

UNIVERSITY OF MILANO - BICOCCA

DEPARTMENT OF PHYSICS "GIUSEPPE OCCHIALINI"

Interuniversity Master's Degree Programme in

ARTIFICIAL INTELLIGENCE FOR SCIENCE AND TECHNOLOGY

(CLASS LM-91)

Annual Study Manifesto A.Y. 2024/2025

1. Teaching activities

In the Academic Year 2024-2025, the **first** and the **second** year of the Interuniversity Master's Degree Programme in Artificial Intelligence for Science and Technology - Class LM-91 - are activated. They are jointly organized by the University of Milano-Bicocca (UNIMIB), the University of Milano (UNIMI) and the University of Pavia. The Master's Degree Programme in Artificial Intelligence in Science and Technology is taught in English. The exams will be carried out in English. The classes will take place in all three Universities according to the class schedule published at the address mentioned in paragraph 6 of this manifesto.

The teaching activities activated respectively for the first and second year are listed below.

FIRST YEAR

(For students enrolling in the A.Y. 2024-2025 – Didactic Regulations A.Y. 2024-2025).

Mandatory teaching activities

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q001	ADVANCED FOUNDATIONS OF MATHEMATICS FOR AI	6	MAT/07	F9102Q001M	ADVANCED FOUNDATIONS OF MATHEMATICS FOR AI	6	First semester
F9102Q002	ADVANCED FOUNDATIONS OF STATISTICS FOR AI	6	SECS-S/01	F9102Q002M	ADVANCED FOUNDATIONS OF STATISTICS FOR AI	6	First semester
F9102Q003	ADVANCED FOUNDATIONS OF PHYSICS FOR AI	6	FIS/01	F9102Q003M	ADVANCED FOUNDATIONS OF PHYSICS FOR AI	6	First semester
F9102Q004 ADVANCED FOUNDATIONS OF ARTIFICIAL INTELLIGENCE	12	ING-INF/05	F9102Q004M	ARTIFICIAL INTELLIGENCE	6	First semester	
		12	INF/01	F9102Q035M	AI FOR SIGNAL AND IMAGE PROCESSING	6	First semester

Mandatory multiple-choice activities

The student has to choose one of the following Application Areas:

Application Area n. 1: AI for Industry and Environment

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q007	SYSTEMS FOR INDUSTRY 4.0 AND ENVIRONMENT (IoT)	6	ING-INF/05	F9102Q007M	SYSTEMS FOR INDUSTRY 4.0 AND ENVIRONMENT (IoT)	6	Second Semester
F9102Q008	ADVANCED DATA MANAGEMENT AND	6	INF/01	F9102Q008M	ADVANCED DATA MANAGEMENT AND	6	Second Semester

	DECISION SUPPORT SYSTEMS				DECISION SUPPORT SYSTEMS		
F9102Q009	ADVANCED ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND DEEP LEARNING	6	INF/01	F9102Q009M	ADVANCED ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND DEEP LEARNING	6	Second Semester
	SENSING AND VISION FOR	12	ING-INF/03	F9102Q029M	INTELLIGENT SENSING AND REMOTE SENSING	6	Second Semester
F9102Q029	INDUSTRY AND 12 ENVIRONMENT	INF/01	F9102Q030M	VISION FOR INDUSTRY AND ENVIRONMENT	6	Second Semester	

Application Area n. 2: Intelligent Embedded Systems

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q012	EMBEDDED SYSTEMS ARCHITECTURES AND DESIGN	6	ING-INF/05	F9102Q012M	EMBEDDED SYSTEMS ARCHITECTURES AND DESIGN	6	Second Semester
F9102Q008	ADVANCED DATA MANAGEMENT AND DECISION SUPPORT SYSTEMS	6	INF/01	F9102Q008M	ADVANCED DATA MANAGEMENT AND DECISION SUPPORT SYSTEMS	6	Second Semester
F9102Q009	ADVANCED ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND DEEP LEARNING	6	INF/01	F9102Q009M	ADVANCED ARTIFICIAL INTELLIGENCE, MACHINE LEARNING AND DEEP LEARNING	6	Second Semester
F9102Q043 AMBIENT INTI		12	INF/01	F9102Q04301	ADVANCED HUMAN- SYSTEM INTERFACES	6	Second Semester
		12	INF/01	F9102Q04302	AMBIENT INTELLIGENCE AND DOMOTICS	6	Second Semester

