UCLouvain

BRAS2MC

2024 - 2025

Advanced Master in Brewing Engineering

The version you're consulting is not definitive. This programme still may change. The final version will be published on 1th June.

At Louvain-la-Neuve - 60 credits - 1 year - Day schedule - In French
Dissertation/Graduation Project : **YES** - Internship : **YES**
Activities in English: **optional** - Activities in other languages : **NO**
Activities on other sites : **NO**
Main study domain : **Sciences agronomiques et ingénierie biologique**
Organized by: **Faculty of bioscience engineering (AGRO)**
Programme acronym: **BRAS2MC** - Francophone Certification Framework: 7

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BRAS2MC - Introduction

Introduction

Your profile

The training is accessible to Belgian or foreign students who hold a diploma at the end of their second cycle of studies (BAC+5) of type: Bioengineer, Agricultural Engineer, Civil Engineer, Chemical Engineer, Industrial Engineer, Management Engineer, Physician, Master in Chemistry, Biology, Biochemistry, Physics, Geology, Veterinary Medicine, Pharmaceutical Sciences, or any other diploma recognized equivalent by the Faculty of Bioengineers.

Any candidate who is not in one of the automatic admission cases described above, but nevertheless holds a BAC+5 degree in the field of Science and Technology, may submit an application which will be processed by an internal commission at the Faculty of Bioengineers.

BRAS2MC - Teaching profile

Learning outcomes

For candidates who have prior training in fields such as biochemistry, microbiology and other aspects of engineering, this course offers special training for the brewery sector and enables them to gain a high-level, professional qualification.

On successful completion of this programme, each student is able to :

1.

2.

3.

4.

5.

6.

7.

8.

Programme structure

This programme is designed to provide training and preparation for professional practice in the brewery sector. It comprises theoretical and practical training as well as a placement- dissertation in industry.

• Schematic description of the course components

1. Theoretical training

The theoretical training includes the biochemistry, chemistry and the microbiology of procedures used in the malting house and the brewery. It also covers the practical and technological aspects linked to these two industries as well as the organoleptic aspects. It will widen students' knowledge of related subjects such as the chemistry and microbiology of foodstuffs.

2. Placement-dissertation

The aim of this work is to enable students to discover the brewery sector in a practical context. They will familiarize themselves with the activity of a team working on a specific problem related to the production of malt or beer. They will have to use the theoretical knowledge they have acquired in the framework of a piece of scientific research (ability to analyze the context of the problem from all perspectives, understand the methodology adopted and analyze the teamâ€™s results). In addition, students will become more familiar with the different analytic techniques (e.g. GC-MS and HPLC) applied to brewing/malting.

This work is sponsored by a lecturer from the Master programme and a manufacturer. It forms the subject of a written report and a public oral defence before a group of lecturers and researchers whose work relates to the area of the placement.

BRAS2MC Programme

Detailed programme by subject

CORE COURSES [60.0]

- Mandatory
- Optional
- Not offered in 2024-2025
- Not offered in 2024-2025 but offered the following year
- Offered in 2024-2025 but not the following year
- Not offered in 2024-2025 or the following year
- Activity with requisites
- Open to incoming exchange students
- Not open to incoming exchange students
- [FR] Teaching language (FR, EN, ES, NL, DE, ...)

Click on the course title to see detailed informations (objectives, methods, evaluation...)

LBRAL2103A	Food Chemistry		FR [q1] [30h] [3 Credits]
LBRAS2301	Malt Biochemistry and Technology	Sonia Collin (coord.) Charles Nouwen	FR [q1] [30h+15h] [4 Credits]
LBRAS2302	Chimie du houblon et technologies associées	Sonia Collin	FR [q1] [30h+30h] [5 Credits]
LBRAS2303	Hop Chemistry and Technology for wort boilong and dry-hopping	Stephan Declerck (coord.)	FR [q1] [30h+15h] [4 Credits]
LBRAS2304	Qualités organoleptiques et microbiologiques de la bière et du vin	Sonia Collin (coord.)	FR [q1] [15h+30h] [4 Credits]
LBRAS2305	Questions spéciales de brasserie	Sonia Collin (coord.)	FR [q1] [45h] [5 Credits]
LBRAS2310	Stage-mémoire		FR [q1+q2] [] [27 Credits]

Courses to chosen for 8 credits amongst the following list:

This list is not exhaustive. Students can propose to follow another course to the academic coordinator.

