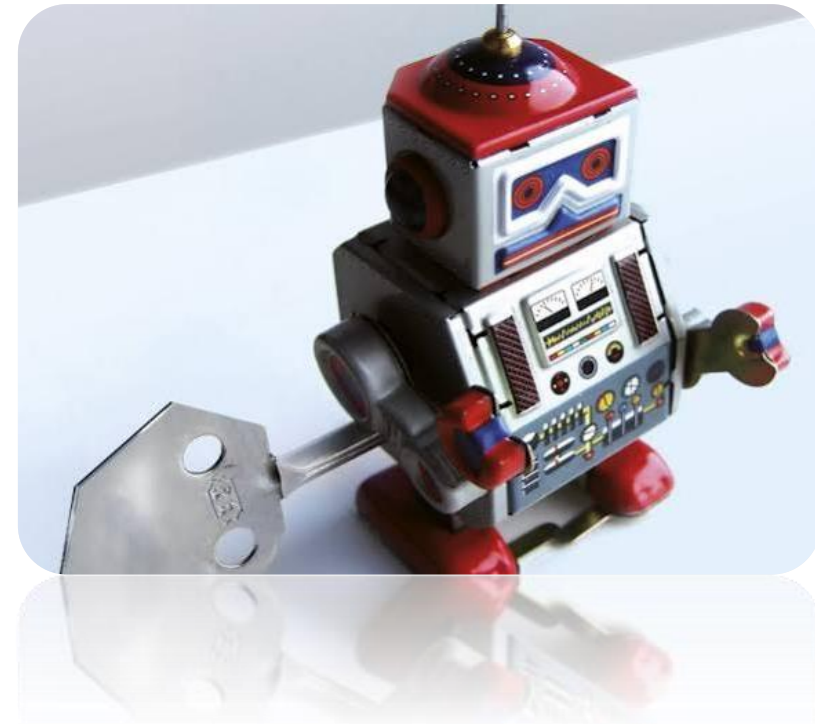

Welcome Master Students

Microengineering/Robotic
Section

Academic Year 2026–2027



The microengineering governance

Prof. Yves Bellouard

Section Director



Prof. Francesco Mondada

Director, Robotics Master



Dr. Elmira Shahrabi

Section Adjunct



Your study advisors

Giovanni Boero

Micro & Nanosystems



Yves Bellouard

Advanced Production & Fabrication



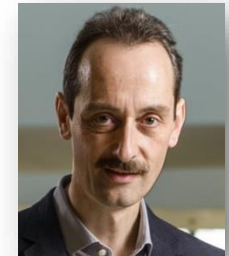
Olivier Martin

Optics & Photonics



Francesco Mondada

Robotics Master & Orientations



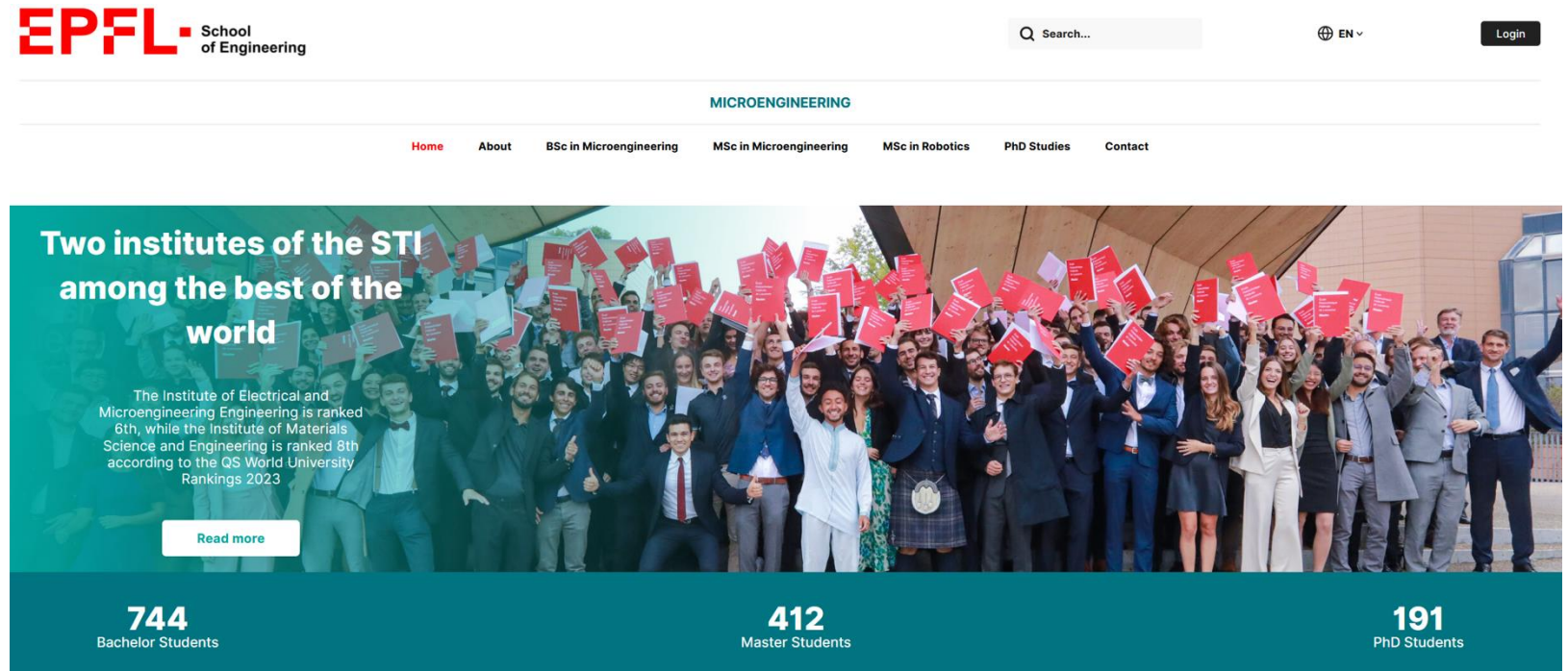
Your essential tools

[IS-Academia](#)

Course and exam registrations.

