UNIVERSITA' DEGLI STUDI DI MILANO
PROGRAMME DESCRIPTION - ACADEMIC YEAR 2023/24
BACHELOR
CULTURAL HERITAGE: SCIENCES, TECHNOLOGIES AND DIAGNOSTICS (Classe L-43)
Enrolled from academic year 2023-24

HEADING

Degree classification - Denomination and code:	L-43 Conservation and restoration of culturale heritage
Degree title:	Dottore
Length of course:	3 years
Total number of credits required to complete programme:	180
Years of course currently available:	1st
Access procedures:	Open, subject to completion of self-assessment test prior to enrolment
Course code:	F4A

PERSONS/ROLES

Head of Study Programme

Prof. Marco Merlini

Tutors - Faculty

Tutor per l'orientamento - prof. Mattia Marini, prof. Giulio Borghini, prof.ssa Flavia Groppi
Tutor perla mobilità internazionale e l'Erasmus - prof.ssa Nicoletta Marinoni
Tutor per i piani di studio:
prof.ssa Silvia Bruni - Orientamento analisi e conservazione dei beni storico-artistici
prof. Andrea Zerboni - Orientamento analisi e conservazione dei beni culturali archeologici
prof. Alessandro Rizzi - Orientamento analisi, conservazione e restauro dell'informazione e dei supporti informativi
dott. Leonardo Gariboldi - Orientamento analisi e conservazione dei beni museali scientifico-tecnologici
Tutor per tirocini, laboratori e altra attività - prof.ssa Elisabetta Onelli
Tutor per tesi di Laurea - prof.ssa Elisabetta Onelli
Tutor per tesi di laurea - dott.ssa Bonizzoni Letizia
Tutor per trasferimenti - prof. Marco Merlini
Tutor per ammissioni Lauree Magistrali - prof. Luca Trombino
Tutor per riconoscimento crediti - prof. Marco Merlini

Degree Course website

https://beniculturali-std.cdl.unimi.it

Via Celoria, 18 - Milano Phone 0250325032 https://www.unimi.it/it/studiare/servizi-gli-studenti/segreterie-informastudenti/sedi-e-orari-segreterie-studenti

Via Botticelli, 23 - Milano (II piano) riceve quando disponibile e su appuntamento Email: marco.merlini@unimi.it

Ufficio per la Didattica, per appuntamento scrivere a : sportello.beniculturali@unimi.it Email: sportello.beniculturali@unimi.it

CHARACTERISTICS OF DEGREE PROGRAMME

General and specific learning objectives

This degree programme is designed to train students to become qualified professionals who can contribute to the study and conservation of cultural heritage and information storage media.
Graduates will be equipped with the necessary methodological, scientific and technological skills to be able to:
- assess the state of conservation of a piece of cultural heritage, also performing operational tasks;
- analyse the morphological and structural characteristics and properties of its component materials;
- perform tasks pertaining to the identification of cultural objects and risk assessment;
- design interventions and diagnostic projects to stop the degradation and deterioration of archaeological sites, historical and artistic artefacts, museum collections, information storage media and their contents (archives, digital contents, music, theatre plays, films etc.);
- design interventions and diagnostic projects for the conservation of information storage media and their contents;
- take on science and technology roles in professional organisations and institutions in charge of the protection, management and conservation of cultural heritage, as well as in private professional associations operating in the fields of environmental

conservation and restoration;
- speak and write proficiently in at least one language of the European Union other than Italian, both in their field of expertise and for general communication purposes;
- perform tasks related to the communication, conservation, use and management of information, including operational tasks;
- work in team and independently, as required, and smoothly integrate into a new workplace.
Year I includes a core set of activities designed to provide students with training in the basic scientific disciplines; these are complemented by courses on cultural heritage and on certain types of cultural assets. Year II includes courses devoted to science and technology applied to the conservation of cultural heritage, courses focusing on disciplines pertaining to Earth sciences and natural sciences, as well as other educational activities aimed at giving students an interdisciplinary training. The goal of this combination of disciplines is to provide the basics of professional scientific enquiry, to ensure that graduates in Cultural Heritage: Sciences, Technologies and Diagnostics receive an all-round cultural training. During year III, students can customise their study plan by choosing courses dedicated to different types of cultural heritage, such as archaeological findings, historical and artistic artefacts, scientific and technological tools and the various information storage media. This will allow them to focus on employable skills and to increase their chances of entering the job market quickly and smoothly right after graduating.

