

Physiology, epigenetics, differentiation and cancer (PhEDC)

Master in Biology



Duration
1 year



Component
UFR Chimie-
Biologie



**Language(s) of
instruction**
English

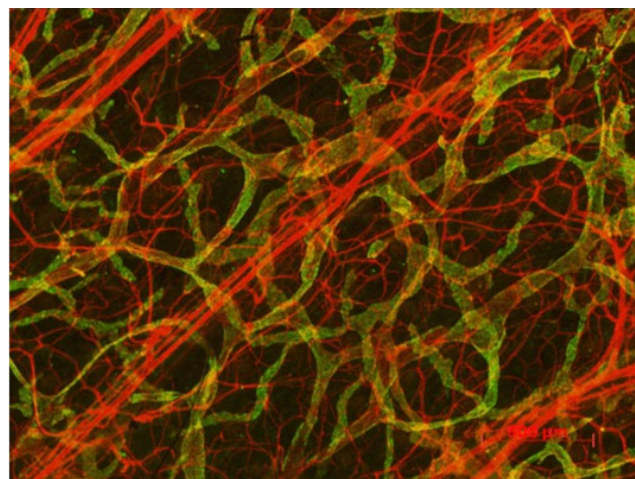
Presentation

After having completed the first year of the master in Biology program at Université Grenoble Alpes (or Molecular and cellular biology program or an equivalent 1st year program in another university), the students will have to apply for admission in 2nd year PhEDC program.

The first semester of the 1st year program is meant to complete the general scientific background of the enrolled students in various fields of biology (physiology, cell biology, genetics, biochemistry...) while the second semester introduces the students to their specific master 2nd year's program by offering them specialized courses and a 2-months internship in a laboratory.

The 2nd year PhEDC year is divided in two semesters. The PhEDC first semester includes 3 types of classes :

1. Classes aiming at providing general knowledge or skills that are necessary to researchers (handling of a research project, entrepreneurship, English)
2. Specialized classes directly related to the topics of the 2nd year's PhEDC program (Physiology, epigenetics, differentiation and cancer...)
3. Optional classes proposing an initiation to other fields of biological sciences (neurosciences, biostatistics, high throughput biology...). The PhEDC second semester is entirely constituted of a 6-month research internship in a laboratory.



The blood and lymphatic circulation networks in the mouse ear: a model for studying the development of blood vessels.
Laboratoire de Biologie du Cancer et de l'Infection, INSERM U1036, CEA Grenoble, Université Grenoble Alpes.

At the end of this year of master 2nd year program, the enrolled students should be able to master the theoretical knowledge and the technical expertise in the fields of physiology, epigenetics, development, differentiation and/or cancer, be fluent in English (oral communication and writing skills for the preparation of research projects and scientific reports), have acquired an expertise in synthesizing bibliographic data, be able to autonomously propose a research project and develop it using the most advanced technological equipment.

International education : Internationally-oriented programmes

International dimension

The 2nd year PhEDC program is taught in English.

Admission

Access conditions

Second year of the master's degree in Biology : to be eligible to apply, you should have completed (or you should be enrolled in) a first year of a master's degree in Sciences *i.e.* you should have validated 60 ETCS of a master's degree in Sciences by the end of your current academic year.

Public continuing education : You are in charge of continuing education :

- if you resume your studies after 2 years of interruption of studies
- or if you followed training under the continuous training regime one of the previous 2 years
- or if you are an employee, job seeker, self-employed

If you do not have the diploma required to integrate the training, you can undertake a [validation of personal and professional achievements \(VAPP\)](#).

Candidature / Application

If you want to apply and register, you must know that the procedure is different depending on the diploma you are seeking, the diploma that you have obtained, or your country. To know more, follow the [link](#)

- 2 application campaigns are organized for the 2nd year of the master in Biology
- **Campaign 1** : On the application "e-candidat" for students having completed a 1st year in France **from March 2th to March 20nd, 2020** / On the application "Portail des études en France" for students having completed a 1st year's master in a foreign country **from March 2th to March 20nd, 2020**

- **Campaign 2** : On the application "e-candidat" for students having completed a 1st year in France **from April 27th to May 15th, 2020** / On the application "Portail des études en France" for students having completed a 1st year's master in a foreign country **from April 27th to May 15th, 2020**

Fees

- Tuition fees 2019-2020 : 243 €
- CVEC fees : 91 €

And after

Further studies

Graduating from a master degree in Physiology, epigenetics, differentiation and cancer (PhEDC) leads to a career as a research engineer in academic or private laboratories. For the students interested in a career as a research scientist in academic institutions or in private pharmaceutical industries: consecutively to a master degree in Physiology, epigenetics, differentiation and cancer (PhEDC), the students may choose to continue with a PhD program offered by a french doctoral school or foreign universities, and related to the aforementioned fields of biology. After the obtaining of their PhD, the young researchers usually undertake one or two post-doctoral trainings of 2-3 years each, in France or foreign countries, in order to diversify their expertise. They can then apply to permanent positions as:

- Full time researchers at the national French organizations of research ("CNRS", "INSERM", "INRA", "IRD" etc)
- Project managers in R&D laboratories from private biotech companies
- Researchers-teachers in French or foreign universities

Useful info

Contacts

Program director

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Administrative contact

Chemistry-Biology Course Services

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Course location(s) - City

📍 Grenoble

Campus

🏠 Grenoble - University campus

Program

Master 2nd year

Semester 9

	Nature	CM	TD	TP	Crédits
UE Research project	Teaching Unit (UE)	3h	35h		6 credits
UE Ageing and longevity	Teaching Unit (UE)				6 credits
UE Cardiovascular physiology and integrated metabolism	Teaching Unit (UE)				6 credits
UE Epigenetics and cell differentiation	Teaching Unit (UE)	18h	18h		6 credits
UE Evolution and development of Eukaryotes	Teaching Unit (UE)	21h	15h		6 credits
UE Molecular biology of the cancer cell	UE	36h			6 credits
UE Molecular biology of the cancer cell	UE	36h			6 credits
UE High throughput in biology	Teaching Unit (UE)				6 credits
UE Biostatistics, bioinformatics and molecular modeling (part II)	Teaching Unit (UE)	27h	12h		6 credits
UE Cancer disease : experimental and therapeutical approaches	Teaching Unit (UE)	30h	10h		6 credits
UE Neurophysiology	Teaching Unit (UE)				6 credits
UE Neurodegeneration and repair	Teaching Unit (UE)				6 credits
UE Plasticity of the adult nervous system	Teaching Unit (UE)				6 credits

Semester 10

	Nature	CM	TD	TP	Crédits
UE Communication in scientific english (part II)	Teaching Unit (UE)				3 credits

UE Business plan of your start-up (entrepreneurship and science)	Teaching Unit (UE)	24h	3 credits
UE Laboratory internship PhEDD (part II)	Teaching Unit (UE)		24 credits