

4.0 credits

30.0 h

1q

Teacher(s) :	Damblon Christian ; Rider Mark (coordinator) ; Collet Jean-François ; Bertrand Luc ; Opperdoes Frederik ;
Language :	Français
Place of the course	Bruxelles Woluwe
Prerequisites :	Good background in chemistry, physics and biochemistry. Basic computer skills (including use of search engines and data base searching).
Main themes :	<p>Methods of expression, purification and in vitro renaturation of proteins (5h)</p> <p>Protein sequencing (2h)</p> <p>Bioinformatic analysis of proteins (homology searches, alignments, phylogenetic studies, motif and domain searching, structure modelling) (10h)</p> <p>Structure determination by NMR, crystal structures by X-ray diffraction in relation to function (3h)</p> <p>Enzymology (thermodynamics, pre- and steady state kinetics, calculation of kinetic parameters, ligand binding and allosteric enzymes, site-directed mutagenesis, theory of metabolic control) (10 h)</p>
Aims :	<p>To provide Masters students in Biomedical Sciences with the necessary competence to study:</p> <ul style="list-style-type: none"> - techniques of overexpression/purification and structural analysis of proteins - structure-function relationships in proteins - physiological roles of enzymes <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p>
Evaluation methods :	Written exam
Teaching methods :	Formal lectures, background reading
Content :	Enzymology, purification, sequencing, structure determination and bioinformatic analysis of proteins.
Bibliography :	Support: PDF files of Power Point présentations will be made available to the students on iCampus.
Other infos :	Teaching of the course material will be in French but Power Point files will be mostly in English
Cycle and year of study :	<p>> Master [120] in Biomedicine</p> <p>> Master [240] in Medecine</p> <p>> Master [60] in Biomedicine</p> <p>> Master [120] in Public Health</p> <p>> Master [120] in Statistics: Biostatistics</p>
Faculty or entity in charge:	SBIM