Expected learning outcomes

Knowledge and understanding
Bachelor's graduates are familiar with the foundations of biology, chemistry, physics, Earth sciences and computer science that may be useful for the characterisation, classification, digitalisation and informatisation of artistic and archaeological objects, for diagnostics (also using non-invasive methods), and for the identification of archaeological sites within the landscape.
Knowledge and understanding are acquired during each course.
Knowledge and understanding of the course contents are assessed by way of exams, to be organised during and/or at the end of each course. These exams aim to ascertain whether students have assimilated the basics of each discipline, with regard to the theoretical aspects.
Applying knowledge and understanding
Bachelor's graduates are able to: study tangible and intangible cultural assets by adopting the latest techniques in terms of chemical, physical, mineralogical, petrographical, palaeontological and geoarchaeological analysis; assess the conservation state of cultural objects, identifying the causes behind any deterioration process and working to prevent them; participate in projects for the valorisation of cultural heritage, also using ICT tools.
Many courses include practical activities such as exercises, laboratories and educational visits. These are a chance for students to put into practice the knowledge and skills acquired during the lectures, under the supervision of professors and experts in the field. Students can also familiarise with equipment and procedures used for analysis or sampling purposes.
The ability to apply the knowledge acquired is assessed by way of exams, to be organised during and/or at the end of each course. Where applicable, these exams aim to ascertain whether students have acquired the technical or practical skills covered by each course.
Making judgements
Graduates are expected to be able to make autonomous and informed judgements on any analytical, diagnostic or project decisions made within the organisation or company where they may work, with particular regard to:
- study and assessment of the conservation state of cultural objects, and the scheduling of cultural heritage surveys;
- risk assessment, interventions and diagnostic projects to stop the degradation and deterioration of archaeological sites, historical-artistic artefacts, information storage media and their contents (archives, digital contents, music, theatre plays, films etc.).
Students are also expected to also fully assimilate the principles of professional ethics applicable to interpersonal relations in the work environments where they may find a job after graduating.
Expected learning outcomes:
- Critical reasoning skills and ability to question choices relating to the methods and tools for the study and preservation of cultural heritage and information storage media;
- Independent thinking skills;
- Familiarity with alternative methodological approaches for the analysis and conservation of cultural heritage and information storage media, and an understanding of why such alternatives are important;
- Ability to critically assess the relevance, characteristics and costs of the various possible interventions for studying and/or preserving the cultural heritage;
- Ability to critically evaluate and interpret evidences.
To this end, students are equipped with the necessary tools to be able to autonomously review the academic literature on certain important topics covered by this interdisciplinary programme. At the same time, they learn how to retrieve information from other national or international research studies. This last ability is also trained during the final internship, and assessed in the context of the internship evaluation. During lectures and workshops, students are encouraged to discuss cases and further explore topics in their field of studies and intervention sectors on their own. Thanks to their studies, graduates are able to analyse various kinds of situations, also of a complex nature. As a matter of fact, skills acquired by students are assessed in terms of their actual ability to find a solution to problems based on real-life cases, and to interpret data connected to such problems or cases. This means that graduates will be able to gather the various elements that may be useful for the analysis of complex situations (collection of qualitative and quantitative data, analysis of secondary data,

ability to use techniques for statistical, diagnostic and economic analysis, including scientific techniques) and to assess the relevance of such data.

Communication skills

Graduates of this programme are expected to master communication skills and tools in the following areas: written and oral communication in Italian and English; ability to process and present data using a computer; team-working skills; communication and dissemination of information on topics related to the cultural heritage and the study and preservation of cultural assets.

Graduates must be able to argue their positions and communicate the results of their analyses and assessments in a clear and effective way, using the most common language in international working contexts, i.e. English. They are also expected to be fully capable of using the latest scientific and technological innovations and the most advanced tools (in the fields of chemistry, physics, geology, biology, IT, mathematics, statistics, economy and law) for the study and conservation of cultural heritage and information storage media.

