UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Organic Chemistry Laboratory

2627-3-E1301Q084-E1301Q082M

Aims

The Organic Chemistry module allows the student to become confident with analytical and preparative chromatographic techniques and with reactivity of organic compounds applied to biological systems.

1. Knowledge and understanding.
   At the end of the course, students will know basic theory and experimental of chromatography and chemical transformations of organic compounds.

2. Ability to apply knowledge and understanding.
   At the end of the course, students will be able to apply the acquired knowledge to organic compounds transformation and purification.

3. Making judgements.
   At the end of the course, students will be able to process what they have learned to general experimental methodologies.

4. Communication skills.
   At the end of the course, students will be able to process the experimental data obtained and to describe the procedures and the results, using the most appropriate technical vocabulary.

5. Learning skills.
   At the end of the course, students will be able to apply basic experimental techniques of the organic chemistry lab to biomolecules.

Contents

The organic chemistry module aims to provide the students with basic chromatographic techniques and organic compounds transformation.

Detailed program

The organic chemistry module will be organised in 4 experimental lab sessions, focussed on the following techniques and methodologies:

? Thin layer chromatography

? Column chromatography

? Organic compounds purification and separation through liquid-liquid extraction and partition

? Organic compounds reactivity: interconversion of functional groups towards the synthesis of biologically relevant derivatives

Prerequisites

Background: Organic chemistry basics: polarity and solubility, functional groups reactivity.
Prerequisites: none.

Teaching form

4 five-hours-lab experimental activities (interactive teaching, DI) in presence in equipped labs.
The theoretical concepts will also be provided through interactive activities available on the course's e-learning portal. These activities will facilitate both the students' preparation to the experimental activities and their study for the preparation of the final examination.

Textbook and teaching resource

Slides and experimental protocols, illustrative videos and self-assessment tests will be made available on the e-learning platform.

Semester

First semester

Assessment method

For the Organic Chemistry module, as for all LIB teaching modules, there is no possibility of taking partial or "module" exams. The method of verifying the entire teaching is a single written test aimed at assessing the skills acquired for each of the 6 modules that make up the course.
The written test lasts 2 hours and takes place in the computer laboratories, using a PC on a dedicated computer platform. The test consists of closed questions (exercises, multiple choice questions) on the disciplinary contents of all the modules, and a single open question on the disciplinary contents of one module. The closed questions of each module allow to acquire a maximum of 10 points. The overall result on the closed questions of the 6 modules is converted into a maximum score of 29 (automatically assigned by the system at the end of the test); the score of the open question is from 0 to 2 points, following a correction by one of the teachers. The open question will be evaluated only upon reaching a minimum score assigned to the closed questions. The overall score is given in thirtieths and is obtained by adding the two scores (for "closed" answers and for "open" answer). An overall score ?30.5 allows to obtain honors.

Office hours

The teachers will receive by appointment requested by e-mail.

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING