and development activities of both large companies and prestigious international research centers in the U.S. and Europe. The underlying idea is to shift the focus of Artificial Intelligence from "stand-alone" applications aimed at replacing humans in intelligent tasks to interactive applications in which human and machine intelligence work together to overcome the limitations of both.

The overall goal of this master's degree program is to offer a significantly interdisciplinary context to train new professionals capable of accompanying the widespread diffusion of Artificial Intelligence, enabling the reasonable and responsible integration of new technologies into the human context in which they are to be used. This integration aims to solve complex problems involving a constellation of non-technical variables: strategic goals, moral values, legal constraints, cognitive biases, and other psychological and social factors. From this perspective, the input of human agents becomes an integral part of an Artificial Intelligence system, and Artificial Intelligence itself becomes a set of sophisticated technologies to enhance the intelligence of human agents by expanding their cognitive capabilities. Hence, there is an essential need for strongly interdisciplinary skills, both theoretical and empirical ones, to meaningfully and responsibly guide this process of integrating new technologies into the real-world contexts.

The aim is to train bridging figures between the hard-skills of experienced developers and the soft-skills needed to integrate AI applications into the human context in which they are deployed.

Graduates in Human-Centered AI will possess:
- significant education in the disciplines characterizing the interaction between human cognition and AI;
- a thorough understanding of the most advanced methods of data collection, analysis and decision-making (machine learning);
- a thorough understanding of the theoretical, technical and cognitive aspects of human-computer interfaces;
- the ability to design models and interventions for the reorganization of interfaces between humans and AI systems;
- the ability to independently conduct research activities in the field of artificial intelligence;
- the ability to use fluently, in written and oral form, at least one language of the European Union besides Italian, with reference also to the terminology of the field;
- a thorough knowledge of a theoretical and operational nature on communication and decision-making processes based on the use of artificial intelligence systems;
- knowledge of the principles and the main methodologies of AI at a level adequate to interact fruitfully with computer scientists and connect them with domain experts in a multi-disciplinary context;
- a thorough understanding of the non-technical aspects- e.g. ethical issues, legal constraints, cognitive aspects, philosophical foundations, neuroscientific foundations associated with the use of AI technologies to support, not replace, humans and their activities;
- familiarity with the main applications of AI in the work context (business, health care, legal) and with the tools that enable informed and transparent interactions between humans and machines;
- decision-making abilities in highly complex situations.

Specific objectives will be formulated according to the curricula in which the course is organised. Since this is an interdisciplinary degree, which admits graduates from different backgrounds, these objectives will be achieved:
a) by including in the curriculum alternative courses that allow students to integrate their previously acquired knowledge according to the degree course of origin and the exams taken,
b) by proposing personalised study plans to guide students in their choices,
c) by proposing advanced foundations courses for the characterising subjects that are essential to the achievement of the training objectives, the purpose of which is to provide, in the initial part, a summary of the basic knowledge needed to acquire more advanced content,
d) by setting up a structured tutoring service to facilitate students with different backgrounds using these courses.

Starting from a broad common core, the course will be divided into three curricula. The common core will consist of characterising subjects belonging to the following areas:
1) philosophical and linguistic disciplines (with the addition of the areas IUS-20 and IUS-08), to acquire knowledge and competences of logical, epistemological and ethical-legal type
2) psychological disciplines, to acquire knowledge and competences on human-computer interaction and on the role of AI in decision-making processes
3) psychobiological and neuroscience disciplines, to acquire knowledge and skills relating to cognitive functions and their neural bases
4) mathematical, computer and engineering disciplines, to acquire knowledge and skills relating to development and analysis of machine learning models, algorithms and programming, for knowledge representation and reasoning, and natural language processing.

Laboratories aimed at acquiring further knowledge and skills in computing are also part of the common core. The three curricula aim to provide a more specific preparation in relation to three main contexts:

A) the general context of integrating AI applications in an organisation and planning for fruitful collaboration between humans and machines, taking into account the psychological and social component of this interaction. This curriculum will provide:
- additional knowledge and skills in the field of AI, obtained through teaching in the fields of mathematics, computer science and engineering, as well as additional computer laboratories;
- knowledge and skills relating to the psycho-social and legal aspects of working in complex teams (made up of human beings with different skills and machines) and the impact of AI on the organisation of work, obtained through teaching in the field of psychology and related and complementary disciplines, with reference to sociology and anthropology.

B) The context of clinical and theoretical neuroscience. This curriculum will provide
- further knowledge and skills in the field of neural bases of brain processes for the development of AI-based, multiscale and bio-inspired neural models and for the handling of human-machine interface neural signals;
- knowledge and skills relating to the application of AI algorithms in the field of clinical neuroscience, in order to promote the diagnostic and therapeutic/rehabilitation process in the direction of precision and personalised medicine.

C) The legal (domestic and European) as well as ethical context of AI applications in a public or private organisation. This curriculum will provide:
- further knowledge and skills in the field of AI, adopting a multidisciplinary approach that enables the combination within the same teaching course (and laboratories) of the mathematical, computer and engineering disciplines relating to a specific field of application (judicial, public administration, tax, labour relations etc.), with the respective and specific legal issues;
- knowledge and skills relating to the general ethical-legal aspects associated with AI applications, such as profiles relating to fundamental and human rights, data protection and data collection, civil and criminal liability, protection of intellectual property, communication, transparency.

All curricula guarantee, within the framework of the characterising disciplines, a minimum of 12 ECTS of computer science teaching in the first year, aimed at consolidating, or providing, if necessary, fundamental knowledge and skills in this field. The laboratory activities also provide, for all students, the acquisition of at least a further 9 ECTS in activities useful for acquiring computer skills.