Expected learning outcomes:

- Written communication skills are assessed by way of reports, written mid-course and end-of-course exams (for each course), and in the final thesis. Such skills include the use of subject-specific terminology and technical-scientific language to present and critically assess technical and methodological ideas and arguments in written form, in a clear, coherent, and concise way;
- The ability to produce and present complex technical and methodological arguments in oral form, also in public contexts, is assessed by way of oral presentations, and mid-course and end-of-course exams (for each course);
- The ability to produce an original research dissertation on a complex topic, also relying on the appropriate digital technologies, will be assessed during the presentation of the final thesis, which will focus on the internship. Each student will have to prepare a presentation on their thesis using a presentation software, and deliver it orally in front of the degree board. The board members will assess the student's ability to present the topic of his/her work and discuss it with the board.

Learning skills

The programme aims to lead students, albeit gradually, to the frontier of scientific-technological knowledge in the disciplinary and interdisciplinary fields of reference. For this very reason, the programme is intended, first and foremost, to help students develop their learning skills and acquire methodological and theoretical competencies. This will enable them to pursue further investigations and research on their own according to internationally recognised scientific and technological standards, also with a view to their future studies, should they decide to pursue a Master's degree related to cultural heritage.

Expected learning outcomes

- Ability to organise ideas critically and systematically;
- Ability to identify, select and gather information, using relevant sources appropriately;
- Ability to use libraries, databases, archives and paper and electronic catalogues to access relevant scientific and documentary information, also with a view to lifelong learning;
- Ability to organise and implement an independent study plan;
- Ability to reflect on one's learning experience and to adjust learning according to the input and advice received from instructors or colleagues;
- Ability to recognise where further studies are necessary, and to appreciate the role of innovative learning modes and additional research activities;
- Ability to design and develop an independent research work, albeit under the supervision of a tutor.

One of the core focus of the programme is the application of scientific and technological knowledge, methods and tools, whose level of acquisition is defined by the final mark obtained by students at the end of each course. The final mark is based on the activities carried out by students during the course, as well as on a final oral and/or written exam; these two elements may impact differently on the final mark, depending on each course. The programme is also intended to boost students self-reflection and independent studying skills. These objectives not only inform the general structure and characteristics of all lectures and practical activities, but become even more central starting from the third year, when students have to draft their final thesis in an innovative way, with a view to strengthening their own skills pertaining to the analysis, conservation and dissemination of cultural heritage, diagnostics processes and independent project design. More specifically, students will attend professional seminars designed to guide them in choosing a topic for their final thesis, and to help them organise their work along lines which have already been validated by the scientific community, and are of sure interest in terms of practical applications to the different types of cultural assets covered by the course.

Professional profile and employment opportunities

The specific roles and professional skills applicable to graduates in Cultural Heritage: Sciences, Technologies and Diagnostics are only partially covered by the Technical Professions listed by ISTAT, the Italian Institute of Statistics. As a matter of fact, the current ISTAT codes fail to describe all the range of professional profiles trained by this programme. However, these profiles have been recognised in a recent law adopted by the Italian Chamber of Deputies, which specifically mentions "Experts in diagnostics and science and technology applied to cultural Heritage" among the professions listed in the Italian Code of Cultural Heritage. Moreover, some professional profiles listed in the National Charter for Museum Professions (2008) by ICOM (International Council of Museums) share some points of contact with the contents of this programme. This is particularly the case with professions listed in point 4.3, "Research, curation and management of collections".