[SMT Website](#)

Important information, guidelines and useful links for your studies.



EPFL School of Engineering

Q Search... EN Login

MICROENGINEERING

[Home](#) [About](#) [BSc in Microengineering](#) [MSc in Microengineering](#) [MSc in Robotics](#) [PhD Studies](#) [Contact](#)

Two institutes of the STI among the best of the world

The Institute of Electrical and Microengineering Engineering is ranked 6th, while the Institute of Materials Science and Engineering is ranked 8th according to the QS World University Rankings 2023

[Read more](#)

Rank	Students
744	Bachelor Students
412	Master Students
191	PhD Students

Your EPFL e-mail

firstname.lastname@epfl.ch

- Your EPFL e-mail should now become your reference account.
- Important information regarding your studies will be sent to this address.
- Check it regularly.

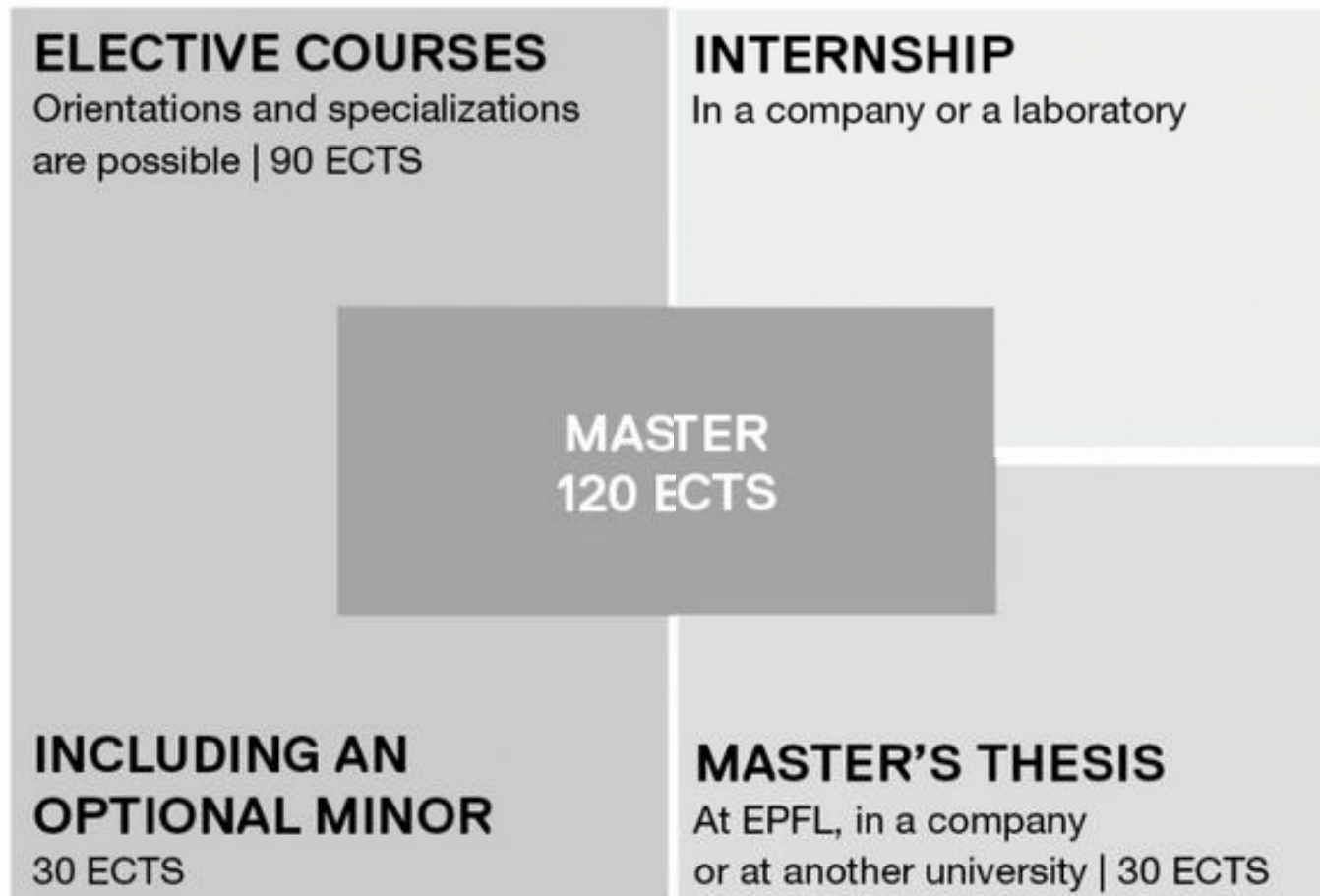
In case of doubt, always consult the official regulations for your studies.

« Ignorantia juris non excusat »

Master Structure

Understanding how your programme is built

Your master in one view



Your study plan

Your official study plan is available online:

■ [Microengineering](#) ↗

■ [Robotics](#) ↗

Master project (.)

COURSES	LANGUAGE	MASTER 1			MASTER 2			MP AUTUMN			MP SPRING			EXAM	CREDITS
		L	E	P	L	E	P	L	E	P	L	E	P		
Engineering internship credited with master project (master in Microengineering) (Stage d'au minimum 8 semaines après le 2ème semestre de Master. Inscription par la bourse aux stages) MICRO-597 / Section MT Profs divers	FR	-	-	320h	-	-	320h	-	-	320h	-	-	320h	Winter/Summer session Term paper	0
Master project in robotics MICRO-598 / Section MT Profs divers	FR/EN	-	-	-	-	-	-	-	-	900h	-	-	900h	Winter/Summer session Oral	30

Block 1

COURSES	LANGUAGE	MASTER 1			MASTER 2			SPECIALISATIONS/ORIENTATIONS	EXAM	CREDITS
		L	E	P	L	E	P			
Applied machine learning MICRO-455 / Section MT Billard	EN	4h	-	-	-	-	-		Winter session Written	4
Basics of mobile robotics MICRO-452 / Section MT Mondada	EN	2h	2h	-	-	-	-		Winter session Written	4
Basics of robotics for manipulation MICRO-450 / Section MT Bouri	EN	3h	-	-	-	-	-		Winter session Written	3
Model predictive control ME-425 / Section GM Jones	EN	2h	2h	-	-	-	-		Winter session Written	4



Important : study plans can evolve each year. The study plan that determines the completion of your blocs and groups is the one from the first semester of your Master studies.