LANGL1881	English : reading and listening comprehension of texts in Bioengineering	Amandine Dumont Ariane Halleux Sandrine Meirlaen Anne-Julie Toubeau (coord.)	EN [q1] [30h] [2 Credits]
LBIR1342	Analyse de composés organiques dans des matrices complexes	Sonia Collin	FR [q2] [30h+45h] [5 Credits]
LBIR1342A	Analyse de composés organiques dans des matrices complexes 1 partim A		FR [q2] [30h] [3 Credits]
LBIR1346	Surface and colloid chemistry	Christine Dupont	FR [q2] [30h] [3 Credits]
LBIR2050	Challenges of sustainable development and transition	Valentin Couvreur Nathalie Delzenne Valérie Swaen (coord.)	FR [q2] [30h] [5 Credits]
LBIR2050A	Challenges of sustainable development and transition		FR [q1 or q2] [22.5h] [3 Credits]
LBIRC2109A	Process engineering: Unit operations		FR [q2] [30h+7.5h] [3 Credits] *> English-friendly*
LBIRE2131	Environmental Impact Assessment : diagnosis and indicators	Charles Bielders (coord.) Pierre Defourny	FR [q2] [22.5h] [3 Credits]
LBRAL2102	Physiological and nutritional biochemistry	Cathy Debier Yvan Larondelle (coord.)	EN [q1] [37.5h+0h] [5 Credits] *> French-friendly*
LBRAL2104	Food microbiology	Annika Gillis	EN [q2] [30h+22.5h] [5 Credits] *> French-friendly*
LBRAL2202	Technological quality control	Vincent Baeten	FR [q1] [30h] [3 Credits]
LBRPP2211	Biological control and plant health	Claude Bragard Stephan Declerck Anne Legrève (coord.)	FR [q2] [37.5h+0h] [4 Credits] *> English-friendly*

The programme's courses and learning outcomes

For each UCLouvain training programme, a reference framework of learning outcomes specifies the the skills expected of every graduate on completion of the programme. Course unit descriptions specify targeted learning outcomes, as well as the unit's contribution to reference framework of learning outcomes.

BRAS2MC - Information

Access Requirements

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail.
Decree of 7 November 2013 defining the landscape of higher education and the academic organization of studies.
The admission requirements must be met prior to enrolment in the University.

Unless explicitly mentioned, the bachelor's, master's and licentiate degrees listed on this page are to be understood as those issued by an institution of the French, Flemish or German-speaking Community, or by the Royal Military Academy.

In the event of the divergence between the different linguistic versions of the present conditions, the French version shall prevail.

SUMMARY

General access requirements

Translated from https://www.gallilex.cfwb.be/fr/leg_res_01.php?ncda=39681&referant=l02

Art. 112. of the "Décret définissant le paysage de l'enseignement supérieur et l'organisation académique des études" :

§ 1. In accordance with the general requirements established by the academic authorities, students who have:

1. a master's degree;

2. an academic degree similar to the one mentioned in the preceding paragraph awarded by a higher education institution in the Flemish Community or the German-speaking Community, or by the Royal Military Academy, by virtue of a decision of the academic authorities and in accordance with any additional requirements they may establish;

3. a foreign academic degree recognised as equivalent to those mentioned in paragraphs 1 and 2 pursuant to this decree, a European directive, an international convention or other legislation, in accordance with the same requirements.

The additional admission requirements referred to in paragraph 2 are intended to ensure that the student has acquired the knowledge and skills required for the studies in question. When the additional admission requirements consist of one or more additional course units, these may not represent more than 60 additional credits for the student, taking into account all the credits that he or she may otherwise use for admission. These course units are part of the student's study programme.