The programme is notably designed to prepare students for the following new professions:

Geoarchaeologists and field archaeologists (diagnostics experts in the field of geoarchaeology and archaeological

excavations)
Job function:
Identification, survey, study and diagnostics of archaeological sites and landscapes, in order to define their surface, analyse their conservation state and formation processes and assess conservation risks to inform archaeological excavations; management of documents; management of protection and valorisation projects.
Professional skills:
Subject-specific methodological, scientific, technological and operational skills in the areas of geomorphology, geopedology, Quaternary geology, on-site geognostics (core drilling, near-surface geophysics), stratigraphic archaeological excavations and related lab documents (pedosedimentary analyses). These skills allow for the advancement of scientific knowledge, enabling students to smoothly integrate into operational teams and to draft investigation reports on specific applications.
Career opportunities:
Access to further studies (Master's degree or postgraduate schools); employment at dedicated regional or national offices, museums, architecture and engineering firms (in technical-managerial positions) or archaeological excavation companies operating in the area of Preventive Archaeology (Italian Law 109/2005 and Legislative Decree 163/206); freelancing.
Conservation scientists in the historical, artistic and archaeometric field
Job function:
Study and diagnostics of historical, artistic and archaeological objects, as well as their conservation environments, in order to identify the nature and origin of their component materials (stone, ceramic, metal, wood, painting materials etc.), manufacturing techniques, state of conservation and alteration and degradation causes, and to assess the conservation risks to support restoration and protection activities and valorisation processes. Participation in teams working on the planning and implementation of restoration works.
Professional skills:
Since all work activities in the heritage science sector require a holistic approach, the degree programme has a highly interdisciplinary structure and is designed to provide students with specialised and advanced methodological, scientific, technological and operational skills in the areas of biology, chemistry, law, physics, computer science, mineralogy, petrography and art history. Such skills will enable students to conduct research, apply their expertise to historical contextualisation and provenance issues, plan activities for the conservation and valorisation of cultural assets, and write scientific papers and investigation reports.
With regard to the study and diagnostics of historical and artistic heritage, methodological and scientific skills include the ability to characterise a wide range of component materials of artistic and archaeological objects, such as stone, painting materials, metals, organic materials and so on, as well as the products of their degradation.
Sticking to the area of characterisation, technical skills include the assimilation of methods and protocols to solve issues ranging from the analysis of micro-samples to the non-invasive study of artworks. Graduates also have professional skills in the area of prevention, in other words, they are familiar with the set of activities designed to limit risks and slow down the degradation of cultural heritage artefacts in their environment.
Career opportunities:
Access to further studies (Master's degree or postgraduate schools); technical-managerial positions at regional or national offices in charge of cultural heritage protection, management and conservation, museums, private professional associations in the area of conservative restoration and diagnostics, architecture and engineering firms, archaeological excavation companies; freelancing.
Conservation scientists and experts in the valorisation of scientific heritage
Job function:
Conservation of historical scientific instruments and dissemination of scientific knowledge, with a focus on the conservation and valorisation of modern instruments once they become obsolete and stop being used in research processes, in order to contextualise and understand significant discoveries. Ability to understand the relevance of an instrument based on its uniqueness, in the case of prototypes, or, for non-unique tools, based on the process that led that tool to be used in a research study, whereby such process can become a topic for a museum exhibition. For those working for museums, the ability to select parts of larger scientific equipment which were used to achieve important scientific discoveries, but cannot be displayed in museums due to their size.
Professional skills:
The programme provides students with the basic scientific and cultural knowledge needed to understand the role and functions of scientific instruments in the various disciplines. Students acquire specialised technical and scientific skills for the conservation and valorisation of scientific and historical heritage both in the context of museums, as well as for educational and dissemination purposes.
Career opportunities:
Access to further studies (Master's degree or postgraduate schools); technical-managerial positions at regional or national offices in charge of the protection, management and conservation of scientific heritage items held by museums, or at private professional associations operating in the area of conservative restoration; freelancing. The archetypal profession would be conservator and curator in science museums. Another option would be working in the organisation of thematic exhibitions and scientific dissemination initiatives.
Conservation scientists for digital and analogue information media
Job function:
Study, monitoring, diagnostics, planning and management of conservation and restoration works on information storage media and their contents (archives, digital contents, music, theatre plays, films etc.); design and implementation of initiatives for the communication, conservation, use and management of information within digital archives and networks of cultural

