UE 3.11C – Chemistry of Biomolecules – 3 ECTS

Instructors’ names:
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Pedagogical objectives:
The aim of this course is to address specific problems about synthesis of biomolecules (peptides, sugars and nucleic acids). This course will involved general concepts of organic chemistry.
Some part of this course will be done using the “Reverse Pedagogy”.

Course pre-requisites:
Taking courses in Organic Chemistry.

Program:
Sugars: structural aspects (conformation, Stereoelectronic effects), chemistry of monosaccharides (protective groups, substitution reactions), formation of O-glycoside bonds (activation methods, control of stereochemistry, mechanistic aspects).
Peptides: Formation of peptide bonds, synthetic strategy, synthesis on solid support.
Nucleic acids: Protective Groups, Phosphodiester bonds synthesis, synthesis on solid-phase support.

Acquired skills:
chemical reactivity elements encountered in the synthesis of biomolecules.

Evaluation:
Terminal control (100%)