

3 credits

30.0 h

Q1

Teacher(s)	De Plaen Etienne ;Octave Jean-Noël coordinator ;
Language :	French
Place of the course	Bruxelles Woluwe
Prerequisites	<i>The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.</i>
Main themes	Cloning and expression tools in prokaryotic and eukaryotic cells. Genetic engineering and production of proteins useful in biomedical sciences. Analysis and modifications of the DNA. High throughput sequencing. Transgenic animals. Gene therapy.
Aims	<p>1 The objectives are the learning of molecular biological approaches needed for the analysis and use of genetic material for diagnostic purposes, or for creating tools that are increasingly indispensable in biomedical sciences.</p> <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 examination: questions with short open answers.
Content	Description and use of different cloning and expression vectors in prokaryotes. DNA analysis: restriction enzymes, PCR, sequencing. Cloning and expression of cDNA in different cell types. Overexpression and invalidation of genes in transgenic animals. Examples of gene therapy.
Bibliography	<ul style="list-style-type: none"> • Notes de cours et dossier power point.
Other infos	Lecture notes and reference book: Biotechnology, DP Clark and NJ Pazdernik (Academic Cell).
Faculty or entity in charge	SBIM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Bachelor in Biomedicine	SBIM1BA	3	WMD1120 AND WMD1106 AND WFARM1221S AND WSBIM1226 AND WSBIM1227 AND WMDS1211 AND WFARM1282	