UE Synthetic strategies

ECTS
6 credits

Component
UFR Chimie-Biologie

Semester
Tous les ans

- **Teaching language(s):** English
- **Open to exchange students:** Yes

Presentation

Description

Course outline:

The total synthesis of a complex organic molecule, such as a drug or a bio-active natural product, may be a difficult task, especially if it contains a large number of carbon atoms, many functions (or, indeed, no function at all) and/or rings of various size. The way leading to the final target may be even harder to find if lots of stereogenic centers are present. Strategies to overcome such difficulties will be presented, both in a general perspective and in a series of examples selected whether for their interest in the history of total synthesis, or because they are representative of the most recent developments in the field.

Details:

1- General strategy
2- Alkene synthesis
3- Three-membered rings
4- Four-membered rings
5- Five-membered rings
6- Six-membered rings
7- Larger rings
8- Condensed rings
9- Silicon chemistry
10- Rearrangements

Throughout these chapters, lots of representative total syntheses (ca. 50) will be outlined, e.g. pheromones, morphine, taxol, penicillin, oseltamivir (Tamiflu), chlorophyll A …

Course parts

UE Synthetic strategies - CM	Lectures (CM)	36h
TD	Tutorials (TD)	4,5h

Recommended prerequisites

Prerequisites:

advanced level in organic Chemistry

Period : Semester 9

Skills

Skills:

Be able to plan the total synthesis of any given target molecule starting from available compounds.

Useful info

Contacts

Program director

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Place

Grenoble

Campus

Grenoble - University campus