Risultati di apprendimento attesi

Knowledge and understanding

Graduates will possess:
- advanced knowledge related to the new epistemological, ethical and legal issues raised by the diffusion of AI technologies in society and industry.
- ability to understand in-depth texts and scientific articles to follow the continuous evolution of research on these issues. This knowledge and ability will be obtained mainly through educational activities within the logico-philosophical and linguistic disciplines (including legal disciplines);
- a thorough knowledge of the fundamentals of Machine Learning, the main techniques of high-level and "human- oriented" programming, natural language processing, knowledge representation, and reasoning, as well as the ability to make advanced use of the main computer software and tools for AI applications in a work context. This knowledge and ability will be obtained through educational activities within the mathematical and computer science disciplines and through laboratories;
- a thorough understanding of the cognitive aspects underlying human-computer interaction and computer-aided decision making;
- the ability to understand advanced texts to follow the continuing evolution of research on these topics and to direct the design of understandable and ethically transparent interfaces. Such knowledge and skills will be obtained primarily through characterizing educational activities within the psychological disciplines.

Such in-depth knowledge is acquired through lectures, tutorials, laboratories, group work and practical case studies, and classroom discussions.

The verification of the achievement of the expected results will be carried out by means of written and/or oral examinations, individual presentations of the results achieved in the work carried out (including group work) and practical tests in the laboratory.

Ability to apply knowledge and understanding

Graduates will possess:
- the ability to adequately assess the ethical-legal, psychological and social impact of the use of specific artificial intelligence technologies;

- the ability to link the technical aspects of AI with the humanities and to build bridges that connect IT experts, domain experts and the general public;
- the ability to lead the activities of a working group including expert developers, domain experts, and stakeholders tasked with designing the responsible development and integration of AI technologies into the relevant context;
- the ability to design and lead ongoing staff training activities in a work context and to promote an "AI culture" that values the role of human agents in the application of new technologies;
- the ability to responsibly, consciously, and purposefully use the major software environments available to analyze the growing amount of data made available by the evolution of the Internet.

For these skills, the reference activities are those belonging to the areas of philosophical, linguistic, psychological, legal, mathematical and computer science disciplines, appropriately complemented by professionalizing laboratories.

Further skills will be acquired through additional activities belonging to the fields of psychobiology and brain sciences.

These skills are acquired through lectures, tutorials, of the practical-experimental activities in the laboratory, group work and practical case studies also through a didactic approach oriented to the solution of specific problems and interaction in the classroom.

Verification of these skills takes place through written and/or oral examinations, individual presentations of the results achieved in the work carried out (including in groups), practical tests in the laboratory, as well as in the evaluation of the final examination.

Making judgements
Graduates will be able to integrate acquired knowledge, to evaluate complex phenomena with a critical sense and to make judgements on the basis of limited or incomplete information. The graduate will also be able to understand and manage the social and ethical responsibilities associated with the application of their knowledge and judgements. These skills are acquired through problem-solving-oriented teaching methods and through projects, also in progress, to be carried out individually or in groups. Evaluation takes place through the assessment of projects, in individual examinations, in practical activities carried out in laboratories, as well as in the assessment of the final exam.

Communication skills
Graduates will be able to communicate the results of their analyses and proposed solutions clearly and effectively to both specialists and non-specialists in artificial intelligence. Graduates will possess, in particular, relevant skills in communicating and collaborating in working groups and in heterogeneous and interdisciplinary environments. This is achieved by means of projects, also in itinere, and group work, including in-class presentations by the students themselves. Communication skills are tested through the presentation of the activities carried out in the projects, during oral examinations and during the discussion of the final exam.

Learning skills
Graduates will be able to independently extend their knowledge and skills through the personal study of scientific publications and technical reports. Graduates will also be able to access selections for the higher level of education (PhDs and second-level Masters), with particular reference to the new PhDs in Artificial Intelligence, which are expanding rapidly both in Italy and abroad. These skills will be acquired in the context of the realisation of projects, also in itinere, of practical-experimental activities in the laboratory and of exercises aimed at solving specific problems and studying cases, as well as in the eventual theoretical-experimental internship activity for the preparation of the thesis. Learning skills will be assessed both by means of in itinere tests and projects and in the final exam.

Profilo professionale e sbocchi occupazionali
Expert in Human-AI Cooperation

Function in a business context:
- Coordinating hybrid work teams (consisting of humans with different skills and machines), fostering interaction between IT experts, managers, domain experts, UX- designers and stakeholders.
- Organising the division of tasks and the ways of cooperation between humans and machines, taking into account psychological, ethical, sociological and cultural aspects.
- Translate stakeholders' needs in order to elaborate appropriate AI-based development projects within an organisation or company.
- Propose coaching and training sessions in which to illustrate to employees the benefits that human-machine hybrid teams can bring to the organisation.
- Coordinate collaboration with external consultants (economists, sociologists, analysts).
- Propose new performance indicators to assess the effectiveness of hybrid teams.
- Properly assess the ethical, psychological and social aspects of introducing artificial intelligence into the work environment

and the general social context.

Skills associated with the function:
- Ability to make decisions on the basis of the logical-epistemological, legal, cognitive and computing foundations of artificial intelligence;
- Ability to use data analysis and visualisation tools aimed at human-computer interaction;
- Ability to contribute to the development of applications of artificial intelligence in the fields of education, human sciences, art and culture;
- Ability to connect collaborators with different skills in order to effectively integrate artificial intelligence technologies in the work context;
- Ability to lead advanced research in the area of human-centered AI with special reference to the areas of logic, epistemology, ethics, cognition, and computer science.