Registering for courses & exams

You must register yourself for all subjects, including compulsory courses, through IS-Academia.

Autumn

Spring

Course Registration

- from August until **Friday of the second week** of the autumn semester
- from January until **Friday of the second week** of the spring semester

Withdrawing from Tests

- from October to the **Friday of the tenth week** of the semester
- from March to the **Friday of the tenth week** of the semester

How do you pass ? Bloc vs Group

[Requirements for passing the Master's degree ↗](#)



**Requirements for passing
the internship and the Master's project :**

[Internships ↗](#)

[Master's projects ↗](#)

BLOC

A bloc is passed when:

- all subjects it contains have been examined at least once;
- the weighted average of the bloc is 4.00 or above.

When the bloc is passed, all credits associated with it are acquired.

GROUP

A group is passed when:

- enough individual subjects have been passed with a grade of 4.00 or above;
- the required number of credits for the group has been reached.

An average is calculated, but it has no bearing on passing the group.

Semester projects

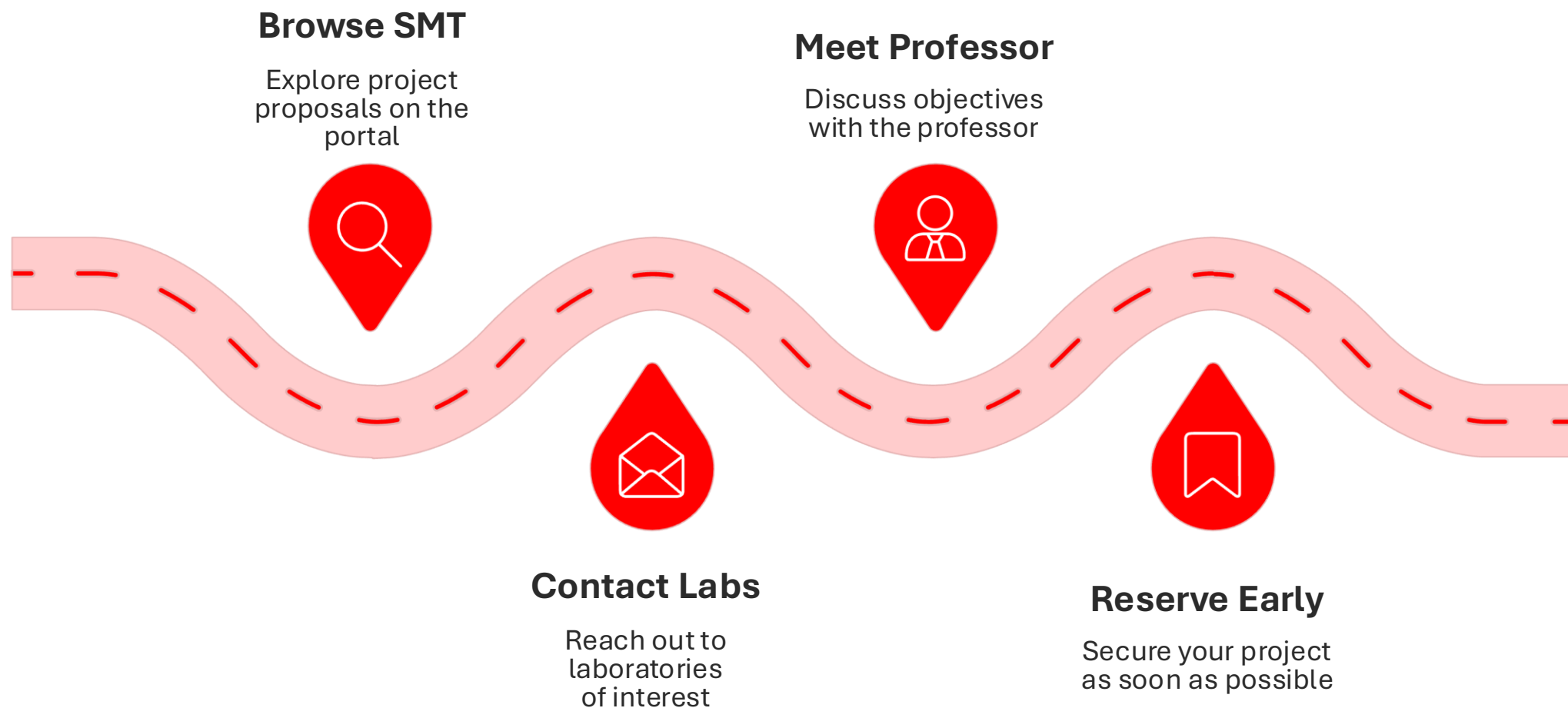
Hands-on research at the heart of your Master



Important for Microengineering master:
two semester projects are mandatory

- **Semester Project I:** It must be carried out in the field of microengineering or a related field.
- **Semester Project II:** It can be carried out either in the field of microengineering or within the topic of your minor.

How to find a semester project



Semester project : guidelines

[Semester project guidelines ↗](#)

MICROENGINEERING

[Home](#)[About](#)[BSc in Microengineering](#)[MSc in Microengineering](#)[MSc in Robotics](#)[PhD Studies](#)[Contact](#)

Semester project guidelines

Find a project

We recommend to look for your project at the end of the previous semester. Browse through the following pages

- [Lab webpages dedicated to projects](#)
- [Extraction list from the IS-A project portal](#)

These project lists are non-exhaustive and other projects can be found by contacting directly the labs of interest.

