

# Biotechnologies Manager (5 years) | graduate

FULL-TIME STUDY

SCIENCES AND HEALTH

Access positions of responsibility, thanks to your expertise in **biology and biotechnology supplemented by a solid foundation in engineering sciences.**

**5**

years of study

**12**

months of  
internship at least

**3**

months abroad at  
least

DISCOVER OUR

## **MANAGER IN BIOTECHNOLOGIES PROGRAMME**

OVERVIEW

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### Diploma issued



### Double degrees possible

- National Master's Degree "Biotechnologies"
- National Master's Degree "Management of Biobanks"
- ESDES Master degree diploma "Management and business management"

**The training prepares for a wide variety of professions in the pharma, veterinary, cosmetics, biotech industries ...**

The specializations offered in 4th and 5th year allow you to choose between very scientific positions (research and development engineer, industrialization engineer ...) or more transversal positions involving project management and management.

Each specialization gives you access to a double diploma.

## **Develop your soft skills**

In a constantly evolving world, the skills most in demand in the professional world are adaptability and interdisciplinarity.

Become a responsible and agile manager, develop your ability to structure and problematize the societal challenges of a project, dare to confront different approaches and exercise your critical sense.

## **Become a responsible manager**

The managers of tomorrow have a duty of responsibility towards society, and must be able to bring meaning and a human dimension to any new project.

The “Humanities: Science and Society” modules aim to broaden your vision of the world, to teach you about doubt, to place ethics at the heart of your reflections and actions.

## **INTERNSHIP & WORK-LINKED TRAINING**

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### **Work experience in companies**

The course includes at least 12 months in business:

- Year 1: 1 month internship in an English-speaking situation
- Year 2: 1 to 2 months of internship in a laboratory
- Year 4: 4 to 6 months of internship or 7 months in a company (work-study program)
- Year 5: 6 months internship or 7 months in a company (work-study program)

### **Word-linked training**

Years 4 and 5 can be followed on a work-study program.

## **INTERNATIONAL**

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### **INTERNATIONAL STAY OF AT LEAST THREE MONTHS MANDATORY**

Three methods are possible:

- semester in a partner university (in year 3)
- internship in a partner laboratory (in year 4 or 5)
- gap year with international project

## **SPECIALIZATIONS**

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## **Infectiology**

- Acquire expertise in the science of infectious agents: viruses, bacteria, parasites ... for humans, animals, plants
- Ensure scientific and technological monitoring
- Identify innovative avenues for combating infectious agents
- Design and develop products and services (vaccines, drugs, diagnostic tests, medical devices, cosmetics ...), from the innovation phase to clinical studies
- Ensure scientific coordination of projects
- Know how to work in collaboration with the other departments of the company (marketing, production, regulatory affairs ...) to take into account the needs of users, technical and regulatory constraints

### **Targeted jobs:**

- Innovation and Research: engineer
  - Development: engineer
  - Industrialization, Production: engineer
  - Qualification - Validation - Quality Control: engineer
  - Clinical research: clinical research associate (ARC)
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## **Bioresources and data**

- Organize biological resources (DNA, cells, microbial strains ...) within biobanks intended for the scientific community (research and industries)
- Manage the data with biological resources
- Apply legislation, ethics and rules of ethics relating to bioresources
- Transfer technologies and propose innovations
- Develop a Quality Management system
- Manage a team, a budget, projects, an organization
- Communicate with international expert networks

### **Targeted jobs:**

- Operational manager / Coordinator of biobank or of a network of biobanks
  - Responsible for a platform within a biobank (storage, processing, analyzes ...)
  - Project manager in a biobank
  - Quality Manager of a biobank or a network of biobanks
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## **Innovation management**

- Add a strong managerial component to your scientific expertise
- Master the management of projects in an international and multicultural environment
- Manage decision-making taking into account ethical and societal issues
- Access to transversal functions with high added value in the company to pilot complex and innovative projects

## **Targeted jobs:**

- Quality Assurance: manager, engineer, consultant
  - Marketing: product / range manager, market research manager, communication manager, marketing manager, business developer
  - Sales: responsible for commercial strategy, account manager, sales manager, application engineer
  - Finance: key account manager, business engineer
  - Logistics: responsible
  - Environment and sustainable development: mission manager
  - Medical Affairs: Medical Science Liaison (MSL)
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## **Two specializations will open in 2021:**

### **Bioprocess**

- Master the large-scale culture processes of bacterial, animal and plant cells
- Master the techniques of separation and purification of cells, molecules
- Optimizing critical parameters, life cycles, yields
- Model biological mechanisms, automate processes

## **Targeted jobs:**

- Development: engineer
  - Industrialization, Production: engineer
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### **Digital transformation and e-health**

- Master digital solutions and technologies
- Identify the potential of the internet, collaborative platforms, big data, artificial intelligence ..., for the internal organization of the company and for the development of new products
- Leading digital innovation projects in the biotechnology industries
- Integrate ethical reflection in the use of personal data
- Supporting the digital transformation of the French healthcare system

## **Targeted positions:**

- Marketing: e-health product manager
- Digital transformation manager
- E-health project manager
- Chief digital officer

## **DOUBLE DEGREES**

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## Double degrees possible depending on the chosen specialization

### Infectiology

National Master's Degree:

**“Biologie Moléculaire et Cellulaire, parcours Biotechnologies”**

issued by Sorbonne University



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### Bioresources and data

National Master's Degree:

**“Ingénierie de la Santé, parcours Management des biobanques”**

issued by Université Claude Bernard Lyon 1



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### Innovation management

Master level diploma:

**“Management and business management”**

issued by the ESDES management school.



DISCOVER THE  
**PROGRAM**  
**DETAILED**

### PREPARATORY CYCLE

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#### YEAR 1

- Biosciences: 30 ECTS
- Engineering Sciences: 18 ECTS
- Personal and cultural development: 12 ECTS
- 1 month internship in English-speaking situation

#### YEAR 2

- Biosciences: 30 ECTS

- Engineering Sciences: 18 ECTS
- Personal and cultural development: 12 ECTS
- 1-2 month internship in a laboratory

## **SPECIALIZATION CYCLE**

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### YEAR 3

Year 3 is a year of transition. It allows you to finalize the theoretical contributions while starting to discover the company and the possible trades, before making your choice of specialization in years 4 and 5.

- Biosciences: 15 ECTS
- Engineering Sciences: 9 ECTS
- Humanities, sciences and society: 3 ECTS
- Business environment: 3 ECTS
- Semester 6 abroad at a partner university (or ESTBB in an international class)

### YEAR 4 & 5

At the beginning of year 4, you have to choose between 5 specializations:

- Infectiology
- Bioresources and data
- Innovation management
- Bioprocesses (opening 2021)
- Digital transformation and e-health (opening 2021)

2 options:

- classical
  - Internship of 4 to 6 months in year 4
  - 6 months internship in year 5
- work-study

In each specialization, a double diploma is possible.

## Contact us

**04 72 32 50 12**

Monday to Friday, 9AM to 6 PM

### **Saint-Paul Campus**

10, place des Archives - 69002 LYON

Métro Perrache (ligne A)

Tramways T2 et T1

### **Carnot Campus**

23, place Carnot - 69002 LYON

Métro Perrache (ligne A)

Tramways T2 et T1

### **Alpes Europe Campus**

25, rue de la cité

74000 ANNECY