Employment outlets:
The master's graduate will be able to find employment as an AI contact person in small and medium-sized companies, in enterprises and corporate groups, including those with a transnational dimension, in public administrations, independent authorities and national, EU and international agencies. He or she may also serve as a freelance consultant and as a researcher in public and private enterprises.

Expert in Neuro-AI

Function in a work setting:
- use virtual models of the brain to advance the diagnostic and therapeutic/rehabilitation pathway in the direction of precision and personalized medicine, in clinical neurology;
- interface the clinical setting with new AI-based ICT technologies;
- oversee the training activities of healthcare personnel by fostering the growth and dissemination of an "AI culture."
- adequately evaluate the ethical, psychological, and social aspects related to the introduction of artificial intelligence in the health and social context.

Skills associated with the function:
- ability to make decisions based on the neuroscientific, cognitive and computer science foundations of AI;
- ability to analyze and visualize data, in the context of human-computer interaction;
- ability to coordinate a team composed of computer scientists and domain experts;
- ability to apply AI in the field of medicine;
- ability to lead advanced research in the area of human-centered AI with special reference to the areas of neuroscience, cognition, and computer science.

Employment outlets:
Clinical facilities, both public and private, neuroscience centers, R&D departments developing digital and technological platforms for personalized and precision medicine, ICT departments in the biomedical field.

Expert in AI and Law

Function in a business context:
- apply AI techniques within the relevant legal framework of public agencies, private organizations, or international organizations;
- advise policy-making bodies and IT practitioners on the protection of rights in data collection and analysis operations and algorithmic decision-making processes;
- oversee the conscious use of AI by users or any civil and criminal liability profiles (for the user or the organization) arising from the use of innovative instrumentation;
- perform discrimination prevention and data protection oversight functions;
- oversee staff training activities by fostering the growth and dissemination of an "AI culture."

Skills associated with the function:
- ability to make decisions based on the legal, ethical, cognitive, and computer science foundations of AI;
- ability to work through AI methodologies employed in public and private organizations;
- ability to seize opportunities for the development of artificial intelligence, overseeing any civil or criminal liability profiles arising from its use;
- ability to coordinate a team composed of IT experts and domain experts;
- ability to interact with managers, IT experts and users of public and private organizations employing AI techniques in order to oversee the protection of the rights at stake;
- ability to lead advanced research in the area of human-centered AI with special reference to the areas of law and computer science.

Employment outlets:
Corporations and corporate groups, including those of transnational dimension; public administrations; independent authorities and national, EU and international agencies; self-employed.

Conoscenze per l'accesso

Admission to the Master's Degree in Human-Centered Artificial Intelligence requires a bachelor's degree or a three-year university degree, or a degree obtained abroad and recognized as suitable.

Basic knowledge in logic and epistemology, mathematics and computer science, cognitive, philosophical, legal sciences is required to enter the Degree.

Curricular requirements consist of the possession of at least 30 CFUs in the fields INF/01 (INFO-01/A), ING-INF/05 (IINF-05/A), MAT/01 (MATH-01/A), MAT/02 (MATH-02/A), MAT/05 (MATH-03/A), MAT/06 (MATH-03/B), MAT/07 (MATH-04/A), MAT/09 (MATH-06/A), SECS-S/01 (STAT-01/A), SECS-S/03 (STAT-02/A), M-FIL/02 (PHIL-02/A), M-FIL/03 (PHIL-03/A), M-FIL/05 (PHIL-04/B), M-PSI/01 (PSIC-01/A), M-PSI/02 (PSIC-01/B), BIO/09 (BIOS-06/A), IUS/01 (GIUR-01/A), IUS/04 (GIUR-02/A), IUS/08 (GIUR-05/A), IUS/09 (GIUR-05/A), IUS/10 (GIUR-06/A), IUS/14 (GIUR-10/A), IUS/20 (GIUR-17/A), of which:
- at least 12 in the fields INF/01 (INFO-01/A), ING-INF/05 (IINF-05/A), MAT/01 (MATH-01/A), MAT/02 (MATH-02/A), MAT/05 (MATH-03/A), MAT/06 (MATH-03/B), MAT/07 (MATH-04/A), MAT/09 (MATH-06/A), SECS-S/01 (STAT-01/A), SECS-S/03 (STAT-02/A);
- at least 12 in the fields M-FIL/02 (PHIL-02/A), M-FIL/03 (PHIL-03/A), M-FIL/05 (PHIL-04/B), M-PSI/01 (PSIC-01/A), M-PSI/02 (PSIC-01/B), BIO/09 (BIOS-06/A), IUS/01 (GIUR-01/A), IUS/04 (GIUR-02/A), IUS/08 (GIUR-05/A), IUS/09 (GIUR-05/A), IUS/10 (GIUR-06/A), IUS/14 (GIUR-10/A), IUS/20 (GIUR-17/A).

Proficiency in English at level B2 or higher according to the Common European Framework of Reference for Languages (CEFR) is required for admission.
The B2-level requirement will be ascertained by the University Language Centre (SLAM) upon admission as follows:
? Valid language certificate at B2 level or higher, issued no more than three years before the application date. The list of language certificates recognized by the University is available at https://www.unimi.it/en/node/39322. The certificate must be uploaded when submitting the online application;
? Having obtained the open badge Bbetween English B2 from the University of Milan-Bicocca, or has passed the Placement test in English B2 from the University of Milan, or has obtained the English B2 certificate from the Language Center of the University of Pavia;
? Holding a degree delivered entirely or predominantly in English;
? 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 application date, including levels based on language certificates submitted by the applicant during their Bachelor?s degree at the University of Milan. Verification will be carried out automatically, no documents need to be uploaded.
? Entry test administrated by the University Language Centre (SLAM) according to the calendar published on the website: (https://www.unimi.it/en/node/39267/).
Applicants who fail to submit a valid certificate or do not meet the required proficiency level will be instructed during the admission procedure to take the Entry test.
Applicants who do not take or pass the Entry test will be required to obtain a language proficiency certificate recognized by the University (see https://www.unimi.it/en/node/39322) and submit it to SLAM via the InformaStudenti service by the deadline set by the master?s degree programme (https://www.unimi.it/en/node/39267/).
Applicants who fail to meet the requirement by said deadline will not be admitted to the master's degree programme and may not sit any further tests.

Admission assessment

The Degree is open access. Admission is subject to verification of the possession of curricular requirements and evaluation of the candidate's personal preparation. For candidates with foreign degrees, verification of the requirements will be carried out by comparing the contents of the candidates' previous courses of studies.

Having verified the curricular requirements, the assessment of personal preparation will be done through individual interview on the knowledge required for admission. The interview will also assess the multidisciplinary preparation necessary to undertake the Course of Study. Specifically,
- basic knowledge in the area of algorithms and programming will be required for the computer science area;
- basic knowledge in the area of logic, probability, statistics and algebra will be required for the mathematics area.

In addition, basic knowledge in at least one of these three areas is required:
- philosophical: logic, epistemology and applied ethics;

- cognitive sciences: neuroscience, general psychology and neurophysiology;
- legal: sources of law, fundamental rights and legal informatics.

The timing and procedures for submitting the application for the evaluation of qualifications, as well as the dates of the interviews will be published on the University website www.unimi.it on the page dedicated to the course of study.

Applicants with degrees from abroad will be attracted through widespread dissemination of open calls in all relevant fields through the academic networks of relevant faculty members. In their case, in order to appropriately assess the congruence of the educational background on the basis of the above curricular requirements, the admissions committee will decide on the appropriateness of admitting the candidate by evaluating the computer, mathematical, philosophical, psychological, biological and legal knowledge and skills acquired in his or her previous course of study, on the basis of an interview, possibly to be held remotely.

Students must select a curriculum within the Master's degree programme upon submitting their application. It is possible to change curriculum in accordance with the procedures laid down by the Academic Board and communicated to students via the Course website.

Struttura del corso

Mode of teaching and its articulation

The normal duration of the Master degree in Human-centered AI is two years and is divided into three curricula. The modes of teaching include, in addition to frontal teaching in the form of lectures and exercises, seminars and group work, laboratories and a stage. All activities are aimed at encouraging the participation of the students and the development of their specific competences as well as their argumentative and communicative skills.

Students who cannot attend courses continuously and take the relevant examinations within the time stipulated by the normal duration of the course of study may avail themselves of part-time enrollment, which allows them to extend their educational path without additional charges. The part-time course of study may not be overall more than twice the normal duration of the course of study of enrollment.

Articulation of teachings

The official teachings of the master's degree are listed in Article 4 of the didactic course of the master's degree program and are organized according to curricula. These teachings, delivered in English, may be activated directly or borrowed from other degree programs of the Universities Faculties and Departments organizing the master’s degree.

Activation of curricula and their description

The degree program is divided into three curricula from which students are invited to choose at the time of enrollment. Students are strongly encouraged to consider the suggestions outlined in this Manifesto and to consult the tutors who serve as guidance counselors for any doubts concerning their course of study. On the course website degree: https://hcai.cdl.unimi.it/en tutorials will be available to help decide on the curriculum, the choice of subjects and the relevant deadlines.

Curriculum Hybrid AI

"Hybrid AI" refers to the set of research and development activities aimed at fostering cooperation between symbolic artificial intelligence, machine learning and human intelligence. Graduates should have adequate knowledge of the fundamentals of artificial intelligence, both its knowledge-based component and new developments in machine learning. The emphasis is not on the ability to develop new applications, rather on the ability to foster dialogue and interaction among components of a team that includes experienced developers and personnel with domain expertise. The overall training objective is to provide the skills and capabilities necessary to integrate artificial intelligence into the work environment in a manner that is effective, ethically appropriate, and corresponds to the strategic goals of the company or institution, fostering a human-centered perspective. To this end, an interdisciplinary background is required to also embrace the philosophical, psychological and anthropological aspects of the widespread diffusion of AI in the work environment and society.
The profile emerging from this curriculum is that of Expert in Human-AI Cooperation. The Expert in Human-AI Cooperation profile is one of the "emerging low-to-mid tech jobs" and one of the figures needed for the introduction of artificial intelligence in large and medium-sized companies.

The graduates will be able to:
- apply available AI technologies in a specific company and relational context, with the goal of developing solutions in partnership with IT experts, domain experts and stakeholders;
- oversee staff training activities by fostering the growth and dissemination of an "AI culture";
- interact with product design managers by fostering the use of market applications and customer or user satisfaction analysis;
- adequately assess the ethical, psychological and social aspects related to the introduction of artificial intelligence into the work environment and the general social context;
- lead advanced research in the area of human-centered AI with special reference to the areas of logic-epistemology, ethics,

cognition, and computer science.

Curriculum Neuro-AI

The Neuro-AI curriculum aims at providing essential training in the emerging area of interaction between Artificial Intelligence and Neuroscience. This interaction is two-sided: artificial intelligence enables the understanding of computational processes in brain circuits and at the same time the inclusion of components that emulate brain structure and activity provides artificial systems with human-like intelligence that is more accurate and flexible.

The field is developing rapidly globally and is supported by major national and international research and development policies through government and private initiatives. The acronym Neuro-AI is borrowed from similar ongoing initiatives (e.g., at Stanford University and Cold Spring Harbor Laboratory). These new theoretical perspectives and subsequent applications directly involve the problem of human-computer interaction, as well as ethical and philosophical issues related to the use of AI and related new technologies.