Reserve your project as early as possible. Meet with the Professor in charge and define the objectives and work to be accomplished.

IMPORTANT: The project supervisor is a Professor or MER [authorized by the section](#); exceptions have to be asked to [Elmira Shahrabi](#).

It is not allowed to take two projects during the same semester, neither to carry out two projects in the same laboratory.

Registration

Register on IS-A as soon as the portal is opened by the Academic Service. (this registration is official and mandatory, please respect the deadlines).

Attention, the semester project is non-withdrawable. Once enrolled, it is no longer possible to change.

Guidelines & Templates

- Semester Projects Guidelines
- Intermediate presentation template
- Final presentation template
- Semester Thesis report template

Examples & Forms

- Project proposals
- Example of a semester project report
- Project Evaluation Sheet
- MAKE Project guidelines

Semester project : important rules

PROJECT OUTSIDE SMT

If the Professor proposing the project **is not** [affiliated with the Microengineering Section](#) ↗ the project must be submitted for validation to : **elmira.shahrabi@epfl.ch**

TWO PROJECTS

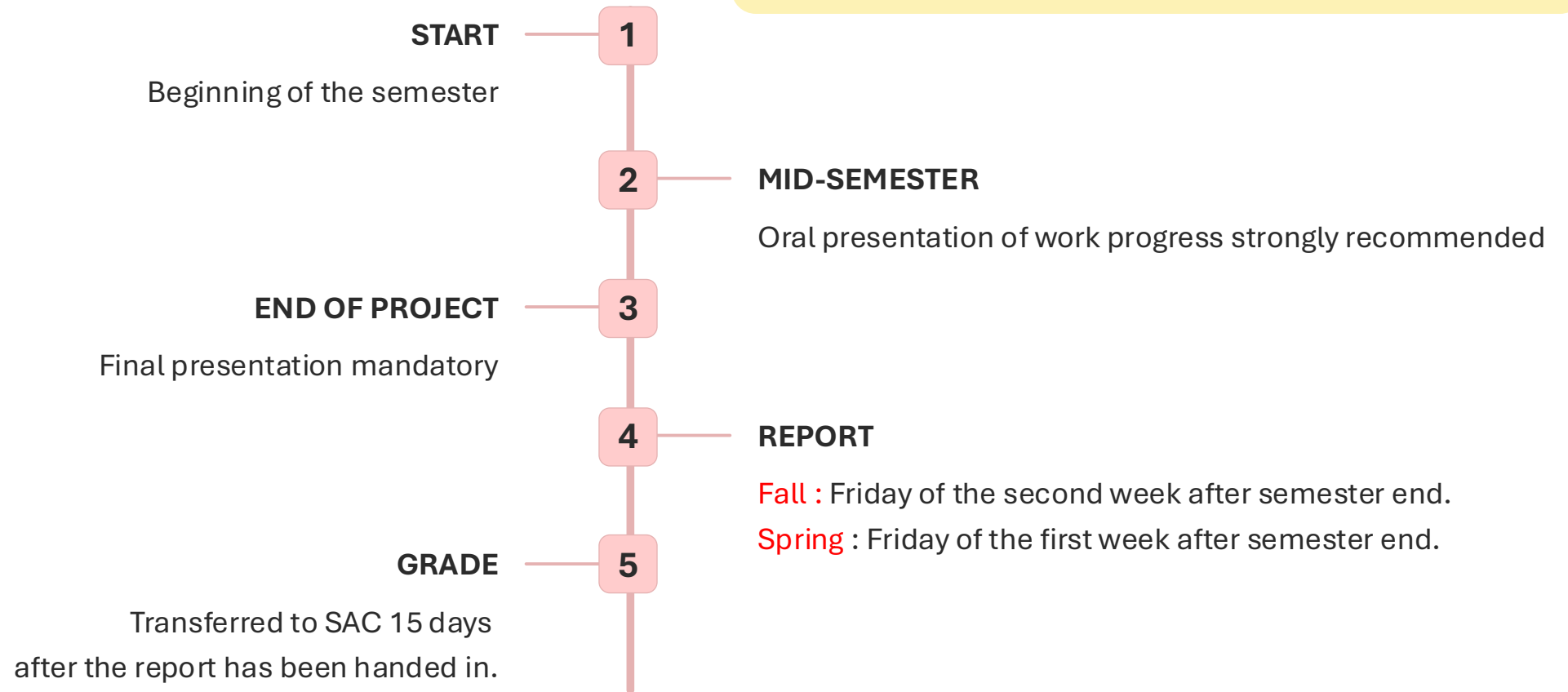
It is **not allowed**:

- to take two projects during the same semester;
- to carry out two projects in the same laboratory.

Semester project : timeline



The supervising Professor should confirm the exact dates for the report and oral presentation at the beginning of the project.



Study room [BM 0246](#) ↗

Exclusively for SMT Master students

- Access with your Camipro card
- A dedicated place to study and work
- Please follow the study room rules and guidelines



Minors

Deepen your expertise

Minors : key rules

[Minors rules and procedures](#) ↗

- **Choose your Minor**

Inform the Section of your choice and register your Minor in IS-Academia **no later than the beginning of your 2nd Master semester.**

- **Complete at least 30 ECTS**

A Minor is successfully completed once you have earned **at least 30 ECTS from the approved courses.**

- **Pass each course individually**

Each course must be passed on its own. **There is no compensation between courses.**

Minors recommended by SMT

Biomedical Technologies Minor ↗

Responsible: Carlotta Guiducci

Photonics Minor ↗

Responsible: Olivier Martin

Imaging Minor ↗

Responsible: Daniel Sage



Other Minors are also available and can be explored in the [Minors](#) ↗ file

Industry Immersion

Bridging academia and the professional world

Mandatory industry immersion

You have two options :

OPTION 1 **Industry Internship**

2–6 months

OPTION 2 **Master Project in Industry**

25 weeks + 1 week vacation

When can you do your internship?

