




MSC BIOTECHNOLOGY PROGRAMME BIOTECHNOLOGICAL ENGINEERING AND MANAGEMENT IN AGRO-INDUSTRIES

IDENTITY CARD

- > Domain : Sciences, Technologies and Health
- > Full time course
- > [Continuing Education](#)
- > [Master of Engineering](#)
- > [120 ECTS credits](#)
- > 4 semesters
- > Course partly taught in English
- >  La Rochelle
- > In partnership with



REGISTRATION

<https://www.univ-larochelle.fr/formation/admission-inscription-et-scolarite/candidatures-et-inscriptions/candidater-universite-la-rochelle/>

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OBJECTIVES

> Presentation

“ The Biotechnology Master’s degree in Biotechnological Engineering and Management in Agro-Industries provides the essential knowledge for understanding and controlling several phenomena concerning the living world. It offers the scientific and technical fundamentals in the field of biotechnology, nutrition, health and agri-food but also provides you with a range of professional opportunities specific to other training fields such as innovation, management, distribution and equipment. In addition to scientific and technical education that ensures a solid general culture, you will acquire a good level of English and of another foreign language. You will develop your ability to work in a team as well as your ability to commit yourself and take responsibilities. The Biotechnological Engineering and Management in Agro-Industries course focuses on quality control and management. Make good use of Biotechnologies !



Stéphanie Bordenave-Juchereau

✓ ADMISSION

> Your profile

You have a Bac+3, Bac+4 or equivalent (minimum 180 ECTS) : you must have knowledge on biochemistry, enzymology, microbiology, molecular biology and chemistry.

> How to apply ?

In the 1st year of the Master's degree, the selection of candidates is made on the basis of their application documents.

How to apply to the [1st year of the Master's](#)

How to apply to the [2nd year of the Master's](#)

📄 PROGRAMME

● Mandatory ■ Course option

> Semester 1

> Brasserie et fermentation ●

● Brasserie et fermentation

Language used for teaching
French

Teaching time
63h (18h lectures - 12h tutorials - 21h practical work - 12h work in accompaniment)

6 ECTS credits

Course code
280-1-51

> Génie génétique et traçabilité moléculaire ●

● Génie génétique

Language used for teaching
French

Teaching time
21h (12h lectures - 6h tutorials - 3h work in accompaniment)

2 ECTS credits

Course code
280-1-61

● Traçabilité moléculaire

Language used for teaching
French

Teaching time
42h (12h lectures - 21h practical work - 9h work in accompaniment)

4 ECTS credits

Course code
280-1-62

> Mineur : Agro ■

● Etudes de marché

Language used for teaching
French

Teaching time
16h 30min (9h lectures - 4h 30min tutorials - 3h work in accompaniment)

2 ECTS credits

Course code
280-1-81

- Grandes filières alimentaires

Language used for teaching	French
Teaching time	21h (18h lectures - 3h work in accompaniment)
2 ECTS credits	
Course code	280-1-82

- Mercatique

Language used for teaching	French
Teaching time	16h 30min (9h lectures - 4h 30min tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-1-83

> Mineure : Biochimie ■

- Microbial interactions and communication

Language used for teaching	French - English
Teaching time	15h (12h lectures - 3h work in accompaniment)
2 ECTS credits	
Course code	280-1-72

- Stratégies de lutte contre les pathogènes

Language used for teaching	French
Teaching time	36h (12h lectures - 18h practical work - 6h work in accompaniment)
4 ECTS credits	
Course code	280-1-71

> Procédés d'extraction et dimensionnement •

- Opérations unitaires et dimensionnement de procédés

Language used for teaching	French
Teaching time	48h (12h lectures - 6h tutorials - 21h practical work - 9h work in accompaniment)
5 ECTS credits	
Course code	280-1-41

- Procédés d'extraction de biomolécules

Language used for teaching	French
Teaching time	15h (6h lectures - 6h tutorials - 3h work in accompaniment)
1 ECTS credit	
Course code	280-1-42

> Unités transversales •

- Biotech day

Language used for teaching

French

Teaching time

15h (3h tutorials - 12h practical work)

1 ECTS credit

Course code

280-1-03

- LV1 Anglais

Language used for teaching

French

Teaching time

24h (24h tutorials)

2 ECTS credits

Course code

280-1-01

- Plans d'expériences et biostatistiques

Language used for teaching

French

Teaching time

30h (12h lectures - 6h tutorials - 6h practical work - 6h work in accompaniment)
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3 ECTS credits

Course code

280-1-02

> Semester 2

> Extraction & biomolécules actives ●

- Bioréacteurs et production de biomolécules

Language used for teaching

French

Teaching time

33h (15h lectures - 6h tutorials - 12h work in accompaniment)

3 ECTS credits

Course code

280-2-12

- Génie Enzymatique

Language used for teaching

French

Teaching time

49h 30min (15h lectures - 6h tutorials - 21h practical work - 7h 30min work in accompaniment)

5 ECTS credits

Course code

280-2-11

> Fermentations industrielles ●

- Fermentations industrielles

Language used for teaching

French

Teaching time

42h (21h lectures - 15h practical work - 6h work in accompaniment)
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4 ECTS credits

