Université de Lille

Life sciences and technologies

Master Biotechnologies

Durée
2 ans

Composante
Faculté des sciences et technologies

Langue(s) d'enseignement
Anglais

Présentation

By focusing on innovative and breakthrough biomedical technologies for real-time diagnosis, prognosis and precision medicine, the program for this master's degree responds to the important training challenges that accompany the unprecedented development of engineering for health.

Through a highly interdisciplinary training program based on the observation, handling and quantification of living systems in biology and health, this master aims to :

- Provide extensive knowledge, both theoretical and practical, in the field of life sciences, biophotonics, systems biology and microsystems.

- Training in cutting-edge technologies during academic training around technical platforms (cell culture at the IUT of Lille, microscopy at Phlam, etc.) and approved platforms at the University of Lille (BICel, Centrale de Micro Nano Fabrication, etc.), but also during internships thanks to multidisciplinary research centres and the socio-economic world (pharmaceutical and biomedical industries, start-ups, service companies in medical technologies, biotechnologies).

The training is :

- Organized around interdisciplinary research projects. These projects combine personal work and team work made up of students from different backgrounds (physicists, biologists, chemists, mathematicians, computer scientists, electrical engineering).

- Led by highly qualified researchers, clinicians and experts in all the disciplines mentioned above and from universities, research institutes, hospitals and companies.

Savoir-faire et compétences

At the end of this 2-year programme, graduates have acquired, in a multidisciplinary environment, the scientific and organisational knowledge and are able to:

- Deal with research and development issues of new technologies with a deep understanding of a biological context.

- Implement a project by defining the context and experimental objectives on quantitative and innovative measurements related to a biological and/or clinical issue.

- Integrate their knowledge and skills in engineering developments towards and for diagnosis, prognosis and precision medicine in order to stimulate the emergence of new technologies for biology (Biotech) and health (Medtech).

Les + de la formation

- Highly interdisciplinary: combines biology, physics, microsystems, biophotonics, systems biology — suitable for a variety of profiles (biologists, physicists, computer scientists, chemists, etc.).
- Focused on innovative biomedical technologies: real-time diagnostics, precision medicine, microtechnologies (microfluidics, chips, organ-on-chip).

- Teaching on state-of-the-art technical platforms: microscopy, cell culture, nano-manufacturing platforms.
- Interdisciplinary research projects: teamwork with students from different disciplines, promoting scientific collaboration.
- Training in English: the entire LST Master's programme is taught in English, promoting international mobility.
- Targeted scientific and technological skills: ability to address R&D issues, define experimental projects, use innovative measurements in a biological/clinical context.
- Preparation for careers in biotech + medtech: graduates can work in research, the pharmaceutical industry, biomedical start-ups, and technological R&D centres.

Organisation

Organisation

The master's programme is organised into different knowledge and skills blocks (BCC):

BCC - Analysing the mechanisms of living organisms and biological systems

BCC – Designing, developing and using advanced technologies for analysing complex biological systems

BCC - Experimenting and innovating in life sciences

Ouvert en alternance

Type de contrat : Contrat d'apprentissage, Contrat de professionnalisation.

Stages

Stage : Obligatoire

Stages obligatoires aux semestres 2 et 4.

Admission

Conditions d'admission

For European and non-EEF students: Apply on the national platform: https://monmaster.gouv.fr

For EEF students: Etudes en France

Prerequisites: Bachelor's degree in EEA, physics, life sciences, or equivalent

Et après

Poursuite d'études

After completing this master's degree, the student can continue his studies with a PhD.

Insertion professionnelle

Upon completion of this master's degree, the range of knowledge and skills and project-based learning offered will enable students to join multidisciplinary research centres in academia (through a PhD) and R&D in the socio-economic world (pharmaceutical and biomedical industries, start-ups, medical technology service companies, biotechnology companies).

Pour en savoir plus sur l'insertion professionnelle des diplômés de l'Université de Lille, consultez les répertoires d'emplois publiés par l'*ODiF (Observatoire de la Direction des Formations)*

Les fiches emploi/métier du *Répertoire Opérationnel des Métiers et des Emplois* (ROME) permettent de mieux connaître les métiers et les compétences qui y sont associées.

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Infos pratiques

Autres contacts

Contact administratif :
FST-master-biotech-lst@univ-lille.fr

Contact pédagogique :
FST-master-biotech-lst@univ-lille.fr

Lieu(x)

Villeneuve d'Ascq - FST

Campus

Campus Cité scientifique

En savoir plus

Faculté des Sciences et Technologies - FST
https://sciences-technologies.univ-lille.fr/