Your industry immersion can be integrated into your Master curriculum in different ways. Depending on your study organisation, you can do:

Internship + Thesis Separately

Industry Internship (8 weeks-25 weeks) + Master Thesis in Academia or Industry (17 or 25 weeks)

Internship + Thesis Together = Master Project in Industry

25 weeks - a full research project carried out in a company

The internship can also be carried out during the summer period.

Industry internship

[Internships](#) ↗

Duration: minimum 2 months, up to 6 months

An opportunity to:

- immerse yourself in industry;
- become familiar with company processes;
- acquire specific competences;
- apply transversal skills.

 **Evaluation** : report by the student and industry supervisor.



Detailed info session:
October 2026



STI Industry internship coordinator:
valerie.berger@epfl.ch



Information will follow.
Stay tuned!

Master project in industry

[Master Projects in industry](#) ↗

Duration : 25 weeks + 1 week vacation



Research in a company

A research project carried out in a company, applying competences acquired during your Master



Academic supervision

Supervised by a Professor from your Section or approved by the section with monthly feedback



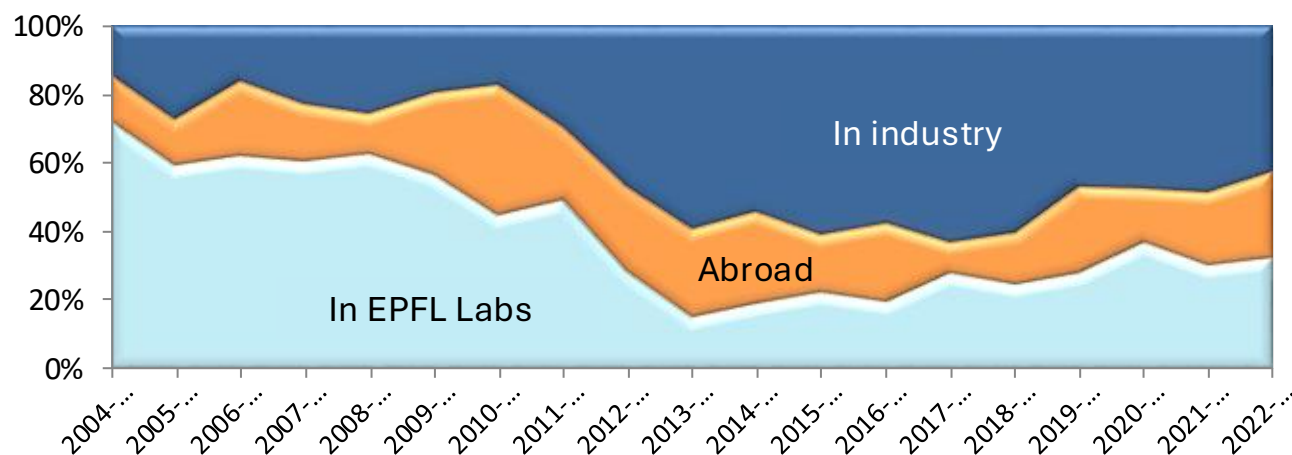
Deliverables

Written report and oral defense

The Master Project

The culmination of your Master studies

Master project



There are several ways to complete your Master Thesis:

AT EPFL

In an EPFL laboratory

ABROAD

At a foreign university, co-supervised by an EPFL Professor

IN INDUSTRY

In a company, co-supervised by an EPFL Professor. Duration: 25 weeks.

Possible locations

UNIVERSITIES & ACADEMIC INSTITUTIONS

- Brigham and Women's Hospital (BWH), Harvard Medical School
- California Institute of Technology (Caltech)
- ETH (Robotics and Perception Group, with Prof. Scaramuzza)
- Georgia Institute of Technology
- Harvard University
- Harvard John A. Paulson School of Engineering and Applied Sciences
- Harvard SEAS - Biodesign lab
- Imperial College London
- Korea Advanced Institute of Science and Technology (KAIST)
- Max Planck Institute for Informatics
- National University of Singapore
- Polytechnique Montréal
- Stanford University
- Technical University of Denmark (DTU)
- UC Berkeley
- Université de Genève
- University of Amsterdam
- University of Basel
- University of British Columbia
- University of California, San Diego
- University of Illinois at Urbana-Champaign
- University of Oregon – Knight Campus

INDUSTRY & RESEARCH INSTITUTES

- Alpine Intuition Sàrl
- Alpiq SA
- Aritria Medical SA
- Astek
- autonomyo
- Baracoda
- Bionomous Sàrl
- Bulgari Horlogerie
- Careviture Medical
- Carl Zeiss AG
- Cartier Opérations – Branch of Richemont Int.
- CleanGreens Solution SA
- CSEM – Centre suisse d'électronique et de microtechnique SA
- Cyberbotics Ltd.
- Demazure SA
- ecoRobotix
- Empa
- European Southern Observatory
- Expedia Lodging Partner Services
- EyeOn Switzerland
- Fusion Lab Technologies SARL
- GSK
- Hublot S.A.
- Hydromea
- IBM Research GmbH
- ID Quantique SA
- IEP Innovation Park Foundation
- Illuin Technology
- Innovation Park Foundation (EIP)
- Isochronic AG
- KEP Innovation Center
- Logitech Europe SA
- London Centre for Nanotechnology
- Magma Learning
- Mantis Technologies GmbH
- Manufacture des Montres Rolex SA
- Medtronic Europe Sarl
- Melexis Technologies SA
- Merck Serono SA
- Metyos
- MotionTech
- Neurorestore
- Neurorestore (CHUV)
- Observatoire de Genève
- Omnisens SA
- Onward Medical SA
- opticode.ch
- Philips High Tech Campus Eindhoven
- Readily3D SA
- Rigi Technologies
- Rigitex
- Rolex
- Schindler Aufzüge AG
- Sensirion AG
- Technis SA
- Tecma Industrias
- TWICE SA
- VLC Photonics
- Volocopter GmbH

Guidelines

Everything you need to prepare
and complete your Master Thesis is available in the :

[Master Projects guidelines ↗](#)

MICROENGINEERING

[Home](#)[About](#)[BSc in Microengineering](#)[MSc in Microengineering](#)[MSc in Robotics](#)[PhD Studies](#)[Contact](#)

Master projects guidelines

In general, [EPFL master thesis guidelines](#) Apply.