§ 2. In accordance with the general requirements established by the academic authorities, a student who holds a title, diploma, degree or certificate of higher education, in the French Community or outside it, which does not grant him or her eligibility for admission to a specialised master's course by virtue of the preceding paragraph, may nevertheless be admitted by the jury of the course in question, in accordance with the additional requirements that it establishes, if the totality of the higher education that he or she has completed or the expertise that he or she has acquired is valued by the jury to be at least 240 credits.

§ 3. By way of derogation from these general requirements, the academic authorities may also admit to a specialised master's course holders of a title, diploma, degree or certificate awarded outside the French Community which, in that system of origin, grants direct eligibility for postgraduate studies, even if the studies sanctioned by these credentials are not organised into distinct degree courses or within a time period of at least five years.

Specific access requirements

Special procedures :

- degree in chemistry and bioindustries, agricultural bio-engineering, bio-engineering or engineering from a Belgian university or a degree recognized as equivalent by the Faculty of Biological, Agricultural and Environmental Engineering.
- adequate command of French is required.

Accessible to adults

The Advanced Master in Bio-engineering : Brewery is open to adults. It provides candidates who already have some experience with more advanced practical and theoretical training in the field of brewery and enables them to broaden or change the focus of their professional career in this constantly changing sector. The strong link between the theoretical aspects of the training and the practical work placement sponsored by a manufacturer gives added value to the training and facilitates entry into the brewery sector.

Teaching method

The teaching staff on the programme have a wide variety of backgrounds, both academic and industrial, and at an international level : this enables candidates to acquire themultidisciplinary knowledge necessary to understand these complex subjects. Being able to join a unit at the forefront of brewing research and undertaking a research placement sponsored by a manufacturer are major benefits for candidates who wish to improve their knowledge of the brewery world.

Evaluation

The evaluation methods comply with the regulations concerning studies and exams. More detailed explanation of the modalities specific to each learning unit are available on their description sheets under the heading "Learning outcomes evaluation method".

The methods by which students are assessed include written and/or oral examinations as well as a placement which forms the subject of a written report and a public oral defence before a group of lecturers and researchers whose work relates to the area of the placement.

Mobility and/or Internationalisation outlook

The wide variety of participants on the programme for the Advanced Master in Bio-engineering : Brewery gives it a strong international outlook and offers many useful opportunities for exchanging experiences. There is special emphasis in the syllabus on globalization of the sector e.g. sourcing raw materials or problems in production methods. It is possible to undertake a placement in an international unit: this is clear evidence of the international scope of this Master.

Possible trainings at the end of the programme

This programme may only be taken after gaining a first Master's degree for 2nd cycle studies worth at least 300 credits. It may lead to doctoral training.

Contacts

Curriculum Management

Faculty

Structure entity	SST/AGRO
Denomination	Faculty of bioscience engineering (AGRO)
Sector	Sciences and Technology (SST)
Acronym	AGRO
Postal address	Croix du Sud 2 - bte L7.05.01 1348 Louvain-la-Neuve Tel: +32 (0) 10 47 37 19 - Fax: +32 (0) 10 47 47 45
Website	http://www.uclouvain.be/agro

Mandate(s)

- Dean : Christine Dupont
- Administrative director : Carole Dekelver

Commission(s) of programme

- Commission de programme - Master Bioingénieur-Sciences agronomiques (BIRA)
- Commission de programme - Master Bioingénieur-Chimie et bioindustries (BIRC)
- Commission de programme - Master Bioingénieur-Sciences & technologies de l'environnement (BIRE)
- Commission de programme - Bachelier en sciences de l'ingénieur, orientation bioingénieur (CBIR)
- Commission de programme interfacultaire en Sciences et gestion de l'environnement (ENVI)
- Fermes universitaires de Louvain (FERM)

Academic supervisor: Sonia Collin

Jury

- Président de jury: Quentin Ponette
- Secrétaire de jury: Marc Maudoux

Useful Contact(s)

- Responsable du programme: Sonia Collin