UNIVERSITÉ DE ROUEN NORMANDIE

Normandie Université

DIPLÔME NATIONAL DE MASTER CONTRÔLÉ PAR L'ÉTAT

MASTER

HEALTH ENGINEERING

Speciality: IQBio
Quality Engineering of Bioproducts

Education accessible to:

- ✓ INITIAL TRAINING
- ○ CO-OPERATIVE COURSES
- ○ DISTANCE LEARNING
- ✓ CONTINUING EDUCATION

Campus Évreux

sciences-techniques.univ-rouen.fr

UFR Sciences et Techniques

- The management of technical, regulatory and documentary issues related to each stage of the production of a bioproduct, from purchasing to customer satisfaction, is necessarily approached in a transversal and multidisciplinary way.
- Often led by a quality assurance department, it requires managers capable of playing a pivotal and integrating role between the various structures of the company. The general objective of the Bioproducts Quality Engineering (IQ Bio) course of the Master's degree in Health Engineering is to provide graduates with a combination of the fundamental and technical skills encountered in the targeted industrial sectors and the management skills necessary to deal with these issues.
- The IQ Bio course can be of interest to professionals returning to university education or looking for continuing professional development. About 30% of the courses in the first year and 35% in the second year of the Master's degree are taught by professional experts. Workplace internships are an important part of the programme (8 months minimum).

ACQUIRED SKILLS

In terms of skills, a graduate of the Master's Degree in Health Engineering will:

- have cross competences in biology, chemistry, (bio)-materials and analytical techniques. They are intended to operate in particular in the pharmaceutical, agri-food, cosmetics and packaging industries;
- have an integrated vision of processes and techniques for the analysis of bio-industrial materials and products, as well as in the fields of quality assurance and risk prevention;
- be able to interpret malfunctions, propose corrective measures and transfer relevant information to decision-making bodies;
- be part of an audit and expertise process;
- lead a team of technicians thanks to their knowledge of management, project management and personnel management.

ADMISSION REQUIREMENTS

Candidates will be required to submit a full application file with supporting documents and can be invited for an interview.

First Year (M1) Admission (28 places)

- Holder of a degree from the University of Rouen in Life Sciences, Health Sciences, Chemistry or Physics with Chemistry;
- Holder of a degree from another university, having followed a molecular-oriented course (biochemistry, physical chemistry, cell biology and molecular physiology) which will be considered as equivalent by the recruiting committee.

Second Year (M2) Admission (28 places)

- Holder of an M1-level qualification in Health Engineering from the University of Rouen, or from another university if the course followed is deemed equivalent;
- Holder of an M1-level qualification in Chemistry or Physics with Chemistry;
- Holder of an M1-level qualification in Health Biology, Bioinformatics, Agricultural Science, Neuroscience, Microbiology.

- Continuing professional development candidates (employees or job seekers) with a professional background which can be considered as equivalent by the recruiting committee.

TRAINING PROGRAM

Year one M1

Semester 1

- E• Professional environment: English - Professional integration
- Statistical modeling for biological use
- Molecular pathogenesis of infectious agents
- Introduction of quality process
- Metabolomic, Proteomic and Fluxome
- Industrial chemistry
- Packaging materials
- Quality on production line
- Enterprise management

Semester 2

- Bioengineering and experimental toxicology
- English
- Bio-product safety
- Pharmacology—Toxicology
- Analyze and control technologies
- Applied informatics
- Trainee placement in company or in Laboratory (at least 8 weeks)

Year two M2

Semester 3

- Coating approaches and surface decontamination
- Technical analyzes and technical for in depth monitoring
- Products and materials compatibility – Biological risk
- Standard norms and quality
- English
- Structural biology
- Enterprise management

Semester 4

- Trainee placement (6 months)

Bridges available in direction of others specialties or diploma

Bridge towards the second year of Professional or Research Masters both at the University of Rouen Normandy and in other French University.

More precisely, since its opening, some students that have validated their Master 1 IQ-Bio, have joined Research Master Biosciences specialty, Research Master in Microbiology or Research Master “Materials” specialty at the Rouen Normandy University.

JOB OPPORTUNITIES

- Quality Manager,
- Functional validation engineer,
- Development engineer,
- Control Lab Manager,
- Industrial Audit,
- HSE Manager…

BUSINESS SECTORS

Industrial sectors at the interface of Physico-Chemistry and Biochemistry, for which the quality process is crucial:

- pharmaceutical industry
- cosmetics
- agribusiness
- biotechnology
- hospitals

PARTNERS

GlaxoSmithKline - Aventis Pasteur
Valois Pharm - Leo Pharma - Delpharm
Panpharma - Boehringer Ingelheim
Steriservice - Yves Saint Laurent
Akzonobel - Eugene-Perma
Norgine Pharma - Delifrance
Barry Callebaut - SGS Multilab
Centre International de Toxicologie (CIT)
Degussa Textures Systèmes
Laboratoires Ercelab Vermed
Beaufour IPSEN Industrie
Henkel France - CRITT Agro Hall
CRITT Analyses et Surfaces - Brindelices
Saint-Louis Sucres - Pain Clément
Schering-Plough - Paucaplast
Huche Leroy - Intervet Productions
Janssen Cilag - Johnson & Johnson

TEACHING MANAGERS

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Septembre 2020