heritage archives.
Professional skills:
The degree programme train students on the principles, conceptual systems and analytical and diagnostic tools for the study and conservation of digital cultural heritage and information storage media.
Students also acquire knowledge and skills regarding quantitative and qualitative methods used in professional contexts, and familiarise with the most important research findings, theoretical developments, good practices and standards for the conservation of digital cultural heritage and information storage media.
Career opportunities:
Access to further studies (Master's degree or postgraduate schools); technical-managerial positions at regional or national offices in charge of the conservation of information media (libraries, opera houses, museums, etc.), private professional associations in the area of conservative restoration and diagnostics; freelance experts providing services in the following areas: conservation state analysis, identification and application of the most effective conservation strategies, organisation and use of digital and analogue information media and their contents, digitalisation and cataloguing of cultural heritage items (artworks, museum objects, archaeological artefacts etc.).

Initial knowledge required

Qualifications and knowledge required for admission
Applicants to this degree programme must hold an upper secondary-school diploma or equivalent foreign qualification, and possess adequate background knowledge. In particular, applicants must be familiar with the basic scientific disciplines and elementary logic.
Admission to the Degree Programme in Cultural heritage: sciences, technologies and diagnostics is open, with a mandatory non-selective test prior to enrolment.

Candidates will have to sit for the TOLC (Test Online CISIA) at the University of Milan or any other member university of CISIA (Consortium of Inter-University Integrated Access Systems). Register to the TOLC test on the CISIA website (www.cisiaonline.it).
The TOLC tests providing access to the Degree Programme in Cultural heritage: sciences, technologies and diagnostics are TOLC-S and TOLC-B.
Only after taking one of these tests, will you be able to enrol, WHATEVER THE RESULT:
- TOLC-S, divided into 4 sections: Basic mathematics (20 questions - 50 minutes), Reasoning and problems (10 questions - 20 minutes), Reading comprehension (10 questions - 20 minutes), Basic sciences (10 questions - 20 minutes).
- TOLC-B divided into 4 sections: Basic mathematics (20 questions - 50 minutes), Biology (10 questions - 20 minutes), Physics (10 questions - 20 minutes), Chemistry (10 questions - 20 minutes).
Each question has 5 answer options, of which only one is correct.
Score: +1 for a correct answer, -0.25 for a wrong answer, 0 for a no answer.
Students who have not achieved at least 10 points in the Mathematics module will have to fulfil additional learning requirements (OFA).

Each TOLC test includes an additional English section, consisting of 30 questions to be answered in 15 minutes. This section does not count toward the overall test score.

Remedial activities and tests: https://beniculturali-std.cdl.unimi.it/it/studiare/le-matricole
Students with additional learning requirements will have to carry out remedial activities organised by the University in the period October-December, and then take a test to prove they have filled their gaps. Otherwise, they may not take any second-year or optional exams before passing the General Mathematics exam.

Test structure and topics, registration procedures, dates, deadlines and any other useful information are set out in the call for applications.
See also https://www.unimi.it/en/study/bachelor-and-master-study/degree-programme-enrolment/enrolment-first-degree-programme.

Compulsory attendance

Attendance is strongly recommended for both courses and laboratories.

Internship criteria

The academic plan includes an internship that preferably involves an experimental activity, to be carried out at University laboratories/facilities, public or private institutions, or professional associations in Italy or abroad, for a total of 12 credits (CFU).
Students can contact the internship board of the degree programme for assistance with internship selection.
Students wishing to undertake an internship off campus must submit an application for approval to the board, with the following information:
- Host institution
- Names and qualifications of the external tutor and internal tutor (thesis supervisor)
- Internship start and end dates
- Description of the activity to be carried out.

The application will be submitted to the Academic Board for approval.
After obtaining the approval, students must contact COSP to start the paperwork for off-campus internships.

