

MATERIALS ENGINEERING AND NANOTECHNOLOGY (LM56)

(Lecce - Università degli Studi)

Insegnamento CHEMISTRY 2

GenCod A003109

Insegnamento CHEMISTRY 2

Anno di corso 1

Insegnamento in inglese CHEMISTRY 2 **Lingua** INGLESE

Settore disciplinare CHIM/07

Percorso PERCORSO COMUNE

Corso di studi di riferimento
MATERIALS ENGINEERING AND

Docente Giuseppe CICCARELLA

Tipo corso di studi Laurea Magistrale

Sede Lecce

Crediti 9.0

Periodo Primo Semestre

Ripartizione oraria Ore Attività frontale:
81.0

Tipo esame Orale

Per immatricolati nel 2019/2020

Valutazione Voto Finale

Erogato nel 2019/2020

Orario dell'insegnamento

<https://easyroom.unisalento.it/Orario>

BREVE DESCRIZIONE DEL CORSO

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.

PREREQUISITI

General Chemistry

OBIETTIVI FORMATIVI

Ability to manage organic chemistry issues.
Ability to perform basic organic spectral analysis

METODI DIDATTICI

Lecture-style instruction / Exercises and Practice Test Questions

MODALITA' D'ESAME

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 theoretical 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.

APPELLI D'ESAME

ALTRE INFORMAZIONI UTILI

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/>

PROGRAMMA ESTESO

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, ethers 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)

TESTI DI RIFERIMENTO

William H. Brown, Thomas Poon, Introduction to Organic Chemistry, 6th Edition, Wiley