

3.0 credits

15.0 h + 15.0 h

1q

Teacher(s) :	Larondelle Yvan (coordinator) ; Ghislain Michel ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	To reach its objectives, the course comprises : - a detailed description of the main fermentation pathways used by bacteria, - a comparison between these pathways in terms of metabolic efficiency, - a presentation of examples of fermentation processes used by digestive bacteria and bacteria of the food industry, - visits to food companies using bacteria in their specific industrial processes.
Aims :	At the end of the course, the student must have acquired a satisfactory capability to understand the biochemical processes associated to the bacterial fermentations, with a special focus on the food sector, at the level of the specific industrial processes involved, of the deleterious effects of food-borne bacterial contaminations, and of the digestive mechanisms. <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>
Content :	The course is made of two complementary parts : A. A detailed presentation of the major bacterial fermentation pathways with comparisons and examples from the practice. The pathways considered are the alcoholic, lactic, acetic, butyric, butanol-acetone, methanic, sulfitic, mixed acids and butanediol, propionic and succinic fermentations (15 hours). B. A collection of seminars (digestive flora and volatile fatty acid production, deterioration of foodstuffs, biohydrogenation phenomenon, specific and original industrial processes, etc.) and of visits to food companies (vinegar production, maturation of some cheeses, etc.)aiming at illustrating the first part of the course (15 hours).
Other infos :	Precursorycourses Basic knowledge in structural and metabolic biochemistry and in microbiology Evaluation Written examination and potential evaluation of the presentations made by the students Support Textbooks, scientific papers and copy of the PowerPoint presentations of the teacher
Cycle and year of study :	> Master [120] in Agricultural Bioengineering
Faculty or entity in charge:	AGRO