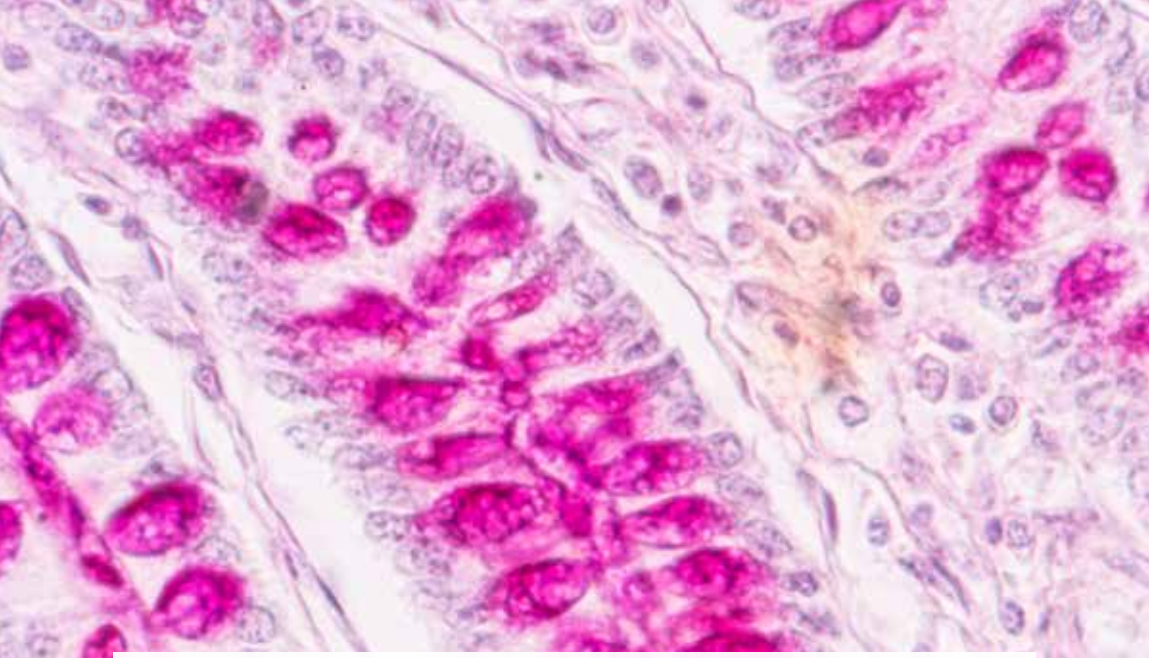
UNIVERSITÉ DE NAMUR

MASTER IN

MOLECULAR MICROBIOLOGY

www.unamur.be



MASTER IN

MOLECULAR MICROBIOLOGY

WHY STUDY AT UNAMUR ?

- UNamur values active learning and the availability of the academic staff is always greatly appreciated by students.
- UNamur is easily accessible: 5 minutes' walk from the train station, 1 hour from Brussels National Airport or Brussels South Airport by public transportation.
- UNamur is located in the centre of the pleasant and peaceful city of Namur, with its array of cultural and sports activities and its proximity to beautiful countryside.

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Studying microbes is crucial to tackling future challenges to human and animal health (multi-drug and antibiotic resistance; microbiota dysbiosis; emerging microbial pathogens), pollution (bioremediation; green energy) and biotechnology (synthetic microbiology and micro-biotechnology; food microbiology).

Unique in Belgium, this Master in Molecular Microbiology (MMM) provides the opportunity to study the microbial world in the context of basic and applied research, allowing you to face all these important challenges of the 21st century.

YOUR OBJECTIVES

- to understand and tackle a large diversity of molecular processes underlying microbial interactions with their environment;
- to manage the technical and conceptual aspects of a research project in Molecular Microbiology (project design, experimental strategies, critical data analysis, discussion and communication);
- to show a deep interest for international mobility and collaboration with international research groups.

WHY STUDY MMM ?