Degree programme final exams

To be awarded the Bachelor's degree in Cultural Heritage: Sciences, Technologies and Diagnostics, students have to pass a final exam, for which they have to present and discuss an exhaustive written report (final thesis) on the activities they carried out during their on-campus or off-campus internship.
To be admitted to the final exam, upcoming graduates must:
a) have earned 177 CFU, including 3 CFU for English language proficiency, 3 CFU for other educational activities (non-gradable) and 12 CFU for the internship;
b) have written a final paper.
The final paper is worth 3 CFU and is the result of the experimental research activity carried out during the internship. Students conduct their research work and draft the corresponding report under the guidance of a professor of the degree programme, who acts as thesis supervisor. Exception to this rule may be granted by the Academic Board on a case by case basis. A co-supervisor may also be involved. The report is presented by students during the graduation sessions, and assessed by a board made up of at least two professors, including the board president.
The final degree mark is calculated by adding to the student's initial mark a maximum of 8 points (rounded to the nearest integer), to be assigned by the degree board as follows:
- a maximum of 1 point if the student has done an internship or taken exams abroad, or has written the final paper in English;
- a maximum of 1 point for his/her academic career (he/she is graduating on time, has earned extra credits);
- a maximum of 6 points for the internship and final paper (the following points are awarded according to the paper's quality: 1-2 points = sufficient; 3-4 points= fair; 5 points = good; 6 points = excellent); theoretical papers can be awarded a maximum of 3 points.

Campus

Lessons take place in the Città Studi classrooms (check the lessons timetable for classroom location, or check the App "La Statale").

Laboratories

Teaching laboratories take place both in departmental structures, equipped with technical-scientific instruments and collections, and on-field, using customised logistics solutions.
Activities in equipped laboratories take place in the following Departments: Department of Earth Sciences, Department of Chemistry, Department of Food, Environmental and Nutritional Sciences (Faculty of Agricultural and Food Sciences), Department of Physics, Department of Computer Science.

Notes

In order to obtain their degree, students must be proficient in English at a B1 level under the Common European Framework of Reference for Languages (CEFR). This proficiency level may be certified as follows:
- By submitting a language certificate attesting B1 or higher level in English and issued no more than three years before the date of submission. You will find the list of language certificates recognized by the University at: https://www.unimi.it/en/node/297/). The certificate must be uploaded during the enrolment procedure, or subsequently to the portal http://studente.unimi.it/uploadCertificazioniLingue;
- By taking a placement test offered by the University Language Centre (SLAM) between October and December of the first year. Students who fail the test will be required to take a SLAM course.
The placement test is mandatory for all those who do not hold a valid certificate attesting to B1, B2, or higher level.
Those who have not taken the placement test by the end of December or fail the end-of-course exam six times must obtain the necessary certification privately before graduating.

EXPERIENCE OF STUDY ABROAD AS PART OF THE TRAINING PROGRAM

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

Study and internships abroad

Students can take part in exchange programmes at foreign universities or research centres, to attend classes and take exams, carry out part of the research works for their final thesis, or complete the internship required before graduation. For any of these opportunities, and in general to carry out research abroad, students have to identify a professor willing to act as their supervisor or scientific coordinator of the project. Hypothetically, mobility opportunities may be available in any field of studies covered by the degree programme. Students can access two types of scholarships:
- Erasmus+ scholarships, enabling students to take exams and conduct research abroad

- Erasmus+ Traineeship scholarships, which can only be used to carry out internships and research activities.

The Erasmus+ Call for this degree programme is available under the Geology section. Particularly recommended are the courses included in the Bachelor's and Master's programmes in Conservation at the Technological Educational Institute (TEI) of Athens, Greece, which has a dedicated agreement in place with this degree programme.

The Erasmus+ Traineeship call is published on the www.unimi.it website and is open to students of any degree programme. Over the last years, partner universities for the Erasmus+ Traineeship have included the Universities of Cergy-Pontoise (France), Poitiers (France), Santiago de Compostela (Spain) and Ghent (Belgium). Moreover, new agreements for study, research or internship purposes can be signed with any other university or research centre with which professors teaching in the programme have an ongoing scientific collaboration. With the exception of exams, any activity carried out at a partner university abroad is worth 3 university credits (CFU) per month.

All activities to be carried out abroad must be approved by the relevant tutors (professors) at the home and host universities and specified in the "learning agreement". This document, together with the transcript of records of any exam taken abroad and/or the research report, is essential for ensuring the recognition of such activities within this degree programme.

