

Academic year 2009/10 University's degree course handbook of **Class L-43;**
Technologies for the Conservation and the Restoration of Cultural Heritage

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Course Presentation:

Italian historical, artistic and architectural heritage, one of the richest in the world, represents a real source of wealth. It is therefore fundamental that this heritage be studied, protected and, if necessary, restored. The degree course in Technologies for the Conservation and the Restoration of Cultural Heritage aims to meet these needs. The graduate in Technologies for the Conservation and the Restoration responds to the demand for new professional figures of a technical/scientific nature able to conjugate historical, artistic and architectural knowledge with advanced scientific disciplines for the diagnosis, conservation and restoration of the cultural heritage. In fact this cross-faculty (Sciences Faculty and Architecture Faculty) degree course in Technologies for the Conservation and the Restoration is a peculiarity among UNICAM degree courses: it is characterized by the coexistence of scientific (mathematics, physics, chemistry, biology, geology, etc.) and humanistic disciplines (art history, history of architecture, museum science, etc) applied to the Conservation and the Restoration of Cultural Heritage.

During their university career, students in Technologies for the Conservation and the Restoration in UNICAM are flanked by professors from both the Faculties of Sciences and Architecture, as well as specialists from the public sector.

Employment prospects

The graduate in Technology for the Conservation and Restoration will be able to work as an art restoration technician.

Italian law (D.Lgs. 24.01.2004 n.42, article 29, Codice dei beni culturali e del paesaggio) recognizes the qualification of Technician for the Conservation and Restoration of Cultural Heritage for graduates in Technology for the Conservation and Restoration among those professional roles related to activities complementary to conservation and restoration of cultural heritage.

The First Degree Course in Technology for the Conservation and Restoration enables graduates:

- to participate in diagnostic techniques on historical, artistic, archaeological and cultural heritage;
- to participate in the various phases of restoration on the basis of specific knowledge about the composition and the materials of a work, as well as its state of preservation and the appropriate techniques to be used;
- to participate in archeometric studies regarding cultural heritage (dating, origin, authenticity, production methods, etc.).

Graduates in Technology for the Conservation and Restoration will be able to work in:

- Universities and Research Centers (management, conservation and protection of cultural heritage);

- Government offices, museums, libraries, archives, etc.;
- Restoration laboratories;
- Companies and professional organizations working in the sector of cultural heritage management, conservation and protection.

Qualifications to access undergraduate degree course

Applicants must have a diploma from secondary school or any other school certificate obtained abroad and recognized as suitable.

Welcome to new undergraduate students

All students enrolling on the degree course in Technologies for the Conservation and the Restoration will take an entrance test with the purpose to orient students through foundation courses necessary to bridge possible gaps. Date and test will be the same as proposed at national level. Acclimatization courses followed by foundation courses for new undergraduate students will start on 1st October. A complementary English course is included for those who do not have the minimum basic knowledge.

Educational goals

The degree course in Technologies for the Conservation and the Restoration responds to the demand for new professional figures of a technical/scientific nature qualified to carry out skilled activities to promote the knowledge, control, conservation and profitable use of the cultural heritage. Upon graduation, students are qualified Technicians for the Conservation and Restoration of the Cultural Heritage, a professional figure already present in other countries. The degree program includes both theoretical coursework to ensure that candidates possess basic knowledge in chemistry, mathematics, physics, mineralogy, biology, geology, etc., as well as practical laboratory activities.

Graduates in Technology for the Conservation and Restoration will possess the skills to identify specific cultural heritage, to recognize its state of conservation and to reconstruct the context of its origin. Thus, graduates will possess the abilities to deploy the appropriate processes for its safeguarding and development.

Assessment is accomplished mainly through oral, or eventually, written exams. Practical laboratory activities will be assessed through in-lab testing.

Expected learning outcomes:

Knowledge and understanding ability

Graduates in Technology for the Conservation and Restoration will acquire knowledge and skills concerning the main scientific techniques for the conservation and restoration of the cultural heritage.

In particular graduates will:

- possess basic knowledge in the following scientific disciplines: chemistry, physics, biology, geology, archeometry;
- possess basic knowledge in the following subjects: art history, history of architecture, history of restoration, museum science;
- possess skills regarding materials and methods for the restoration;

- be familiar with the legislation on cultural heritage.

