

Chemistry

Organic chemistry 2: Synthesis of molecules of interest

IDENTIFICATION

CODE : BS-3-S2-EC-BBCHIM2
ECTS : 5.0

HOURS

Lectures : 22.0 h
Seminars : 0.0 h
Laboratory : 46.0 h
Project : 0.0 h
Teacher-student
contact : 68.0 h
Personal work : 57.0 h
Total : 125.0 h

ASSESSMENT METHOD

Experimental Project Note
Written exam [2h]

TEACHING AIDS

An handout
A molecular modelling kit

TEACHING LANGUAGE

French

CONTACT

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AIMS

This class contributes to the competencies below [level] with associated capabilities:

A2. Operate a model of a real or virtual system [level 1]

- Understanding organic reactivity
- Knowing how to analyse scientific problems and propose solutions

A3. Implement an experimental approach [level 2]

- Use the skills validated in BS-3-COCHORG.S1 to master the application of these concepts to the main functions of organic chemistry.
- Communicate experimental results in synthetic oral and written reports

A5. Process data [level 2]

A6. Communicate an analysis or a scientific approach with scenarios adapted to their speciality [level 2]

C5. Quantifying, structurally characterizing and purifying biomolecules [level 2]

- Understand the theoretical sequence of multi-step synthesis
- Propose a reagent for a given transformation
- Adapting tools to the synthesis / biosynthesis of molecules of interest
- Conducting independently the practical realization of a synthesis project [microproject]
- C13. Understand the quality assurance and regulatory framework in the field of biotechnology [level 1]

- Understand and apply security requirements

B1. Knowing oneself, managing oneself physically and mentally [level M]

- Manage your time and organization for the project

B3. Interact with others, work in teams [level M]

B4. Be creative, innovative, entrepreneurial [level 1]: propose solutions to problems of synthesis

The knowledge associated with this class is :

- to propose a reagent for a given transformation
- to adapt chemical tools to the synthesis or biosynthesis of molecules of interest
- to develop new experimental skills

CONTENT

Development and application of chemical tools to the synthesis or biosynthesis of molecules of interest.

The theoretical concepts are constructed according to the logic of the mechanistic approach. The presentation of the different families of organic compounds concerned and their involvement in the preparation of molecules of interest is discussed.

BIBLIOGRAPHY

Invitation to Organic Chemistry- A.W. Johnson- Johns and Bartlett. Ed

PRE-REQUISITE

A good knowledge of the three-dimensional structure of organic compounds