Application Area n. 3: Sensing and Signal/Image Processing for Healthcare and Environment

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q015	ADVANCED COMPUTATIONAL TECHNIQUES FOR BIG IMAGING AND SIGNAL DATA	6	INF/01	F9102Q015M	ADVANCED COMPUTATIONAL TECHNIQUES FOR BIG IMAGING AND SIGNAL DATA	6	Second Semester
MACHINE LEARNING FOR	12	INF/01	F9102Q04501	SUPERVISED LEARNING	6	Second Semester	
F9102Q045	MODELLING	12	INF/01	F9102Q04502	UNSUPERVISED LEARNING	6	Second Semester
F9102Q016	SIGNAL AND IMAGING ACQUISITION AND MODELLING IN HEALTHCARE	6	FIS/07	F9102Q016M	SIGNAL AND IMAGING ACQUISITION AND MODELLING IN HEALTHCARE	6	Second Semester
F9102Q017	SIGNAL AND IMAGING ACQUISITION AND MODELLING IN ENVIRONMENT	6	FIS/01	F9102Q017M	SIGNAL AND IMAGING ACQUISITION AND MODELLING IN ENVIRONMENT	6	Second Semester

Application Area n. 4: Complex Systems and Quantum Technologies

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q022	AI MODELS FOR PHYSICS	6	FIS/02	F9102Q022M	AI MODELS FOR PHYSICS	6	Second Semester

F9102Q023	STATISTICAL LEARNING	6	INF/01	F9102Q023M	STATISTICAL LEARNING	6	Second Semester
F9102Q045 MACHINE LEARNING FOR MODELLING		INF/01	F9102Q04501	SUPERVISED LEARNING	6	Second Semester	
	MODELLING	12	INF/01	F9102Q04502	UNSUPERVISED LEARNING	6	Second Semester
F9102Q039	FOUNDATIONS OF QUANTUM COMPUTING	6	FIS/03	F9102Q039	FOUNDATIONS OF QUANTUM COMPUTING	6	Second Semester

SECOND YEAR

(For students enrolled in the A.Y. 2023-2024 – Didactic regulations A.Y. 2023-2024).

Mandatory teaching activities

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q006	ADVANCED FOUNDATIONS OF LAW AND REGULATIONS IN PRIVACY AND DATA PROTECTION	6	IUS/04	F9102Q006M	ADVANCED FOUNDATIONS OF LAW AND REGULATIONS IN PRIVACY AND DATA PROTECTION	6	First Semester
F9102Q005	DATA-DRIVEN ORGANIZATIONS AND MANAGEMENT	6	SECS-P/10	F9102Q005M	DATA-DRIVEN ORGANIZATIONS AND MANAGEMENT	6	First Semester
Type D TAF	FREE-CHOICE TEACHING ACTIVITIES	12	NN				
F9102Q037	STAGE	6	NN				
F9102Q038	FINAL EXAMINATION	21	PROFIN_S				

Mandatory free-choice activities

The student has to choose one of the following Further Linguistic Knowledge activities:

Code	Teaching Activity	CFUs	Academic Discipline
	FURTHER LINGUISTIC		
F9102Q032	KNOWLEDGE - ENGLISH -	3	NN
	C1 LEVEL (OR HIGHER)		
	FURTHER LINGUISTIC		
F9102Q033	KNOWLEDGE - FRENCH - B2	3	NN
	LEVEL (OR HIGHER)		
	FURTHER LINGUISTIC		
F9102Q034	KNOWLEDGE - GERMAN -	3	NN
	B2 LEVEL (OR HIGHER)		
	FURTHER LINGUISTIC		
F9102Q035	KNOWLEDGE - SPANISH -	3	NN
	B2 LEVEL (OR HIGHER)		
	FURTHER LINGUISTIC		
F9102Q036	KNOWLEDGE - ITALIAN - B2	3	NN
	LEVEL (OR HIGHER)		

Mandatory multiple-choice activities

The student has to choose ONE MANDATORY MULTIPLE-CHOICE ACTIVITY (6 CFUs) according to the Application Area previously selected. The student can choose it between the following ones:

