



3.00 credits

22.5 h + 15.0 h

Q2

Teacher(s)	Ghislain Michel (coordinator) ;Larondelle Yvan ;
Language :	French
Place of the course	Louvain-la-Neuve
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>
Learning outcomes	
Evaluation methods	The written examination consists of a series of questions that require concise or detailed answers and problems solving ability. The performance developed during the laboratory training sessions are evaluated independently, via the laboratory report.
Teaching methods	Lectures will be given in a classroom. They consist of ex cathedra speeches and solved problems. The laboratory sessions aim at developing a scientific reasoning behaviour and improving classroom communication skills. Students are given a detailed evaluation of their performance. The learning of basic concepts and vocabulary in English is stimulated.
Content	<ul style="list-style-type: none"> • Major fermentation pathways from archea and eubacteria with economical interest : alcohol, lactate, butyrate and butanol-acetone, mixed acid and butanediol, propionate and succinate, acetate, methane. • Biosynthesis of several secondary metabolites • Health benefits aspects are illustrated via selected themes • Protein purification technology • Students are trained to measure the metabolic activity of a model organism through laboratory sessions.
Inline resources	Slides shown in classroom and laboratory notes will be available via moodle.
Bibliography	<ul style="list-style-type: none"> • Bacterial Metabolism (Gottschalk)¹ This course is based on the reference book ""Bacterial metabolism" G. Gottschalk . However the purchase of this book is not required.
Faculty or entity in charge	AGRO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Chemical and Materials Engineering	KIMA2M	4		
Master [120] in Biomedical Engineering	GBIO2M	4		
Bachelor in Bioengineering	BIR1BA	3	LBIR1250	