Find here below the section guidelines

Calendar

The start date is usually the first day of each academic semester. Handing-in date depends on the project duration and is calculated automatically on IS-A when registering.

The Master's projects can start between January 1 and May 31 for the spring semester. The Master's projects can start between June 1 and December 31 for the fall semester. **The Master's projects should in any case start on a Monday, and be submitted on the Friday at noon.**

Students have to register the master project on IS-Academia, latest 2 weeks after the start of the semester, as any other course (academic calendar).

The master project lasts 17 weeks when it's achieved at EPFL. The duration is 25 weeks if the project is achieved out of EPFL (industry or other university) : in either case, add one-week holiday (i.e. 18 or

Passerelle HES

Your pathway into the Master programme

Microengineering / Robotics passerelle

[Requirements for passing the HES/FHS gateway](#) ↗

TO COMPLETE THE PASSERELLE

You must:

- acquire at least 30 ECTS by the end of the second semester;
- acquire all required credits by the end of the fourth semester.

[Passerelle Study Plan](#) ↗

CAN I START THE MASTER BEFORE COMPLETING THE PASSERELLE?

Yes, provided that:

- you have obtained at least 30 ECTS of the Passerelle;
- you are not in definitive failure of the Passerelle.

The period during which you have started the Master but not yet completed the Passerelle counts towards the maximum duration of both programmes.

Microengineering Master program

Orientations, courses, and building your profile

Specifics about the two masters

MICROENGINEERING MASTER

[Rules and procedure ↗](#)



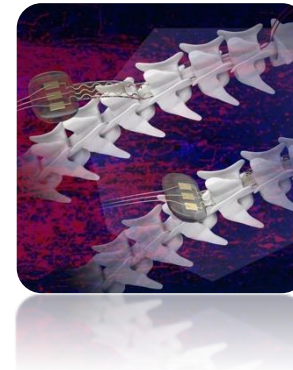
- Optics & Photonics
- Micro & Nanosystems
- Advanced Production & Manufacturing



Choosing an orientation (A, B or C) is optional and simply serves as a guideline to help you plan a coherent set of courses.

ROBOTICS MASTER

[Rules and procedure ↗](#)



- Industrial
- Mobile
- Medical



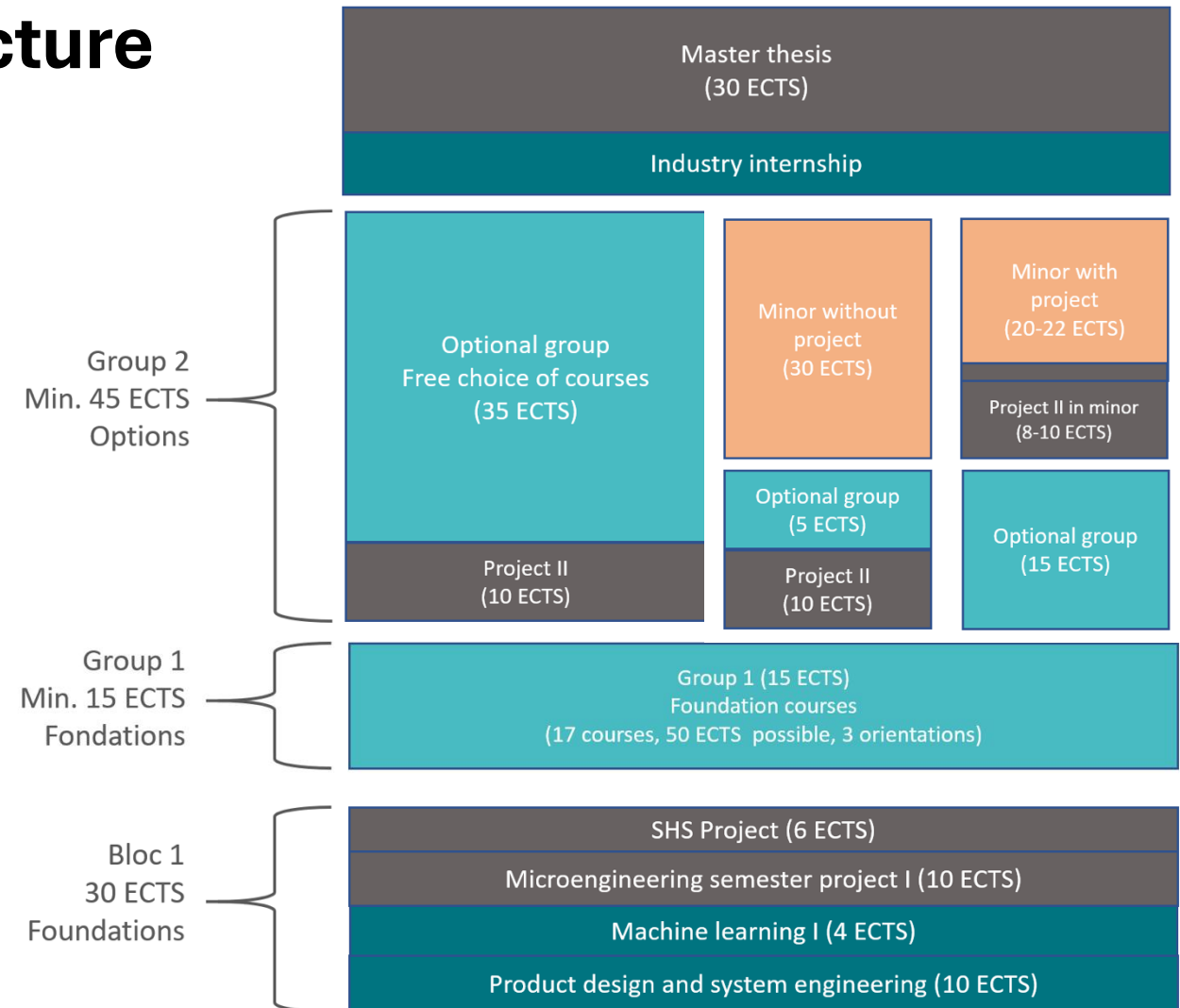
You must complete an orientation (A, B or C) with a minimum of 17 ECTS credits in order to obtain your degree.

