UCLouvain

BRAS2MC

2020 - 2021

Advanced Master in Brewing Engineering

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.

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 studentsâ€™ 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.

> Detailed Program *[en-prog-2020-bras2mc-tronc_commun]*

BRAS2MC Detailled programme

Programme by subject

CORE COURSES [60.0]

O Mandatory	⊠ Optional
△ Courses not taught during 2020-2021	⊘ Periodic courses not taught during 2020-2021
⊕ Periodic courses taught during 2020-2021	Activity with requisites

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

O LBRAS2301	Malt Biochemistry and Technology	Catherine Liégeois (coord.) Julien Slabbinck	30h+15h	4 Credits	q1
O LBRAS2302	Chimie du houblon et technologies associées	Sonia Collin	30h+30h	5 Credits	q1
O LBRAS2303	Hop Chemistry and Technology for wort boilong and dry-hopping	Pablo Alvarez Costales Stephan Declerck (coord.) Marc Maudoux	30h+15h	4 Credits	q1
O LBRAS2304	Qualités organoleptiques et microbiologiques de la bière et du vin	Sonia Collin (coord.) Marc Maudoux	15h+30h	4 Credits	q1

LBRAS2305	Questions spéciales de brasserie	Sonia Collin (coord.) Nicolas Declercq Marc Maudoux	45h	5 Credits	q1
LBRAS2310	Stage-mémoire			27 Credits	
LBRAL2103A	Food Chemistry	Sonia Collin	30h	3 Credits	q1

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.

LBRAL2104	Food microbiology	Jacques Mahillon	30h+22.5h	5 Credits	q2
LBRAL2202	Technological quality control	Vincent Baeten	30h	3 Credits	q1
LBIR1346	Surface and colloid chemistry	Christine Dupont	30h	3 Credits	q2
LBRAL2102	Physiological and nutritional biochemistry	Cathy Debier Yvan Larondelle (coord.)	37.5h+0h	5 Credits	q1

The programme's courses and learning outcomes

For each UCLouvain training programme, a reference framework of learning outcomes specifies the competences expected of every graduate on completion of the programme. You can see the contribution of each teaching unit to the programme's reference framework of learning outcomes in the document *"In which teaching units are the competences and learning outcomes in the programme's reference framework developed and mastered by the student?"*

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.

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SUMMARY

General access requirements

Subject to the general requirements laid down by the academic authorities, admission to the specialized Master's degree programme will be granted to students who fulfil the entry requirements for studies leading to the award of a Master's (second-cycle) degree and who hold a second-cycle diploma, degree, certificate or other qualification issued within or outside the French Community of Belgium, or whose prior learning or experience has been accredited by the Examination Board as being equivalent to at least 300 credits.

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 (https://uclouvain.be/fr/decouvrir/rgee.html). 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 Masterâ€™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 : Philippe Baret
- Administrative director : Christine Denayer

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

- Charles Bielders
- Marc Maudoux

Useful Contact(s)

- Sonia Collin