MATERIALS ENGINEERING AND NANOTECHNOLOGY (LM56)

(Lecce - Università degli Studi)

Teaching CHEMISTRY 2

GenCod A003109

Owner professor Giuseppe CICCARELLA

Teaching in italian CHEMISTRY 2

Teaching CHEMISTRY 2

SSD code CHIM/07

Reference course MATERIALS ENGINEERING AND

Course type Laurea Magistrale

Credits 9.0

Teaching hours Front activity hours: 81.0

For enrolled in 2019/2020

Taught in 2019/2020

Course year 1

Language ENGLISH

Curriculum PERCORSO COMUNE

Location Lecce

Semester First Semester

Exam type Oral

Assessment Final grade

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

BRIEF COURSE DESCRIPTION	The purpose of this course is to introduce students to the molecular-level understanding of the physicochemical properties of organic substances aimed at characteristics of materials.
REQUIREMENTS	General Chemistry
COURSE AIMS	Ability to manage organic chemistry issues. Ability to perform basic organic spectral analysis
TEACHING METHODOLOGY	Lecture-style instruction / Exercises and Practice Test Questions
ASSESSMENT TYPE	The exam consists of two parts: Part 1 - the student is asked to provide a full structural interpretation of FT-IR, MS, 1H- and 13C-NMR spectra and to elucidate the structures of an unknown compound (2 hours); Part 2 - the student is asked to illustrate two thehourstical topics; it is aimed to verify to what extent the student has gained knowledge and understanding of the selected topics of the course and is able to communicate about his understanding.
OTHER USEFUL INFORMATION	**Office Hours** By appointment; contact the professor by email or at the end of class meetings. **Useful tools** A Free Comprehensive Chemical Drawing Package can be downloaded at the following URL: https://www.acdlabs.com/resources/freeware/chemsketch/

FULL SYLLABUS	Covalent bonds and shape of molecules (2 hours). Acids and bases (2 hours). Alkanes and Cycloalkanes (2 hours). Alkenes (2 hours). Alkenes: Reactivity (3 hours). Chirality (3 hours). Alkynes (2 hours). Alkyl halides (3 hours). Alcohols, ehters and thiols (1 hour). Benzene and its derivatives (3 hours). Amines (1 hour). Aldehydes and ketones (2 hours). Carboxylic acids (3 hours). Functional derivatives of carboxylic acids (3 hours). Infrared spectroscopy (6 hours). Mass Spectrometry (6 hours). NMR Spectroscopy (10 hours). Tutorials (27 hours)
REFERENCE TEXT BOOKS	William H. Brown, Thomas Poon, Introduction to Organic Chemistry, 6th Edition, Wiley