

Program Description

The Master Program in **Cell Biology and Physiology** coordinated by the Institute for Cell Biology and Neuroscience focuses on an understanding of fundamental life processes from cell growth, cell-cell communication and differentiation to hormonal, inflammatory, angiogenic neuronal signaling and aging. These processes are studied in the context of cells, individual tissues and model organisms.

Experimental and conceptual approaches include modern cell biological, molecular, biochemical, molecular, immunological and genetic methods combined with molecular imaging, morphological and physiological technologies.

The Master Program consists of **6** compulsory and **4** elective **modules** in order to allow an interdisciplinary education. This may be combined with selective modules from other master programs of the faculty.

Exemplary Degree Course Scheme/ Admission Requirements

Term		Module
1 - Winter	comp.	Introduction
	comp.	Advanced Physiology
	optional	Elective Module - 1
	optional	Elective Module - 2
2 - Summer	comp.	Advanced Cell Biology
	optional	Elective Module - 3
	optional	Elective Module - 4
3 - Winter	comp.	Current Concepts in: Physiology - or - Cell Biology
	comp.	Methods in: Physiology - or - Cell Biology
4 - Summer	comp.	Master Thesis

Students entering the graduate program should have a Bachelor's degree in a related biological, biomedical, psychological or other scientific/mathematic science. The Master Degree of **Cell Biology and Physiology** starts only in winter term!

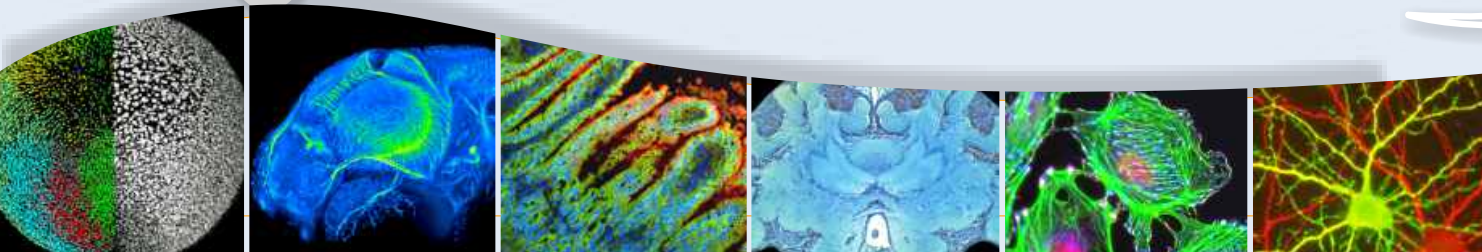
- Information for application can be found at:
[www.uni-frankfurt.de / studium / studienangebot / master / index.html](http://www.uni-frankfurt.de/studium/studienangebot/master/index.html)

Master Cell Biology and Physiology

Master of Science (M. Sc.)

Institute for Cell Biology
and Neuroscience

Institut für Zellbiologie
und Neurowissenschaft



Institute for Cell Biology and Neuroscience

The Institute offers a graduate program leading to the Master of **Cell Biology and Physiology**.

Our groups work on biochemical, cellular, immunological, genetical, molecular methods in order to analyze scientific questions in the field of physiology, cell biology, molecular genetics, neurobiology and neurochemistry.

Scientific questions will be investigated on different cell culture systems and model organisms. In addition our department provides access to high resolution optical technologies, documentation systems and databases.

International partnership programs, scientific cooperations with other universities, other institutes of the department, institutions and hospitals are well established.

- General information can be found at:
www.uni-frankfurt.de/fb/fb15/institute/inst-2-zellb-neuro/index.html

Participating Groups / Course Instructor

Institute for Cell Biology and Neuroscience

Neurochemistry
Prof. Dr. Walter Volkmandt

Neurobiology of the Honeybee
Prof. Dr. Bernd Grünewald

Molecular and Cellular Neuroscience
Prof. Dr. Amparo Acker-Palmer

Neurobiology of Biosensors
Prof. Dr. Manfred Kössl

Physical Biology
Prof. Dr. Ernst H.K. Stelzer

Molecular Cell Biology and Human Genetics
Prof. Dr. Anna Starzinski-Powitz

Institute for Molecular Bio Sciences

Molecular Developmental Biology
Prof. Dr. Heinz D. Osiewacz

Molecular Cell Biology of Plants
Prof. Dr. Enrico Schleiff

FB 16 / Institute for Cardiovascular Regeneration

Vascular Homeostasis
Prof. Dr. Stefanie Dimmeler

Elective Modules

Cell Biology and Physiology of Signal Transfer

Neurophysiology of Sensory Systems

Developmental Neurobiology

Cell Biology and Physiology of Angiogenesis

Physiology and Behaviour

3-D Cell Culture and Microscopy

Cell Communication, -Adhesion, -Motility

Fungal Cell Biology

Plant Cell Biology

Program Objectives

- Education of students in modern concepts and methods of cell biology and physiology.
- Performance of interdisciplinary science and acquisition of self-dependent scientific action and thinking.
- Adjustment to a new job, independent advancement in the area of expertise and expanding career opportunities in: bioinformatics, biopharmaceutical research, scientific management, biotechnology, marketing.