This curriculum aims to address this set of issues, aiming at the coherent and informed professional training of new graduates in neuro-AI.

The professional profile emerging from this curriculum is that of Expert in Artificial Intelligence applied to bio-inspired algorithms and human-computer interaction systems. The graduate will make use of the skills acquired on artificial intelligence for the design and management of AI systems (neurocomputers and neurorobots) based on the structure and function of the nervous system and for solving problems of collection, processing, classification, and recognition of multimodal data in biomedicine. In these areas he or she will be able to specifically use modeling of the nervous system and neural networks to devise human-environment interaction systems.

This will enable the graduate to fit into multiple work settings involving the development of new AI solutions and constant confrontation in the management of Medicine-ICT interfaces and interfaces between brain activity and various medical, mechanical, and support devices (e.g., computers, robots, exoskeletons, motion aids). In addition, it will be able to provide central input, based on the use of artificial intelligence, to decision-making stages in multiple application areas at the interface between the healthcare world and ICT, such as supporting implementation and integration of diagnostic procedures, as well as optimizing and guiding medical and surgical choices.

The graduates will be able to:

- analyze and visualize data, in the context of human-computer interaction;
- use artificial intelligence applications in the field of medicine and contribute to their development;
- develop skills in communication, teamwork, and the ability to organize work by objectives and thus manage problem solving with different levels of responsibility, interfacing with professionals from the medical and technological fields;
- lead advanced research around human-centered AI with special reference to the areas of neuroscience, cognition and computer science.

In summary, the graduate will be able to work effectively in multiple work areas where the specific ability to design advanced AI solutions and to analyze and interpret data of different types and complexity is valued. This professional role may be carried out in healthcare, both public and private, in hospital settings in collaboration with healthcare professionals (physician, surgeon, psychologist, radiologist, nurse, physiotherapist, speech therapist, etc.), but also in the programming of telemedicine platforms, thus remote assistance. It will also be able to work in R&D departments of ICT industries and research centers oriented toward the development of advanced solutions for applied neuroscience, and in R&D departments of pharmaceutical industries developing and employing artificial intelligence for personalized medicine solutions based on predictions about the effectiveness of treatments.

Curriculum AI and LAW

The curriculum in AI and Law aims to provide a bridge between artificial intelligence and legal sciences for the informed management of interfaces between humans and complex systems. The interdisciplinary approach makes it possible to combine a suitable legal preparation with a conceptual and operational basis of artificial intelligence technologies applied to data collection and analysis processes and decision-making in public and private entities. This approach also allows for an understanding of the legal discipline as a function of opportunities for technological, economic and social development. The professional profile emerging from this curriculum is that of Expert in law and artificial intelligence.

The graduates will be able to:

- advise and take decisions on the risks and opportunities of data collection and analysis operations, design and use of algorithmic decision-making processes that do not infringe on rights. For example, graduates will be able to perform cybersecurity, discrimination prevention, and data protection oversight functions in public administrations and international organizations as well as in private entities (professional firms; banks; insurance companies; publishers and the media in general);
- seize opportunities for the development of artificial intelligence, overseeing any civil or criminal liability profiles arising from its use;
- coordinate a team composed of computer scientists and domain experts;
- lead advanced research in human-centric AI with reference to the areas of law and computer science.

The public sector will benefit from the conscious use of artificial intelligence systems in expenditure and performance control, citizen relations, the organization of competitions, and the automated analysis of contracts. Regarding the justice, law enforcement and taxation sectors, graduates will be able to manage the legal implications of predictive fiscal and crime risk systems, algorithmic decision-making, digital evidence acquisition, the use of intelligent databases and telematic justice platforms. In the private sector, graduates will be able to oversee civil and criminal liability profiles arising from the use of artificial intelligence systems in activities such as personnel management, contracting, manufacturing, and the use of automated vehicles or biomedical devices. In this way, the entities and individuals involved will not only be able to understand and take risks, but also be aware of whether they are subject to artificial intelligence techniques.

Study plan
The study plan must be submitted once a year, at the beginning of the second semester, within the deadline set by the Student Registrar. For information on dates and procedures for submitting the official study plan, please visit the relevant section of the UNIMI website: https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/plan-study.
It is possible to modify the study plan by submitting a new study plan in the following year, which will replace the previous study plan if approved.

Academic calendar
Available at the following link: https://www.unimi.it/en/education/faculties-and-schools/humanities/studying-humanities

Lecture timetable
The lecture timetable is available at: https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/course-timetables

Exams
Available at the following link: https://www.unimi.it/en/study/bachelor-and-master-study/following-your-programme-study/sitting-exams

Tutorato
Tutoring Activities

The Teaching Board of the master's degree program will be responsible for defining, planning, organizing, implementing, monitoring and evaluating in-progress orientation and tutoring activities. The structures supporting orientation activities are the Centro Orientamento (COR) for the University of Pavia, the Centro di Ateneo per l'Orientamento allo Studio e alle Professioni (COSP) for the University of Milan, and the Servizio Orientamento Studenti (SOS) for the University of Milan-Bicocca. Tutoring activities will be carried out with the active collaboration of the course faculty and the support of additional teaching staff and experts from the various fields.