Application Area n. 1: Al for Industry and Environment

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q010	INTELLIGENT MONITORING AND CONTROL SYSTEMS	6	ING-INF/04	F9102Q010M	INTELLIGENT MONITORING AND CONTROL SYSTEMS	6	First Semester
F9102Q011	ENVIRONMENTAL MONITORING AND MANAGEMENT	6	ING-INF/03	F9102Q011M	ENVIRONMENTAL MONITORING AND MANAGEMENT	6	First Semester

Application Area n. 2: Intelligent Embedded Systems

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q013	EMBEDDED SYSTEMS FOR BIOMEDICAL APPLICATIONS	6	ING-INF/06	F9102Q013M	EMBEDDED SYSTEMS FOR BIOMEDICAL APPLICATIONS	6	First Semester
F9102Q014	INTELLIGENT CONSUMER TECHNOLOGIES	6	INF/01	F9102Q014M	INTELLIGENT CONSUMER TECHNOLOGIES	6	First Semester

Application Area n. 3: Sensing and Signal/Image Processing for Healthcare and Environment

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Mudule	CFUs	Semester
F9102Q018	PHYSICAL SENSORS AND SYSTEMS FOR BIOMEDICAL SIGNALS	6	FIS/03	F9102Q018M	PHYSICAL SENSORS AND SYSTEMS FOR BIOMEDICAL SIGNALS	6	First Semester
F9102Q019	PHYSICAL SENSORS AND SYSTEMS FOR ENVIRONMENTAL SIGNALS	6	FIS/03	F9102Q019M	PHYSICAL SENSORS AND SYSTEMS FOR ENVIRONMENTAL SIGNALS	6	First Semester
F9102Q020	PHYSICAL SENSORS AND SYSTEMS FOR BIOMEDICAL IMAGING	6	FIS/07	F9102Q020M	PHYSICAL SENSORS AND SYSTEMS FOR BIOMEDICAL IMAGING	6	First Semester
F9102Q021	PHYSICAL SENSORS AND SYSTEMS FOR ENVIRONMENTAL IMAGING	6	FIS/07	F9102Q021M	PHYSICAL SENSORS AND SYSTEMS FOR ENVIRONMENTAL IMAGING	6	First Semester

Application Area n. 4: Complex Systems and Quantum Technologies

Code	Teaching Activity	CFUs	Academic Discipline	Module Code	Module	CFUs	Semester
F9102Q025	ADVANCED STATISTICAL MECHANICS AND DISORDERED SYSTEMS	6	FIS/02	F9102Q025M	ADVANCED STATISTICAL MECHANICS AND DISORDERED SYSTEMS	6	First Semester
F9102Q026	QUANTUM INFORMATION AND ALGORITHMS	6	INF/01	F9102Q026M	QUANTUM INFORMATION AND ALGORITHMS	6	First Semester
F9102Q027	STATISTICAL MECHANICS OF NEURAL NETWORKS	6	FIS/02	F9102Q027M	STATISTICAL MECHANICS OF NEURAL NETWORKS	6	First Semester
F9102Q028	QUANTUM COMPUTERS AND TECHNOLOGIES	6	FIS/02	F9102Q028M	QUANTUM COMPUTERS AND TECHNOLOGIES	6	First Semester

2. Enrolment

In order to be eligible for admission to the Master's Degree Programme in Artificial Intelligence for Science and Technology, candidates must hold a Bachelor's Degree, a three-year university diploma or a foreign academic qualification acknowledged as suitable.

Basic knowledge of Computer Science, Mathematics, Statistics and Physics is essential. Therefore, candidates must have at least 30 CFUs in the following scientific-disciplinary sectors: INF/01, ING-INF/05, ING-INF/03, from MAT/01 to MAT/09, from SECS-S/01 to SECS-S/06, from FIS/01 to FIS/08.

Once the curricular requirements have been verified, the admission to the Master's Degree Programme is conditional on the assessment of the adequacy of candidates' personal preparation. The personal preparation will be evaluated through an individual interview conducted by the Selection Committee. The interview will assess applicants' basic knowledge in Computer Science, Mathematics, Statistics and Physics.

In particular, the interview will cover topics from the following areas:

- Computer Science: Programming, Algorithms, Data Structures, Artificial Intelligence.
- Mathematics: Linear Algebra, Differential and Integral Calculus in one or more variables, Numerical Series.
- Statistics: Descriptive Statistics, Probability, Random Variables, Inference, Linear Model.
- Physics: elements of Statistics, Dynamics, Energy, Thermodynamics, Electromagnetism, and Optics.

