

**CHM1341 Organic chemistry III**

[30h+15h exercises] 4 credits

This course is not taught in 2005-2006

Language: French

Level: First cycle

**Aims**

In the continuity of the organic chemistry II course, this course follows the study of reaction intermediates and reaction mechanisms. A first part is dedicated to pericyclic reactions and to frontier orbital theory. Connections with the physical chemistry course will be highlighted. The second part treats the reactivity of carbocations and radicals. Examples from the biochemistry course will be used to illustrate these concepts. In both parts emphasis is put on all aspects of selectivity while creating new bonds.

**Main themes**

Frontier orbital theory. Fukui treatment. Thermal activation and photochemistry. Cycloadditions: regio and stereoselectivity. 1-3 dipolar cycloadditions. Rearrangement of Cope and related reactions. Cationic polycyclisations. Polymerizing cations. Biomimetic reactions. Radical polycyclisation. Polymerizing radicals. Natural antioxidants.