Course code

280-2-41

> Food biochemistry and novel food ●

- Allegation, rules, novel food: innovate in EU

Language used for teaching

French - English

Teaching time

10h 30min (7h 30min lectures - 3h work in accompaniment)

1 ECTS credit

Course code

280-2-51

- Food biochemistry and bioengineering

Language used for teaching

French - English

Teaching time

52h 30min (33h lectures - 4h 30min tutorials - 15h work in accompaniment)

5 ECTS credits

Course code

280-2-52

> Mineure : Agro ■

- Gestion de production

Language used for teaching

French

Teaching time

18h (12h lectures - 3h tutorials - 3h work in accompaniment)

2 ECTS credits

Course code

280-2-83

- Gestion de projet en agroalimentaire

Language used for teaching

French

Teaching time

18h (12h lectures - 3h tutorials - 3h work in accompaniment)

2 ECTS credits

Course code

280-2-81

- Stratégie de l'entreprise et plan d'action

Language used for teaching

French

Teaching time

18h (12h lectures - 3h tutorials - 3h work in accompaniment)

2 ECTS credits

Course code

280-2-82

> Mineure : Biochimie ■

- Advanced Molecular Immunology and Immunotherapy

Language used for teaching

French - English

Teaching time

18h (12h lectures - 3h tutorials - 3h work in accompaniment)

2 ECTS credits

Course code

280-2-72

- Utilisation de la "protein data bank" et infographie proteique

Language used for teaching	French
Teaching time	36h (9h lectures - 6h tutorials - 9h practical work - 12h work in accompaniment)
4 ECTS credits	
Course code	280-2-71

> Unités transversales •

- LV1 Anglais

Language used for teaching	French
Teaching time	24h (24h tutorials)
2 ECTS credits	
Course code	280-2-01

- Stage (3 semaines)

Language used for teaching	French
4 ECTS credits	
Course code	280-2-02-STAG

> Semester 3

> Hygiène et sécurité sanitaire •

- Risques biologiques alimentaires

Language used for teaching	French
Teaching time	21h (6h lectures - 12h tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-42

- Sécurité des personnels et protection de l'environnement en industries agroalimentaires

Language used for teaching	French
Teaching time	16h 30min (12h lectures - 4h 30min work in accompaniment)
2 ECTS credits	
Course code	280-3-43

- Sécurité sanitaire et moyens de maitrise

Language used for teaching	French
Teaching time	21h (18h lectures - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-41

> Management en agro-industries •

- Distribution

Language used for teaching	French
Teaching time	21h (15h lectures - 3h tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-52

- Gestion de la performance industrielle

Language used for teaching	French
Teaching time	21h (15h lectures - 3h tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-53

- Vision globale des secteurs d'activités

Language used for teaching	English - French
Teaching time	21h (15h lectures - 3h tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-51

> Mineure : Agro ■

- HACCP et gestion de la Qualité

Language used for teaching	French
Teaching time	42h (30h lectures - 3h tutorials - 9h work in accompaniment)
5 ECTS credits	
Course code	280-3-81

- Qualité nutritionnelle

Language used for teaching	French
Teaching time	15h (9h lectures - 3h tutorials - 3h work in accompaniment)
1 ECTS credit	
Course code	280-3-82

> Mineure : Biochimie ■

- Argumentation, ethics and rhetorics

Language used for teaching	French - English
Teaching time	16h 30min (9h lectures - 4h 30min tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-71

- Nanomedecine

Language used for teaching	French
Teaching time	16h 30min (9h lectures - 4h 30min tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-72

- Relation structure fonction des polysaccharides

Language used for teaching	French
Teaching time	16h 30min (9h lectures - 4h 30min tutorials - 3h work in accompaniment)
2 ECTS credits	
Course code	280-3-73

> Nutrition et risques alimentaires ●

- Dépenses énergétiques et besoins nutritionnels

Language used for teaching	French
Teaching time	19h 30min (15h lectures - 4h 30min work in accompaniment)
2 ECTS credits	
Course code	280-3-61

- Equilibres alimentaires

Language used for teaching	French
Teaching time	19h 30min (12h lectures - 3h tutorials - 4h 30min work in accompaniment)
2 ECTS credits	
Course code	280-3-62

- Risques chimiques en alimentaire

Language used for teaching	French
Teaching time	19h 30min (15h lectures - 4h 30min work in accompaniment)
2 ECTS credits	
Course code	280-3-63

> Unités transversales ●

- Biotech day

Language used for teaching	French
Teaching time	19h 30min (4h 30min tutorials - 9h practical work - 6h work in accompaniment)
2 ECTS credits	
Course code	280-3-03

- LV1 Anglais

Language used for teaching

French

Teaching time

24h (24h tutorials)

2 ECTS credits

Course code

280-3-01

- PI et innovation / financement de l'innovation

Language used for teaching

French

Teaching time

16h 30min (13h 30min lectures - 3h work in accompaniment)

2 ECTS credits

Course code

280-3-02

> Semester 4

> Stage fin d'études •

- Stage (24 semaines)

Language used for teaching

French

30 ECTS credits

Course code

280-4-01-STAG

AFTERWARDS

Information subject to change

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