Students holding the curricular requirements (at least 30 CFUs in the following scientific-disciplinary areas: INF/01, ING-INF/05, ING-INF/03, from MAT/01 to MAT/09, from SECS-S/01 to SECS-S/06, from FIS/01 to FIS/08) are exempt from the admission interview if:

1. they hold a Bachelor's Degree with a mark equal to or higher than 100/110;

or:

2. they hold a Master's Degree in one of the following classes: LM-17, LM-18, LM-21, LM-25, LM-27, LM-32, LM-35, LM-40, LM-44, LM-66, LM-82, LM-91, or a foreign Master's Degree acknowledge as suitable.

Also candidates who meet **all** the following 4 conditions are exempt from the interview as well:

1. they hold a Bachelor's Degree obtained with a grade equal to or higher than 95/110 and lower than 100/110, or a Cumulative/Overall GPA equal to or higher than 3.4 (in a scale from 0 to 4);

2. they achieved at least 20 CFUs (or equivalent credit/hours) in Computer Science (academic disciplines: INF/01, ING-INF/05) in the previous academic career;

3. they achieved at least 15 CFUs (or equivalent credit/hours) in Mathematics (academic disciplines: MAT/01, MAT/02, MAT/03, MAT/04, MAT/05, MAT/07, MAT/08 e MAT/09) in the previous academic career;

4. they achieved at least 5 CFUs (or equivalent credit/hours) in Statistics and Probability (academic disciplines: from SECS-S/01 to SECS-S/06 or MAT/06) in the previous academic career.

Students holding the curricular requirements (at least 30 CFUs in the following scientific-disciplinary areas: INF/01, ING-INF/05, ING-INF/03, from MAT/01 to MAT/09, from SECS-S/01 to SECS-S/06, from FIS/01 to FIS/08) and not exempt from the interview, are admitted to the interview if they meet **all** the following 4 conditions:

1. they hold a Bachelor's Degree obtained with a grade equal to or higher than 85/110 and lower than 100/110, or a Cumulative/Overall GPA equal to or higher than 3.3 (in a scale from 0 to 4);

2. they achieved at least 10 CFUs (or equivalent credit/hours) in Computer Science (academic disciplines: INF/01, ING-INF/05) in the previous academic career;

they achieved at least 6 CFUs (or equivalent credit/hours) in Mathematics (academic disciplines: MAT/01, MAT/02, MAT/03, MAT/04, MAT/05, MAT/07, MAT/08 e MAT/09) in the previous academic career;
they achieved at least 4 CFUs (or equivalent credit/hours) in Statistics and Probability (academic disciplines: from SECS-S/01 to SECS-S/06 or MAT/06) in the previous academic career.

Candidates who do not meet the requirements described above **will not be admitted** to the Master's Degree Programme.

The interviews will take place remotely.

The English language proficiency equal to or higher than B2 level is also required for admission.

The English language proficiency requirement is considered fulfilled if the candidate:

a) holds a certification corresponding to B2 level or higher, recognized by our University and issued by an accredited body;

b) has obtained the Bbetween English B2 Open Badge of the University of Milano-Bicocca, or has passed the Placement test in English language at level B2 of the University of Milano-Bicocca;

c) has completed a Degree Programme entirely or predominantly taught in English.

The instructions for application as well as the dates of the interviews will be published here: <u>Degree</u> <u>Programme</u>

3. Contemporary pre-enrolment

According to the legislation in force, the student can pre-enrol simultaneously in two different high education programmes, in order to obtain two different academic titles (see art. 20 of <u>University Didactic</u> <u>Regulations</u>).

Information on application procedures and payments can be found in the following University website's page: https://www.unimib.it/servizi/studenti-e-laureati/segreterie/contemporanea-iscrizione-due-corsi-studio.

4. Pre-enrolment for the years subsequent to the first one

For information on pre-enrolment for the years subsequent to the first one, please see the website: <u>https://www.unimib.it/servizi/segreterie-studenti/rinnova-liscrizione</u>

5. Recognition of credits and transfer procedures

Students who:

- have transferred from other Master's Degree Programmes
- have taken a leave of absence
- have previously withdrawn from the University
- hold another Master's Degree

have to apply for the evaluation of their previous academic career in view of the verification of the adequacy of their personal preparation and the possession of curricular requirements. The Didactic Coordination Council will approve the total or partial recognition of the passed educational activities. In the event of student's transfer from other Master's Degree Programme of Class LM-91, the amount of CFUs relative to the same scientific-disciplinary area directly recognized to the student cannot be lower than 50% of the already held credits. (M.D. 16 March 2007).

