





4 credits

30.0 h

Q1

Teacher(s)	Bertrand Luc ;Collet Jean-François ;De Plaen Etienne ;Rider Mark coordinator ;
Language :	English
Place of the course	Bruxelles Woluwe
Main themes	<p>Methods of expression, purification an 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> <ol style="list-style-type: none"> 1 - techniques of overexpression/purification and structural analysis of proteins - structure-function relationships in proteins - physiological roles of enzymes <p>-----</p> <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 plus a "workshop" on bioinformatic analysis.
Content	Enzymology, purification, sequencing, structure determination and bioinformatic analysis of proteins.
Bibliography	<ul style="list-style-type: none"> • fichier PDF des présentation powerpoint du cours disponibles sur moodle <p>Les étudiants sont encouragés à lire des revues dans la littérature !</p> <p>The students are encouraged to do background reading, for example by consulting numerous comprehensive reviews on the subject matter of the course available in the literature (for example via Pub Med).</p>
Other infos	Teaching of the course material will be in English and the Power Point files will be mostly in English.
Faculty or entity in charge	SBIM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [240] in Medecine	MED2M	4		
Master [120] in Statistic: Biostatistics	BSTA2M	4		
Master [180] in Medecine	MD2M	4		
Master [60] in Biomedicine	SBIM2M1	4		
Master [120] in Biomedicine	SBIM2M	4		