



MASTER Cardiac EP - Electromechanical Heart Diseases

Program factsheet

ACADEMIC COOPERATION

Unique academic collaboration including clinicians and researchers from Liryc (Electrophysiology and Heart Modeling Institute, www.ihu-liryc.fr) and Bordeaux University Hospital as well as international world-renowned experts and speakers from the industry

LEVEL

International Master (year 2) of Science in Cardiac EP - Electromechanical Heart Diseases.

LANGUAGE REQUIREMENTS

This program is taught entirely in English. Excellent proficiency in English is therefore required. Students whose native language is not English must provide a TOEFL, TOEIC or IELTS certification validating a B2 level according to the CEFRL

Program outline

The Master in Cardiac EP - Electromechanical Heart Diseases provides research and innovation-based training for versatile, high-level specialists in the field of electrophysiology and cardiac bioengineering.

The Master brings a global and transversal approach to all pathologies, including a cardiac electrophysiological component.

ADMISSION REQUIREMENTS

Candidates must fulfill the following:

- › French medical students must have a validated DFASM3 or DFASP2 (advanced medical or pharmaceutical science training degrees)
- › EU/FR students and non-EU students must have completed a 4 year degree in the field of medical/biomedical/biological science, veterinary science or pharmaceutical science or engineering (including CPGE (Preparatory classes for *Grandes Ecoles* for French students))

PROGRAM DURATION

1 year, including an internship (60 ECTS).

FEES

- › Annual registration fees for all selected applicants are calculated according to the rules and regulations of the University of Bordeaux (approximately 400€).

Strengths

- › Innovative multidisciplinary teaching program focusing on cardiac electrophysiology and arrhythmias
- › Research-based teaching with practical sessions hosted within the laboratory
- › Multitude of international mobility possibilities with students benefitting from a large network of international collaborators
- › High-level training increasing students' employability and offering possibilities to continue with a PhD program in the field of cardiac electrophysiology

Program structure

MASTER (YEAR 2):

Semester 1

Didactic session (30 ECTS)

Core program

- › Cardiac physiology and pathophysiology, signal acquisition & treatment, modelisation, cardiac imaging
- › Electromechanical heart diseases: heart failure, supraventricular arrhythmia, ventricular arrhythmia & sudden death
- › Treatments of electromechanical heart diseases (treatments of heart failure, heart stimulation, ablation and pharmacological treatment of arrhythmias)
- › Regulation and innovation economics
- › Technological and therapeutic innovations
- › Scientific communication skills

Hands-on group projects

- › Heart failure, bioenergetics and stimulation
- › Cardiac electrophysiology and arrhythmias
- › Cardiac devices

→ And after?

Students benefit from high-level training and long-standing collaborations with international research centers and industrial partners in the field of cardiac electrophysiology. Multiple opportunities are therefore available to:

- › Pursue a career in the biomedical industry
- › Further studies by enrolling in PhD training
- › For professionals, boost their career path within their sector

Contact

PROGRAM COORDINATORS:

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Semester 2

Internship (30 ECTS)

- › Internship within a research laboratory, hospital department or within the industrial sector.

How to apply?

Please consult the application file on Apoflux (apoflux.u-bordeaux.fr/etudiant)

Deadlines:

- › 25th April - 20th June 2022: applications
- › 22th June 2022: evaluation of applications by the Pedagogical Commission
- › 24th June 2022: notification of results to candidates

Selection criteria:

- › Student's training
- › Grades and assessments obtained
- › Motivations of the candidate and his/her ability to present the reasons for his/her application (professional project)
- › Professional career path for those already in employment (if applicable)

Please note:

- › Maximum number of students: 12

This Master program is supported within the framework of the PIA 3 (Investments for the Future).
Project reference: 17-EURE-0019



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