Pursuant to M.D. 270/2004 and L. 240/2010, Universities may recognize as credits (CFUs) the individually certified knowledge and professional skills, in accordance with the legislation in force, as well as the other knowledge and skills acquired in post-secondary education activities in which the University participated, for a total amount of 12 CFUs within Bachelor's and Master's Degrees.

If some activities have been already recognized as credits in Bachelor's Degree Programmes, they cannot be further considered as CFUs in Master's Degree Programmes.

Information on transfer's application procedures are published on the following web page: <u>https://www.unimib.it/servizi/segreterie-studenti/passaggi-trasferimenti-e-rinunce</u>

6. Class schedule

Classes of the **first semester** will take place **from September 23, 2024 to December 20, 2024**. Classes of the **second semester** will take place **from March 3, 2025 to May 30, 2025**.

Class schedule will be published on the <u>Student Web Agenda</u>, at the address: <u>https://gestioneorari.didattica.unimib.it/PortaleStudentiUnimib/</u>.

7. Teaching programmes

The teaching programmes (syllabus) are available on the University e-learning platform at the following link: <u>https://elearning.unimib.it/course/index.php?categoryid=9164</u>

8. Free-choice activities

The student is required to obtain 12 CFUs in the "free-choice activities". The student can acquire these CFUs passing exams whose number of CFUs attributed is at least equal to the one required.

The student can freely choose the "free-choice activities" among the teaching activities activated in the Master's Degree Programme in Artificial Intelligence for Science and Technology and the teaching activities offered by the others Master's Degree Programmes active in the University of Milano-Bicocca, the University of Milan and the University of Pavia, subject to the approval of the study plan. According to the legislation in force, for calculating the total number of exams, the student's "free-choice activities" are considered as a single examination.

9. Further linguistic knowledge

The acquisition of 3 CFUs relating to "Further Linguistic Knowledge" takes place as described below:

ITALIAN students:

- by passing a University test of foreign language proficiency at B2 level . In this case the foreign language cannot be English, therefore the student has to choose between French, Spanish or German.

or

- by passing a University test of English language proficiency at C1 level .

Italian students who already hold the University of Milano-Bicocca's Open Badge or certifications issued by accredited bodies, attesting French/Spanish/German language proficiency at B2 level or higher or attesting English language proficiency at C1 level or higher, will be entitled to exemption from the test and recognition of the expected CFUs.

FOREIGN students:

- by passing the University test aimed at verifying the Italian language proficiency at B2 level.

Foreign students who already hold the University of Milano-Bicocca's Open Badge or certifications issued by accredited bodies attesting Italian language proficiency at B2 level or higher will be entitled to exemption from the language test and recognition of the expected CFUs.

Information on tests' procedures and CFUs' acquisition are defined at University level and will be available on the University website at the following address: https://www.unimib.it/didattica/opportunita/lingue-unimib.

10. Internship

The educational programme includes a theoretical-experimental internship (6 CFUs). The internship is mandatory and it is aimed at preparing the final dissertation, representing its theoretical-experimental part.

The internship can be carried out at Universities, institutions or companies, either in Italy or abroad.

The student is followed by an internal professor (university tutor) or, if the internship is done outside the University, by an external tutor (company tutor), according to the provisions of the training program agreed between the University and the institution/company for carrying out the internship.

The CFUs' acquisition is subject to the student's achievement of the educational programme's objectives. The student will earn the respective CFUs only if the internship's assessment is positive.

11. Learning methods

The educational programme consists of lectures, exercises and laboratory activities.

The acquisition of knowledge and skills by the student is assessed in university credits (CFU). 1 CFU corresponds to an average time commitment for a student of the course of 25 hours, including the educational activities carried out by the Master's Degree course and the commitment reserved for personal study or other individual educational activities.

To earn 1 CFU, the student must attend:

- 8 hours of lectures;
- 12 hours of exercises;
- 12 hours of laboratory activities.

The credits corresponding to each educational activity are assigned after the student passes the exam or other method of verifying the preparation and the skills acquired.