Attending courses and taking exams at a foreign university is not only a life-shaping experience and an opportunity to learn the local language, but also a chance for students to experience a different teaching system and develop a more flexible approach to their studies. Carrying out research activities or an internship abroad often allows students to use facilities that otherwise would not be accessible (for example, large equipment), as well as to conduct applied research in specific fields and interact with wider research groups.

How to participate in Erasmus mobility programs

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 organizes 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; mobility.out@unimi.it

Student Desk booking through InformaStudenti

1st COURSE YEAR Core/compulsory courses/activities common

Learning activity	Ects	Sector
ART HISTORY	6	L-ART/03
ELEMENTS OF MINERALOGY AND PETROGRAPHY	9	(5) GEO/06, (4) GEO/07
English assessment B1 (3 ECTS)	3	ND
GENERAL AND INORGANIC CHEMISTRY	6	CHIM/03
GENERAL COMPUTER SCIENCE	12	INF/01
GENERAL MATHEMATICS	6	MAT/03
LAW FOR CULTURAL HERITAGE	6	IUS/10
METHODOLOGY OF THE ARCHAEOLOGICAL RESEARCH	9	L-ANT/10
PHYSICS GENERAL	9	FIS/01
Total compulsory credits	66	

2nd COURSE YEAR (available as of academic year 2024/25) Core/compulsory courses/activities common

Learning activity	Ects	Sector
ANALYTICAL CHEMISTRY	9	CHIM/01
MICROBIOLOGY	6	AGR/16
MINERALOGY APPLIED TO CULTURAL HERITAGE	6	GEO/09
N-DEPTH CHEMISTRY	6	(3) CHIM/02, (3) CHIM/06
PALEONTOLOGY AND STRATIGRAPHIC GEOLOGY	9	(4) GEO/02, (5) GEO/01
PHYSICAL METHODOLOGIES FOR CULTURAL HERITAGE	9	FIS/07
PLANT BIOLOGY	6	BIO/02
PLANT BIOLOGY AND ENTOMOLOGY	9	(2) AGR/16, (5) AGR/11, (2) AGR/12
Total compulsory credits	60	

3rd COURSE YEAR (available as of academic year 2025/26) Core/compulsory courses/activities common

Learning activity	Ects	Sector
FINAL EXAM	3	NA
TRAINING	12	NA
Total compulsory credits	15	

COURSE YEAR UNDEFINED Core/compulsory courses/activities common

Learning activity	Ects	Sector
OTHER EDUCATIONAL ACTIVITIES	3	NA
Total compulsory credits	3	

Further elective courses

Students must earn 18 credits (CFU/ECTS) by choosing 3 supplementary courses from the ones listed in the table below:

ANTHROPOLOGY	6	BIO/08
ARCHAEOMETALLURGY	6	ING-IND/23
CHEMICAL AND PHYSICAL METHODS FOR THE CULTURAL GOODS CONSERVATION	6	CHIM/02
CHEMISTRY OF MATERIALS FOR CULTURAL HERITAGE	6	CHIM/04
CONTEMPORARY MUSEOLOGY	6	L-ART/04
Data Analysis	6	SECS-S/01
GEOARCHAEOLOGY	6	GEO/04
GEOLOGY QUATERNARY	6	GEO/04
Methods and languages for data management	6	INF/01
MULTIBAND IMAGING TECHNIQUES FOR CULTURAL HERITAGE	6	FIS/07
RESTORATION OF CULTURAL HERITAGE	6	ICAR/19

Moreover, students are required to earn 18 credits for elective activities to be freely chosen among those offered by the University, provided that they are coherent with their study programme and their contents are not the same of those of the core and elective courses already included in their study plan. In particular, students can choose any of the courses included in this Programme Description that meet these criteria, as well as any of the courses listed below, which are included in other Bachelor's and Master's degree programmes:

Bachelor's degree programme in Natural Science
Geobotany (6 cfu)
Geomorphology (6 cfu)
Geopedology (6 cfu)
Bachelor's degree programme in Computer Science
Scientific Visualization (6 cfu)

COURSE PROGRESSION REQUIREMENTS

The program of each course indicates the preliminary knowledge necessary to adequately deal with the contents of the course itself. It is the responsibility, as well as the interest, of the student to comply with these indications.