In-progress orientation for this master's degree program includes various activities delivered periodically during study, aimed at improving participation in educational activities and university life, as well as improving overall performance and cultural and professional growth. The central goal is to support students from the moment they enter university, during their academic life, and at the threshold of earning a master's degree with a view to job placement. In particular, the following will be organized:
- meetings with students to present in detail the master's degree program, its peculiarities, teachings, teaching organization and tutoring services;
- information services regarding services and activities of the universities involved and of the specific master's degree course, including times, places and modes of delivery of educational activities, modes of learning verifications, times and places of conducting examinations, study abroad opportunities within the master's degree course, seminars, internships for the preparation of the master's thesis in companies and institutions both national and international, recreational and sports activities, socialization opportunities;
- information and organization of cultural initiatives;
- counseling on study methods and learning problems, as well as re-orientation psychological counseling by the in-progress orientation support structures in the three universities;
- non-clinical counseling services to help students who are struggling due to psychologically challenging or clinically relevant periods that significantly reduce their ability to maintain the right pace of study and regain the motivational drive to complete their education;
- support services for students with disabilities or DSA, for the definition and implementation of a study program, study support and verification of acquired knowledge and skills in a personalized manner.

The in-progress tutoring activities include various activities directed at supporting the different stages of each student's educational process, with a personalized approach for effective and efficient support that can quickly address and resolve emerging educational difficulties.
Specifically, the following will be implemented:
- informational tutoring activities, aimed at guiding students on the choice of educational path, drafting the study plan and

possible change of course of study;
- psychological tutoring to support students with relational or learning problems and individual or group counseling services.

Information on in-progress orientation activities is posted on the following sites of the orientation structures of the three universities:
https://www.unimib.it/servizi/bicocca-orienta
https://www.unimi.it/it/corsi/orientarsi-e-scegliere/il-cosp
https://orienta.unipv.it/

The University's services are available at
https://www.unimi.it/en/study/bachelor-and-master-study/degree-programme-enrolment/your-first-steps-new-student

Prove di lingua / Informatica

Language test / computer literacy test

To obtain the degree, those who do not hold an Italian high school diploma or degree must demonstrate proficiency in Italian at the A2 or higher level per the Common European Framework of Reference for Languages (CEFR). This level must be demonstrated prior to completing the course programme in one of the following ways:
- by submitting a certificate of A2 or higher level issued no more than three years prior to the date of submission. You will find the list of language certificates recognized by the University at: https://www.unimi.it/en/node/349/). The language certificate must be uploaded through http://studente.unimi.it/uploadCertificazioniLingue ;
- via an entry-level test administrated by SLAM that can be taken only once and is compulsory for all students who do not have a valid language certificate. Those who fail to reach A2 level will have to attend one or more than one 60-hour Italian course(s) geared to their level. Those who do not take the entry-level test or fail to pass the end-of-course test after six attempts will have to obtain language certification privately in order to earn the 3 credits of Additional language skills: Italian.

To obtain the degree, Italian Students must demonstrate proficiency at the B1 or higher level per the Common European Framework of Reference for Languages (CEFR) of one Language between French, German or Spanish.
Italian Students will have to acquire 3 ECTS through one of the Language proficiency tests offered by the University Language Center (SLAM) or by submitting a B1 or higher level issued no more than three years prior to the date of submission.
You will find the list of language certificates recognized by the University at: https://www.unimi.it/en/node/349/). The language certificate must be submitted to the University Language Centre (SLAM) via the Language Test category of the InformaStudenti service: https://informastudenti.unimi.it/saw/ess?AUTH=SAML.

Obbligo di frequenza

Attendance is not mandatory, but the interdisciplinary nature and mixed and participatory teaching methods strongly recommend attendance. In addition, laboratory and internship activities are mainly conducted in presence, and any other form of participation must be agreed with the lecturers or supervisors.

Caratteristiche Tirocinio

Compulsory, 3 CFUs, duration 150 to 300 hours maximum, valid subject to approval by the Academic Board.
It may be replaced by research activities at research centres.
Instructions on how to apply for internship are provided on the website of the Course of Study at the page https://hcai.cdl.unimi.it/en/study/internship

Caratteristiche della prova finale

Upcoming graduates must have earned 99 CFU prior to sitting for the final examination.
The master's degree in Human-Centered Artificial Intelligence is awarded by passing a final examination, consisting of the presentation and discussion of a dissertation.
The dissertation is prepared by the student, under the guidance of a faculty advisor, and consists of a written paper on a topic chosen within the educational course of the master's degree program, possibly the subject of the theoretical or practical activities involved by the internship.
The paper, if written as part of an internship activity, describes the activities carried out by the student, the knowledge and skills acquired in the theoretical and/or applied study, as well as the connections with the state of the art in the field of the applications of human-centered artificial intelligence in the cognitive sciences. In this case, the internship activity aimed at the thesis may be carried out at universities, institutions or companies, in Italy or abroad.
The thesis work may also consist of the critical investigation of the topics studied, carried out through direct, rigorous and comprehensive examination of sources and literature.
The final examination consists of the discussion of the thesis before an appointed committee. The thesis will be written and discussed in English.
The final exam awards 21 credits and a grade reflecting the thesis quality and the candidate's intellectual maturity. The degree mark (on a scale of 110) will be determined based on the student's academic achievements throughout the programme as well as the final exam grade. Candidates who score 110/110 may be awarded honours for the value of their work, with a

unanimous vote of the examining board.
The schedule of sessions, deadlines and operational directions are published on the course of study website.

ESPERIENZA DI STUDIO ALL'ESTERO NELL'AMBITO DEL PERCORSO FORMATIVO

The University of Milan supports international mobility by providing its students with the opportunity to spend study and internship periods abroad. It is a unique chance to enrich your educational path in a new exciting environment.

The agreements entered into by the University with over 300 universities from the 27 EU member countries under the European Erasmus+ programme allow regularly enrolled students to carry out part of their studies at one of the partner universities or to undertake internships at companies, training and research centres and other organisations.

Similar international mobility opportunities are provided outside Europe, through agreements with a number of prestigious institutions.

