

7.0 credits

60.0 h + 15.0 h

1q

Teacher(s) :	Meurens Marc ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<p>Module I : operation engineering [22,5h]</p> <ul style="list-style-type: none"> - Unit operations of separation in sifting (sorting of the grains), dehydrations and separations liquid/solid (extraction, filtration, decanting, centrifugation and distillation) illustrated within the field of the brewery. - Biotechnological processes used in the germination of cereals, in the enzymatic engineering and fermentations illustrated within the field of malting and brewing. <p>Module II : transformation engineering [37,5h]</p> <ul style="list-style-type: none"> - Transformations of the vegetal productions such as cereals, fruits and vegetables. - Transformations of the animal productions such as meat, fish, eggs and milk. - Processes of conservation consisting in treatments by heat and cold. <p>- Exercise integrated [15h] with the presentation of a report about the quality insurance system of a visited food entreprise.</p> <p>The partim BRAL2201A [52,5h] 5 credits includes the module I [22,5h] as the complete course BRAL2201 and the module II limited [30h] without the processes of conservation and doesnot include the exercise.</p>
Aims :	<p>The course aims at acquisition by the student of knowledge and control in food technology with regard to the unit operations, instrumentations and transformation processes of foodstuffs. The teaching of technology will be made in order to give to the future engineer the competences necessary to the exercise of its work notably in quality assurance.</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>
Content :	<p>Knowledge in food technology will be brought by modules of complete lesson in unit operations, transformation processes and quality control. These modules will be applied in an integrated exercise. The unit operations of separation will be sifting (sorting of the grains), dehydrations and separations liquid/solid (extraction, filtration, decanting, centrifugation and distillation) illustrated within the field of the brewery. The unit operations of conservation will be the treatments by heat and cold, dehydration, addition of substances, fermentation, irradiation, conditioning and packaging. The biotechnological processes will be those implied in the germination of cereals, in the enzymatic engineering and fermentations illustrated within the field of malting and the brewing. The transformations of the vegetal productions will be the processes of transformation of cereals into flour mill, bakery, pastry making, starch industry and brewery, fruits in jam and syrup factory, cider-house and oenology and of vegetables in canning facility, sugar refinery and oil mill. The transformations of the animal productions will be the processes of transformation of meat (pork butchery), fish, eggs and milk (dairy, cheese, butter factory).</p> <p>The integrated exercise will consist in the redaction and the presentation of a quality insurance system of a chosen and visited food entreprise.</p>
Other infos :	<p>Precursory courses Génie des procédés : Opérations unitaires Supplemental courses Contrôle technologique et statistique de qualité Evaluation Written examination, presentation of report Support Notes, i-Campus, visit of factories Teaching team Professors + Assistants</p>
Cycle and year of study :	> Master [120] in Agricultural Bioengineering
Faculty or entity in charge:	AGRO