The above-listed knowledge and skills are achieved through lessons, attended by students, and which are flanked, where necessary, by seminars, practical exercises, guided home study and students' individual in-depth analyses.

Assessment is performed mainly through written exams during the course, as well as oral/written exams at the end of the semester.

Ability to apply knowledge and understanding

Graduates:

- are able to use techniques and chemical-physical instrumentation and apply them to the conservation of the cultural heritage;
- are capable of applying their knowledge to practical cases;
- are able to participate in the planning and supervising of actions aimed at safeguarding and restoring cultural heritage based on their knowledge of the composition and the characteristics of the materials that make it up;
- are able to analyze the state of preservation of the cultural heritage;
- are capable of planning procedures aimed at safeguarding an architectural, historical, archeological, archiving (archiving and library disciplines), artistic (music, theatre, cinema) or anthropological cultural heritage;
- can use the main computer software programs to manage and process data.

The above-listed knowledge and skills are achieved through lessons, laboratory activities, guided home study and students' individual or group analyses.

Assessment is performed mainly through written exams during the course and oral /written exams at the end of the semester.

Making judgements

Graduates:

- are capable of collecting and understanding scientific data derived from observations and laboratory measurements;
- are able to plan and carry out an experiment, making judgments to evaluate the results;
- are able to formulate an analytical problem and to propose ideas and solutions;
- are capable of making judgments about important scientific and ethical problems;
- are able to adapt to different projects and working environments, to collect and evaluate information and data.

The above-listed abilities are achieved through lessons, classroom exercises, as well as through guided home study and stage or internship experiences. Assessment is performed mainly through written exams during the course, oral/written exams at the end of the semester and final examination.

Communication skills

Graduates are capable of writing documents or communicating orally about results and the information obtained from experimental data. They are able to describe the nature of the problems and propose possible solutions bearing in mind the context and the target audience (chemists, physics, biologists, geologists, archeologists, art historians, surveyors, technicians for the Conservation and Restoration of the Cultural Heritage, etc.).

Graduates know at least one other European language, possess the ability to analyze and synthesize and are able to work in a team.

The above-listed communication skills are developed during all the educational activities, in relation to the preparation of oral communications and writing documents, during projects and in team activities which foresee a presentation of the skills learned.

Assessment is also performed through the processing and the discussion of the final examination. Oral communication skills in particular are assessed during all the educational activities which foresee a presentation of the skills learned, from oral exams, discussion of the projects, preparation of reports using principal software programs.

Learning skills

Graduates:

- are capable of developing learning skills, necessary to perform future studies;
- are able to acquire a method of study, the ability to work on a team and alone;
- are able to work in professional environments which require autonomous decision-making and to continue with their professional training.

The above-listed abilities are achieved through individual study as well as through guided home study, preparation of seminars, preparation of the final examination and internship experiences. Assessment is performed mainly through oral or written exams at the end of the semester, through the presentation of seminar activities and final examinations.

Assessment and types of exams:

Assessment is performed mainly through written exams during the course and oral or written exams at the end of the semester. Educational activities which provide for practical laboratory activities will be assessed through in-lab tests.

Final Examination

The final examination consists of the preparation of an individual paper written by the student on a specialized subject, preferably multidisciplinary and presented to the Final Examination Committee. The final mark is based on a general assessment of the graduating student's university career and on the vote of the members of the Final Examination Committee. The students who complete the degree course in three years (underway students) will receive a special bonus (1 point) by the members of the Final Examination Committee.

Didactic Regulations

Lessons

Academic Calendar

I Semester Teaching Activity	1 st October 2009 (1 st Year)	To	29 th January 2010
II Semester Teaching activity	5 th October 2009 (2 nd and 3 rd Year) 1 st March 2010	To	11 th June 2010

Course attendance is not compulsory, but it is recommended especially for laboratories

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Largo Cattaneo 4 – 63100 Ascoli Piceno

Lessons timetable

Students may find information on the Calendar of lessons on the University web site <http://www.unicam.it/studenti>.

Exams

During the intervals between semesters and in the months of June, July and September.

Placement

The placement, which can be done after having obtained 100 CFUs, entails at least 250 hours at private restoration laboratories or public institutions, where Unicam has an agreement, or at research laboratories in our university. The student in Technology for the Conservation and Restoration will prepare a short research paper during the placement with a business tutor and with the guidance of an university teacher.