The University of Milan is a member of the 4EU+ European University Alliance that brings together eight public multidisciplinary universities: University of Milan, Charles University of Prague, Heidelberg University, Paris-Panthéon-Assas University, Sorbonne University of Paris, University of Copenhagen, University of Geneva, and University of Warsaw. The 4EU+ Alliance offers integrated educational pathways and programmes to promote the international mobility of students (physical, blended and virtual).

Cosa offre il corso di studi

The Master’s Degree Programme in Human-Centered Artificial Intelligence holds agreements for Erasmus-exchange partnerships with other European universities through the Department administratively responsible for the Degree. The programme keeps students up-to-date on these, encouraging them to take advantage of the opportunities these exchanges offer. The Erasmus scholarship programme is posted to the University's website, and the Degree has an Erasmus and International Mobility Tutor who can be contacted to consider the different options. The Degree is building a coherent number of options with the aim of covering all areas. The various locations also offer the opportunity for students to take exams in subjects not included in the study plan of the Degree. Candidates are selected by the Erasmus and International Mobility Tutor, who assesses the student’s interests, their academic career, and their proficiency in the language of the country where they hope to study.

Admitted students will fill out the Learning Agreement with the Erasmus Tutor. Once abroad, they will correspond via email with the tutor regarding any changes. Students submitting a Learning Agreement to the Erasmus tutor via email will receive it back e-signed. They may then have their host university countersign the document prior to their return home. Upon returning home, any exams the student has taken whilst abroad (documented in the “Transcript of Records”) are converted into Italian exams based on the Learning Agreement; exam conversion and the marks for the same shall be subject to approval of the Teaching Board.
Current international agreements are available at the following link:
https://www.unimi.it/en/international/university-milan-world/international-agreements (Search by Philosophy Department).

Additionally, agreements through Erasmus+ Traineeship are active, as well as the possibility of applying for the Call for Theses Abroad of the University of Milan.

Modalità di partecipazione ai programmi di mobilità - mobilità Erasmus

The students of the University of Milan can participate in mobility programmes, through a public selection procedure.
Ad hoc commissions will evaluate:
-Academic career
-the candidate's proposed study programme abroad
-his/her foreign language proficiency
-the reasons behind his/her application

Call for applications and informative meetings
The public selection for Erasmus+ mobility for study generally begins around February each year with the publication of a call for applications specifying destinations and requirements. Regarding the Erasmus+ Mobility for Traineeship, the University of Milan usually publishes two calls a year enabling students to choose a destination defined by an inter-institutional agreement or to find a traineeship position on their own.

The University organises informative meetings to illustrate mobility opportunities and rules for participation.

Erasmus+ scholarship
The European Union grants the winners of the Erasmus+ programme selection a scholarship to contribute to their mobility costs, which may be supplemented by the University funding for disadvantaged students.

Language courses

Students who pass the selections for mobility programmes can benefit from intensive foreign language courses offered each year by the University Language Centre (SLAM).
https://www.unimi.it/en/node/8/

Learn more at https://www.unimi.it/en/node/274/

For assistance, please contact:
International Mobility Office
Via Santa Sofia 9 (second floor)
Tel. 02 503 13501-12589-13495-13502
Contacts: InformaStudenti;
Student Desk booking through InformaStudenti

MODALITA' DI ACCESSO: 1° ANNO LIBERO CON VALUTAZIONE DEI REQUISITI DI ACCESSO

Informazioni e modalità organizzative per immatricolazione

All students must submit the application for the admission by the deadlines indicated in the "student area" of the University web portal: https://www.unimi.it/en/study/bachelor-and-master-study/degree-programme-enrolment/enrolment-masters-programme/open-admission-master-programmes
The admission application must be completed online from 22 January, 2026 to 30 October, 2026. Undergraduates who intend to graduate by 31st December 2026 may also apply.

See for all details the section above "Admission requirements". If coming from another university or other degree program, admission to second year of the course will be evaluated by competent organs of the course.

Enrolment
At the end of the evaluation procedures, candidates admitted and already graduated must enrol online: https://www.unimi.it/en/node/183/

N° posti riservati a studenti extracomunitari non soggiornanti in Italia

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1° ANNO DI CORSO Attività formative obbligatorie comuni a tutti i curricula

Attività formativa		Cfu	Settore
AI and human decision-making		12	PSIC-01/A
AI, ethics and law		6	(3) PHIL-03/A, (3) GIUR-17/A
Brain and cognition		6	PSIC-01/B
Machine learning		6	INFO-01/A
Workshop: Programming lab		3	NN
	Totale CFU obbligatori	33	

Attività a scelta comuni a tutti i curricula

3 ECTS in a second EU foreign Language for Italian students ONLY

Accertamento linguistico: lingua Francese (3 CFU)		NN
Accertamento linguistico: lingua Spagnola (3 CFU)		NN
Accertamento linguistico: lingua Tedesca (3 CFU)		NN

3 ECTS in Italian Language for foreign students ONLY

Additional Language Skills: Italian (3 ECTS)		NN

Altre attività a scelta comuni a tutti i curricula

12 ECTS to be earned through any of the elective courses among those offered by the University of Milan, or University of Milano-Bicocca or University of Pavia.