Microengineering master structure

Your programme combines:

- Foundational courses
- Elective courses
- An optional orientation
- 2 semester projects
- SHS
- Industry immersion
- Master Thesis

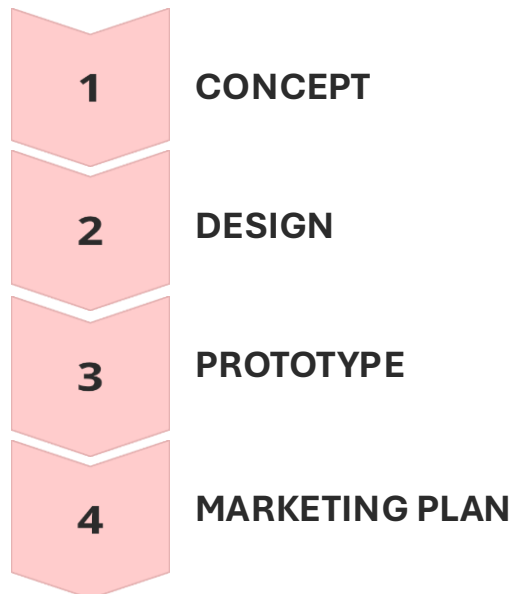
You can build your curriculum according to your interests while respecting the requirements of the study plan.



Product design & systems engineering course

A foundational course during the first semester.

Working in teams, students create their own product:



Fred
Electrical Designer
3D printing



Pablo
Propulsion
Designer



Andrea
Propulsion
Designer



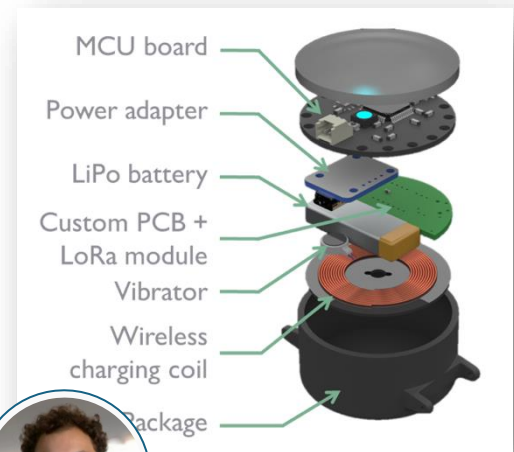
Charlotte
CAD designer



Hugo
Programmer



Florian
Business developer

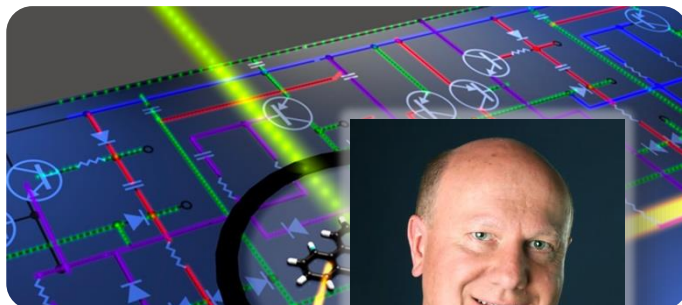


The course also includes invited speakers from Academia and Industry.

Choose your orientation

Orientations are designed as guidelines to help you choose your courses.

A - Optics & Photonics



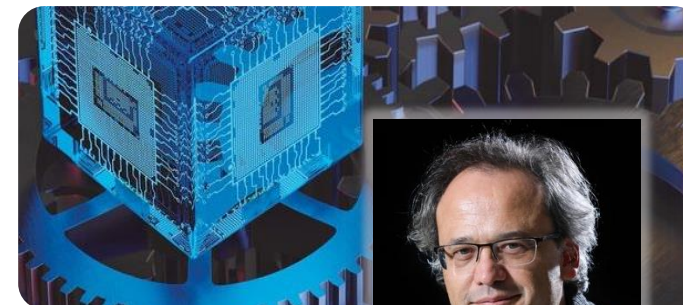
Olivier Martin
Study advisor

B - Micro & Nanosystems



Giovanni Boero
Study advisor

C - Advanced Production & Fabrication



Yves Bellouard
Study advisor

A - Optics & Photonics

Examples of courses include :

- Computational Optical Imaging
- Optical Detectors
- Selected Topics in Advanced Optics
- Optical Design with Zemax
- Lasers: Theory and Modern Applications
- Nonlinear Optics
- Optics Laboratories
- Fundamentals of Biophotonics
- Biomedical Optics
- Nanophotonics
- Photonic Systems and Technology



Important : for the complete and current course list, always consult the official study plan.

B - Micro & Nanosystems

Examples of courses include :

- Nanotechnology
- Scaling Laws in Micro- and Nanosystems
- Advanced MEMS & Microsystems
- Micro/Nanomechanical Devices
- MEMS Practicals I & II
- Fundamentals of Biosensors and Electronic Biochips
- Bio-Nano-Chip Design
- Nanobiotechnology and Biophysics
- Sensors in Medical Instrumentation
- Physical Models for Micro and Nanosystems



Important : for the complete and current course list, always consult the official study plan.