Degree prize

Every year the best First Degree Course in Technology for the Conservation and Restoration receive the degree prize "Luca Luna" dedicated to Professor Luna, a famous art critic of Ascoli Piceno.

Support services:

Tutoring

Tutoring services are provided to support students during their academic careers, to help them solve problems adjusting to university life and to overcome initial knowledge gaps.

The Office for Tutoring, in agreement with the Academic Council, organize periodical meetings with the students to analyze how didactic activities are progressing.

The Class L-43 Academic Council assigns to each student a lecturer (tutor), to help the student in solving problems concerning career guidance and study plans for the whole course of their studies.

The tutor in charge will be available to the students during posted office hours at Largo Cattaneo to solve organization problems and to explain the activities of the University of Camerino.

Several group tutoring meetings will be organized to determine priorities as regards how the tutoring office can intervene to assist students in their studies.

Other meetings will be organized in answer to special needs and to provide information about: i) optional examinations of L-43 class and other classes; ii) Internships & *Career Counseling* services; iii) international programs for student mobility.

AFAQ

ISO 9001:2000 Quality Certification

Teaching Curriculum

N	Course	Total ECTS credits	Modules	ECTS for Scientific Disciplinary Sector	Kind of activity	Grade or suitability
1	History of architecture	6		6 ICAR/18	a	Grade
2	Museum Science and Restoration of Cultural Heritage	8		8 L-ART/04	a	Grade
3	English	6		6 L-LIN/12	3e 3f	Grade
4	Fundamentals of Mathematics and Information Technology	10	Fundamentals of Mathematics	6 MAT/07	a	Grade
			Information Technology	4 INF/01	a	
5	Urban ecology and sociology of cultural heritage	7	Urban ecology	3 BIO/07	b	Grade
			Sociology	4 SPS/10	b	
6	Drawing and surveying	8	Drawing	5 ICAR/17	a	Grade
			Survey	3 ICAR/17	a	
7	Art History	8		8 L-ART/01	a	Grade
	Optional examinations	6		6 NN	d	

N	Course	Total ECTS credits	Modules	ECTS for Scientific Disciplinary Sector	Kind of activity	Grade or suitability
1	Legislation & Cultural Heritage	6		6 IUS/10	b	Grade
2	Laboratory of Physical Anthropology	7		4 BIO/08	b	Grade
				3 M-DEA/01	b	
3	Geomaterials for the cultural heritage	12	Mineralogy	6 GEO/06	a	Grade
			Fundamentals of geology	6 GEO/03	c	
4	Physics	6		6 FIS/01	a	Grade
5	General and Inorganic Chemistry	8		8 CHIM/03	a	Grade

6	Organic Chemistry	5		5 CHIM/06	c	Grade
7	Plant agents of deterioration of cultural assets	8	Plant agents of deterioration of cultural assets	4 BIO/01	b	Grade
			General botany of cultural assets	4 BIO/03	b	
	Optional examinations	6		6 NN	d	
	Placement (stage)	6		6 NN	s	

TABLE 1: List of courses 3st YEAR
(L - 43) Technologies for the Conservation and the Restoration

N	Course	Total ECTS credits	Modules	ECTS for Scientific Disciplinary Sector	Kind of activity	Grade or suitability
1	Mummy Science	8	Mummies in art history	5 BIO/08	b	Grade
			Laboratory of mummiology	3 BIO/08	b	
2	Restoration	8		8 ICAR/19	b	Grade
3	Laboratory of Archeometry	14	Laboratory of physics applied to cultural heritage	8 FIS/07	b	Grade
			Laboratory of cultural heritage materials	6 GEO/07	b	
4	Diagnostic chemistry laboratory for cultural heritage.	14	Restoration Chemistry	4 CHIM06	b	Grade
			Conservation Chemistry Laboratory	5 CHIM/06	b	
			Laboratory of analytic chemistry	5 CHIM/01	b	
5	Remote sensing Laboratory for cultural heritage	7	Laboratory of Geoarchaeology	4 GEO/04	c	Grade
			Remote sensing and Cartography Laboratory	3 GEO/04	c	
	Final examination	6			e	