- The MMM is offered entirely in English, thereby facilitating and promoting international student mobility.
- You will learn cutting-edge technical approaches to cellular and molecular microbiology, biochemistry and bioinformatics applied to microbes.
- You will have access to dynamic research groups in Molecular Microbiology.
- Invited lecturers will introduce you to the worlds of industry and hospitals.
- The MMM is part of a European joint programme in Molecular Microbiology.

CAREER OPPORTUNITIES

MMM opens doors to jobs in human research areas involving Microbiology:

- your hands-on experience of research over 3 semesters will provide you with the necessary credentials for a future job in research;
- you will develop a significant network of contacts in industry and in hospitals, thus connecting you with these communities.

PROGRAMME

The Master in Molecular Microbiology (MMM) is a research-oriented (120 credits) Masters programme offered entirely in English. The integration of the MMM within a European joint programme in association with Aix-Marseille University and Marburg Phillips-Universität promotes international mobility and provides access to a wide range of scientific expertise at two of the most prestigious European Microbiology Research Institutes.

> SEMESTER 1

The first semester is devoted to general and specialised microbiology courses taught by scientists from academia and from industry who address the essential elements of Molecular Microbiology with a particular emphasis on bacteriology. You will have the opportunity to use active learning methods such as Problem-Based Learning (PBL), inverted classrooms and integrated practical courses. You will also be offered the possibility to attend local and national scientific conferences.

	ECTS
GENERAL MOLECULAR MICROBIOLOGY	
Microbiology Basics	3
Molecular aspects of free-living and pathogenic microorganisms in their environment	11
Bacteriology	3
Virology	3
Parasitology	2
Eukaryotic microorganisms and Archae	3
Applied and synthetic microbiology	2
Bioinformatic approach of microbial OMICS	4
MOLECULAR BACTERIOLOGY	
Bacterial genetics and evolution	2
Bacterial cell biology	2
Bacterial stress response and signalling	2
Bacterial pathogens, symbionts and communities	2
Antibiotics, from origin to resistance	2
TOTAL	30

> SEMESTERS 2-4

The final 3 semesters are dedicated to research projects in several research groups within UNamur and at partner laboratories.

During the second semester, the emphasis is put on acquiring technical skills in Molecular Microbiology and the basics of scientific writing. These skills will be further developped during the third semester in the context of your Master's thesis, when you will improve your autonomy and scientific communication.

During the last semester, you will have the opportunity to do a professional internship in industry or in an academic research laboratory abroad.

	ECTS
SEMESTER 2	
Integrated practical courses in molecular microbiology	3
Scientific writing	3
Research initiation (laboratory work and/or bibliographic search)	24
SEMESTER 3	
Thesis	30
SEMESTER 4	
Internship (laboratory or industry)	30
TOTAL	**90**

For more course details, please visit:
www.unamur.be/en/sci/microbiology

CONDITIONS FOR ADMISSION

WWW.KNOK.BE

STUDENTS WITH A FIRST DEGREE OBTAINED IN BELGIUM

DIRECT ACCESS

- bachelier en sciences biologiques
- master en sciences biologiques

ACCESS BY APPLICATION

- bachelier en sciences biomédicales
- bachelier en médecine vétérinaire
- bachelier en sciences de l'ingénieur, orientation bioingénieur

STUDENTS WITH A FIRST DEGREE OBTAINED OUTSIDE OF BELGIUM

If you have a degree from an institution outside of Belgium, you will need to complete and return the admissions request form before 31 August (30 April for students from outside the European Union):
www.unamur.be/en/enrolment

You will also need to successfully complete a language test to confirm your English level (B2).

For admission to Masters degrees, please contact the Admission Service.

For more course details, please visit:
www.unamur.be/en/sci/microbiology

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INFORMATION

Programme coordinator :
Xavier De Bolle
Tél. 081/72 44 38
xavier.debolle@unamur.be

ADMISSION

UNamur · Admission service
Rue de Bruxelles, 85 - 5000 Namur (Belgium)
Tél. +32 81/72 4013 or 4015 or 4016 or 4017 or 4022 or 5722
inscriptions@unamur.be
www.unamur.be/en/admission