DIAGNOSTICS FOR CULTURAL HERITAGE (LM61)

(Università degli Studi)

Teaching PHYSICAL CHEMISTRY FOR CULTURAL HERITAGE

GenCod A005454

Owner professor Gabriele GIANCANE

Teaching in italian PHYSICAL CHEMISTRY FOR CULTURAL HERITAGE

Teaching PHYSICAL CHEMISTRY FOR CULTURAL HERITAGE

SSD code CHIM/02

Reference course DIAGNOSTICS FOR CULTURAL HERITAGE

Course type Laurea Magistrale

Credits 9.0

Teaching hours Front activity hours: 63.0

For enrolled in 2018/2019

Taught in 2018/2019

Course year 1

Language ENGLISH

Curriculum PERCORSO COMUNE

Location

Semester First Semester

Exam type Oral

Assessment Final grade

Course timetable https://easyroom.unisalento.it/Orario

REQUIREMENTS	Basic concepts of chemistry and physics.
COURSE AIMS	Diagnostic techniques used to characterize the material components of historically relevant artifacts and the processes that rule the degradation of the materials will be systematically analysed and explained. In particular, not destructive spectroscopic methodologies will be prosed to the students. During the course, the students will be involved in the study of scientific papers that will be critically analysed highlighting strength and weakness of the proposed researches in order to educate the student to face complex problems and to solve them with powerful analytical methods.
TEACHING METHODOLOGY	Frontal lessons will be given. Course attendance is compulsory.
ASSESSMENT TYPE	Oral tests will be used to evaluate if the students reached the course's objectives
ASSESSMENT SESSIONS	**29 gennaio 2019** **14 febbraio 2019** **28 febbraio 2019** **2 maggio 2019** **13 giugno 2019** **9 luglio 2019** **31 luglio 2019.**

FULL SYLLABUS	During the course, concepts of Physical Chemistry will be proposed and particular attention will paid towards the study of the degradation processes that affect the historical artifacts and monuments. Possible strategies to prevent the effects of external agents on different materials will be examined and the analytical techniques used to characterize them will be considered. Furthermore, chemical physical approaches applied to real cases will be discussed and possible improvements of the

REFERENCE TEXT BOOKS

- AA. VV., La Chimica per l'Arte, Zanichelli.
- Conservation Science for the Cultural Heritage, Applications of Instrumental Analysis, Editor: Varella, Evangelia A.; Springer
- Zecchina, Alchimie nell'arte, Zanichelli
- Science and Art: The Painted Surface Editors: Antonio Sgamellotti, Brunetto Giovanni Brunetti, Costanza Miliani, RSC.
- Ted Lister, Conservation Chemistry, An Introduction;Royal Society of Chemistry.
- M.R. Derrick et al., Infrared Spectroscopy in Conservation Science, Publisher:Getty Trust Publications.
- C. Wayne Smith, Archaeological Conservation Using Polymers, Practical Applications for Organic Artifact Stabilization, Texas A & M University Press
- G. Artioli, Scientific Methods and Cultural Heritage, An Introduction to the Application of Materials Science to Archaeometry and Conservation Science, Oxford University Press