12. Extra Credits

According to art. 22 paragraph 4 of the University Didactic Regulations in force, students enrolled in Bachelor's Degree Programme, Master's Degree Programme or Single Cycle Master's Degree Programme may include in their own study plan one or more additional teaching activities than the ones required for the academic title's achievement up to a maximum of 16 CFUs.

CFUs and marks of additional teaching activities will not be counted in the final average exam grade, but they will be reported in the student's career.

For what is not provided for by this article, please refer to the Student Regulations.

13. Exams

Assessment methods

The exams will be carried out in English. The exams involve the attribution of a mark in thirtieths and they can be oral exams and/or written exams, according to what the <u>University Didactic Regulations</u> and the <u>Students Regulations</u> specified. The written exams, however, cannot be made solely of multiple-choice questions.

Details on the assessment methods and the evaluation of every single teaching activity included in the educational programme can be found in the respective syllabi, which are published in the section "Courses" of the Degree Programme's page.

For the internship and for further linguistic knowledge activities, the evaluation is expressed through judgement.

Subdivision of educational activities and exam sessions

Educational activities are scheduled in two semesters: October-January and March-June.

They will take place in the offices of Milano-Bicocca, Milano and Pavia according to the rules of alternation that will be published promptly on the Degree Programme's website.

The exam sessions – which are in the periods of classes suspension – are scheduled in three periods: Winter session, Summer session and Autumn session. They will take place at the University of Milano-Bicocca.

Exams calendar as well as times and locations the exams will take place at are published on the Student's Web Agenda, at <u>http://gestioneorari.didattica.unimib.it/PortaleStudentiUnimib</u>.

For sessions by single activity, by Degree Programme or by Department see the Sessions Bulletin Board.

Registration for exams must be performed through Segreterie OnLine

14. Submission of the study plan

When enrolling, the student is automatically assigned a study plan called statutory plan, which includes all compulsory educational activities.

Subsequently, the student will be required to submit a personal study plan, indicating his/her optional and free-choice activities.

The periods for submitting the study plan are specified in the following web page: <u>https://www.unimib.it/servizi/studenti-e-laureati/segreterie/piani-degli-studi/area-scienze</u>. The study plan is approved by the Didactic Coordination Council.

The student can exclusively take the exams included in his/her current personal study plan.

The student's right to take the exam of a teaching activity depends on the presence of the activity itself in the last approved study plan.

The student has the possibility to create his/her personal study plan including other educational activities, which are different to the ones planned by the Didactic Regulations, as long as they are coherent with the Degree's Programme Didactic System of the academic year of enrolment and as long as they are approved by the Didactic Coordination Council as congruous with the Degree Programme's educational objectives.

For further information, please see the <u>Student Regulations</u>.

15. Final degree exam

The Master's Degree in Artificial Intelligence for Science and Technology is earned by passing the final exam, consisting of the presentation and the discussion of a dissertation. The dissertation is a student's original composition written under the guidance of a supervising professor. It consists of a written report on a topic chosen within the framework of the academic course of the Master's Degree Programme and object of the theoretical-experimental internship activity.

The dissertation typically describes the activities carried out by the student, the knowledge and the skills acquired by him/her in theoretical and/or experimental study, and the links with the current technological progress in the field of Artificial Intelligence. In particular, the student will present the scientific and technological results obtained highlighting innovation and relevance in the specific scientific/technological field of application. The internship activity can be carried out at universities, institutions or companies, either in Italy or abroad.

16. Final degree exam: procedure

The final exam, which leads to the achievement of 21 CFUs, consists of the discussion of the thesis in front of a specific committee. The thesis must be written and discussed in English. The graduation mark is expressed in one-hundredths.

Session timetables, deadlines and operating instructions are published on the <u>Degree Programme website:</u> <u>https://elearning.unimib.it/course/view.php?id=46348</u>

17. Contacts

The Degree Programme's administrative headquarters is the University of Milano-Bicocca, at the Department of Physics "Giuseppe Occhialini", Square Scienza 3, 20126 Milan.

For information regarding admission, transfers and administrative procedures, please write to: segr.studenti.scienze@unimib.it

For information regarding the Degree Programme, please write to: <u>AI4ST@unimib.it</u>

For University procedures and deadlines related to enrolment/pre-enrolment, transfers, study plan submission, please consult the website <u>www.unimib.it</u>.

For information regarding the organization of didactics and the contacts, and for any other clarification, see the Programme's website:

https://elearning.unimib.it/course/index.php?categoryid=9164.