Attività conclusive comuni a tutti i curricula

Final exam		21	NN
Internship		3	NN
	Totale CFU obbligatori	24	

ELENCO CURRICULA ATTIVI

HYBRID AI Annualità attivate: 1°
NEURO-AI Annualità attivate: 1°
AI AND LAW Annualità attivate: 1°

CURRICULUM: [CBK-A] HYBRID AI

1° ANNO DI CORSO Attività formative obbligatorie specifiche del curriculum HYBRID AI			
Attività formativa		**Cfu**	**Settore**
Mathematics for AI		6	MATH-04/A
	Totale CFU obbligatori	6	
Attività a scelta specifiche del curriculum HYBRID AI			
1 exam to choose among:			
Knowledge representation and reasoning			INFO-01/A
Natural language processing			INFO-01/A
Programming			INFO-01/A
1 exam to choose among:			
Logics for AI			PHIL-02/A
Methodology of data-driven reasoning			PHIL-02/A
Philosophy of cognitive neuroscience			PHIL-02/A
1 exam to choose among:			
AI and organizational development			PSIC-03/B
Principles of social psychology for AI design			PSIC-03/A
2° ANNO DI CORSO (da attivare a partire dall'a.a. 2027/28) Attività a scelta specifiche del curriculum HYBRID AI			
1 workshop to choose between:			
Workshop: Software tools for machine learning			NN
Workshop: Software tools for statistics			NN
1 exam to choose among:			
AI in education			PAED-02/A
Media theory and AI			(3) PEMM-01/B, (3) PHIL-04/A
Technological transfer			ECON-07/A
1 exam to choose among:			
Affective computing			INFO-01/A
Human-computer interaction			INFO-01/A
Knowledge representation and reasoning			INFO-01/A
Natural language processing			INFO-01/A
Text and argument mining			INFO-01/A
1 exam to choose among:			
Anthropology of AI			SDEA-01/A
Smart contracts and intellectual property law			(3) GIUR-01/A, (3) INFO-01/A
Sociology of AI			(3) GSPS-05/A, (3) GSPS-06/A
1 workshop to choose between:			
Workshop: Data visualization			NN
Workshop: Team management			NN

CURRICULUM: [CBK-B] NEURO-AI

1° ANNO DI CORSO Attività formative obbligatorie specifiche del curriculum NEURO-AI			
Attività formativa		**Cfu**	**Settore**
Brain modelling for biomedicine and ICT		6	BIOS-06/A
Neurophysiology and biophysics for AI		6	BIOS-06/A
	Totale CFU obbligatori	12	
Attività a scelta specifiche del curriculum NEURO-AI			
1 exam to choose among:			
Knowledge representation and reasoning			INFO-01/A
Natural language processing			INFO-01/A
Programming			INFO-01/A
1 exam to choose among:			
Logics for AI			PHIL-02/A
Methodology of data-driven reasoning			PHIL-02/A
Philosophy of cognitive neuroscience			PHIL-02/A
2° ANNO DI CORSO (da attivare a partire dall'a.a. 2027/28) Attività formative obbligatorie specifiche del curriculum NEURO-AI			
Attività formativa		**Cfu**	**Settore**
AI applied to neuroimaging		6	(1) IBIO-01/A, (3) MEDS-22/B, (2) PHYS-06/A
AI applied to neurological sciences and brain-computer interfaces		6	(3) PSIC-01/B, (3) MEDS-12/A
	Totale CFU obbligatori	12	
Attività a scelta specifiche del curriculum NEURO-AI			
1 exam to choose among:			
Human-computer interaction			INFO-01/A
Machine learning for collaborative intelligent systems			IINF-05/A
Neuromorphic computing for AI solutions and neuro-robotics			(3) IBIO-01/A, (3)

			IINF-05/A
1 workshop to choose between:			
Workshop: Software tools for machine learning			NN
Workshop: Software tools for statistics			NN
1 workshop to choose between:			
Workshop: Neuromorphic and neurorobotics			NN
Workshop: Neuroplasticity and non-invasive brain stimulation techniques			NN

CURRICULUM: [CBK-C] AI AND LAW

1° ANNO DI CORSO Attività formative obbligatorie specifiche del curriculum AI AND LAW			
Attività formativa		**Cfu**	**Settore**
AI and media law		6	GIUR-05/A
Data protection, law and AI		6	GIUR-17/A
	Totale CFU obbligatori	12	
Attività a scelta specifiche del curriculum AI AND LAW			
1 exam to choose among:			
Knowledge representation and reasoning			INFO-01/A
Natural language processing			INFO-01/A
Programming			INFO-01/A
1 exam to choose among:			
Logics for AI			PHIL-02/A
Methodology of data-driven reasoning			PHIL-02/A
Philosophy of cognitive neuroscience			PHIL-02/A
2° ANNO DI CORSO (da attivare a partire dall'a.a. 2027/28) Attività a scelta specifiche del curriculum AI AND LAW			
1 exam to choose among:			
Corporate governance and AI			GIUR-02/A
Responsibility and AI			(3) GIUR-10/A, (3) GIUR-11/A
Sources of law and fundamental rights in AI			GIUR-05/A
1 exam to choose among:			
Data analysis and tax compliance			(3) STAT-01/A, (3) GIUR-08/A
Digital surveillance, employee monitoring and selection by AI			GIUR-04/A
Justice by algorithm			(3) GIUR-13/A, (3) INFO-01/A
1 exam to choose among:			
AI and public administration			(3) GIUR-06/A, (3) INFO-01/A
Banking and insurance law			(3) MATH-03/B, (3) GIUR-02/A
Multilevel protection of rights in AI			(3) GIUR-09/A, (3) GIUR-10/A
Smart contracts and intellectual property law			(3) GIUR-01/A, (3) INFO-01/A
1 workshop to choose among:			
Workshop: Employee monitoring and recruitment			NN
Workshop: Forensics			NN
Workshop: Tax data analysis and tax risk			NN
1 workshop to choose between:			
Workshop: Software tools for machine learning			NN
Workshop: Software tools for statistics			NN

PROPEDEUTICITA'

To sit the Machine Learning exam, students are advised to have successfully completed at least one programming course at either the Bachelor’s or Master’s level, including the programming course offered within the present degree programme.