C - Advanced Production & Fabrication

Examples of courses include :

- Introduction to Additive Manufacturing
- Manufacturing Systems and Supply Chain Dynamics
- Material Processing with Intelligent Systems (*not given in 2026-2027*)
- Metrology
- Advanced Additive Manufacturing Technologies
- Laser Microprocessing
- Continuous Improvement of Manufacturing Systems
- Industrial Automation
- Metrology Practicals
- Advanced Mechanisms for Extreme Environments
(*not given in 2026-2027*)



Important : for the complete and current course list, always consult the official study plan.

Build your own profile

Beyond the orientation courses, you can develop your profile through courses in areas such as :

AI & MACHINE LEARNING

Machine Learning / Software Architecture / Distributed
Intelligent Systems

SIGNALS & BIO

Image Processing / Neural Signals / Neuroengineering /
Biomedical Signal Processing

SYSTEMS

Embedded Systems / Systems Engineering / Project & Risk
Management

ROBOTICS

Mobile Robotics / Legged Robots / Aerial Robotics /
Evolutionary Robotics

Where can microengineering take you ?

OPTICS & PHOTONICS

- Imaging
- Lasers & Communications
- Marking & Security
- Smart Fabric Printing

MICRO & NANOSYSTEMS

- Watchmaking
- Sensors, Wireless & IoT
- MEMS
- Microfabrication & Packaging
- Systems Engineering

ADVANCED PRODUCTION & FABRICATION

- Industrial Robotics
- Supply Chain
- Materials Processing
- Advanced Manufacturing
- Research Centres



Want to explore further ?

[Student testimonials & information sessions ↗](#)



Discover more about Microengineering and Robotics through student testimonials, experiences and information sessions

Hear directly from students and alumni about their studies,
their Master's experience and their journey at EPFL

Practical Information

Everything you need to navigate your studies

Course attendance and online offer

- Take profit as much as possible from **presential courses** and interact with teachers and assistants
- Follow **live recordings** only if you have major impediments
- Take profit of the **School's infrastructure** to be on campus
- Make use of archived recordings to **revise, catch-up and strengthen** your knowledge



All teachers look forward to welcome you in class in order to have the best dynamic and pedagogical teaching style possible

Indicative course evaluations

- Each semester, all EPFL courses are evaluated by students :
 - **Indicative evaluation** : week 5
 - **In-depth evaluation** : week 14
- **Your feedback matters** : it helps teachers continuously improve their courses and teaching.
- A **high participation rate** is essential to ensure meaningful and representative results.



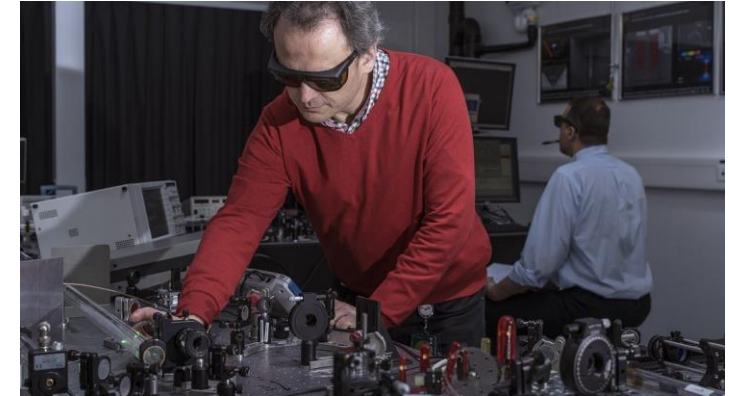
Your evaluations and constructive feedback have a real impact on teaching !

IEM - Labs to host your projects



Covers the following major technical fields:

- Electronic Circuits and Devices
- Micro-manufacturing and Micro- and Nano-technologies
- Robotics
- IoT, Computer & Communication Engineering
- Optics, Photonics and wave engineering
- Machine learning, Information Science and Systems
- Power and Energy



Research in IEM :

- **37** Full Professors / Associate Professors / Tenure-Track Assistant Professors
- **1** SNSF-funded Professor
- **10** Adjunct Professors
- **11** Senior Scientists
- **1** Member of the US National Academy of Engineering
- **1** Member of the American Academy of Arts & Sciences
- **1** Member of the Academia Europaea
- **2** Members of Swiss Academy of Engineering Sciences
- **25** ERC grants : 12 Advanced, 6 Consolidator and 7 Starting grants since 2008

IEM : one Institute, three campuses

Geneva - Campus Biotech

- Bio- and neuroengineering (Wyss center)
- Human Brain Project
- Center for neuroprosthetics

- 420 staff
- 9 chairs
- 3880 m²

Neuchâtel - Microcity

- Microengineering and nanotechnologies

- 230 staff
- 11 chairs
- 8035 m²



Beyond your studies

[Make Projects](#) ↗

Work on ambitious interdisciplinary projects in teams

[Entrepreneurship Education Hub](#) ↗

Explore innovation and turn ideas into projects

[Graph Search](#) ↗

Your personalized EPFL chatbot

EPFL student services

[The EPFL “Student Services” desk](#)

is the main contact point for all academic queries

For EPFL students or doctoral students, whether recent arrivals or recently graduated, whether you have a doubt, a question or a problem, the “Student Services” Hotline is the focal point to process all your requests.

A question ?

Please contact the Student Services Hotline preferably in the following order:

- Look up our information pages on the website [EPFL studies](#).
- Send an [e-mail](#)
- **Go to the Student Services desk** during office hours
Call 021 693 43 45 (you will get voice mail outside office hours or if the office is busy)



Before contacting the section

01

CHECK ONLINE

[Rules and procedures](#) ↗
[SMT website](#) ↗

02

Find Right CONTACT

Select the [appropriate contact](#) ↗
based on your request

03

CONTACT THE SECTION

MT Section Office - [BM1136](#) ↗

- **Administrative questions :**
[Isabelle Schafer](#)
[Christelle Pétremand](#)
- **Curriculum /
study plan appointments :**
[Elmira Shahrabi](#) (Section Adjunct)
[Yves Bellouard](#) (Section Director)

Welcome to EPFL !

We wish you a great start and every success in your Master studies

Microengineering Section