

Organic chemistry : reactions and mechanisms

Titulaires

Kristin BARTIK (Coordonnateur) et Elisabeth VAN DIJK

Mnémonique du cours

CHIM-H406

Crédits ECTS

4 crédits

Langue(s) d'enseignement

Anglais

Période du cours

Premier quadrimestre

Campus

Solbosch

Contenu du cours

Chapter titles:

- 1 Reactions and Mechanisms in Organic Chemistry
- 2 Radical Halogenation
- 3 Reactions of Haloalkanes: Nucleophilic Substitutions
- 4 Reactions of Haloalkanes: Eliminations
- 5 Alcohols
- 6 Alkenes
- 7 Aldehydes and Ketones
- 8 Carboxylic Acids
- 9 Delocalized pi Systems
- 10 Aromatic Systems: Electrophilic Substitution

Objectifs (et/ou acquis d'apprentissages spécifiques)

Specific to the course:

- > Acquire a general overview of the broad range of organic reactions which can be used to prepare molecules and molecular materials
- > Understand the central role played by the chemical industry in our society.
- > Get acquainted with the principles of Green Chemistry

Méthodes d'enseignement et activités d'apprentissages

Interactive lectures with powerpoint presentations

Exercices, case-study and laboratory sessions

Contribution au profil d'enseignement

This teaching unit contributes to the following competences:

- > In-depth knowledge and understanding of exact sciences with the specificity of their application to engineering
- > Collaborate in a (multidisciplinary) team
- > The flexibility and adaptability to work in an international and/or intercultural context
- > An integrated insight in chemical process and materials' technology

Références, bibliographie et lectures recommandées

Organic Chemistry: Structure and Function. Vollhardt and Schore, Freeman and Co. (any of the editions !)

Organic Chemistry. Clayden, Greeves, Warren and Wothers, Oxford University Press (1st or 2nd Ed.)

Organic Chemistry. McMurry, Thomson (any edition)

Support(s) de cours

Université virtuelle

Autres renseignements

Lieu(x) d'enseignement

Solbosch

Contact(s)

Prof. Kristin Bartik : kristin.bartik@ulb.be

Dr. Hennie (Elisabeth) Valkenier-Van Dijk : hennie.valkenier@ulb.be

Teaching Assistants

Alessia Fantoni : alessia.fantoni@ulb.be

Steven Moerkerke: steven.moerkerke@ulb.be

Méthode(s) d'évaluation

Rapport écrit, Examen écrit et Travail pratique

Examen écrit

Question ouverte à réponse courte et Question ouverte à développement long

Construction de la note (en ce compris, la pondération des notes partielles)

Written exam based on the content of **all** the teaching activities (75%).

Lab preparation, work and report (25%). This grade will be awarded individually. Lab grades are taken into account in the second session, but not automatically transferred to subsequent years.

Final grade is the weighted geometric average : $(\text{Exam Grade})^{0.75} (\text{Lab Grade})^{0.25}$

Langue(s) d'évaluation principale(s)

Anglais

Programmes

Programmes proposant ce cours à l'école polytechnique de Bruxelles

MA-IRMA | Master : ingénieur civil en chimie et science des matériaux | finalité Spécialisée/bloc 1

