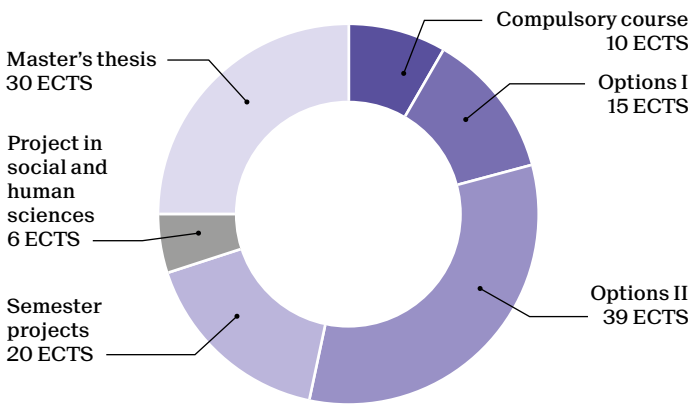


## Master of Science in MICROENGINEERING

2-year program - 120 ECTS



### Industrial internship

The program includes a compulsory 8-week internship which can be extended to 6-month and combined with the Master's thesis.

Students may choose a 30 ECTS minor within the optional courses. Recommended minors with this program:

- Biomedical technologies
- Computational science and engineering
- Energy
- Internet of Things
- Management, technology and entrepreneurship
- Photonics
- Science, technology and area studies
- Space technologies

School of Engineering  
[go.epfl.ch/master-microengineering](http://go.epfl.ch/master-microengineering)  
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	Credits
<b>Compulsory course</b>	<b>10</b>
Products design & systems engineering	10

<b>Options I</b>	<b>15</b>
Advanced MEMS and microsystems	3
Applied machine learning	4
Apprentissage et intelligence artificielle	4
Imaging optics	3
Introduction to additive manufacturing	3
Laser fundamentals and applications for engineers	3
Low-power radio design for IoT	3
Manufacturing systems and supply chain dynamics	3
Materials and technology of microfabrication	3
Materials processing with intelligent systems	3
Metrology	3
Nanotechnology	3
Optical Detectors	3
Robotique industrielle et appliquée	2
Scaling laws & simulations in micro & nanosystems	4
Selected topics in advanced optics	3
Smart sensors for IoT	3

<b>Options II</b>	<b>39</b>
Advanced additive manufacturing technologies	3
Advanced control systems	3
Advanced machine learning	4
Advanced satellite positioning	4
Aerial robotics	4
Analyse de produits et systèmes	2
Audio	3
Basics of mobile robotics	4
Biomedical optics	3
BioMEMS	2
Biomicroscopy I, II	7
Bio-nano-chip design	3
Commande embarquée de moteurs	3
Commande non linéaire	3
Computational motor control	4
Distributed intelligent systems	5
Embedded systems	4
Evolutionary robotics	3
Flexible bioelectronics	4
Fundamentals and processes for photovoltaic devices	3
Fundamentals of biophotonics	3
Fundamentals of computer aided manufacturing	5
Haptic human robot interfaces	3
Image processing I, II	6
Integrated circuit design	3
Lab on app development for tablets and smartphones	4
Large-area electronics: devices and materials	3
Laser microprocessing	2
Lasers: theory and modern applications	4
Legged robots	4
Machine learning programming	2
Management de projet et analyse du risque	4
MEMS practicals I, II	4
Micro/Nanomechanical devices	4
Model predictive control	3
Nanobiotechnology and biophysics	3
Nonlinear optics	3
Optical communications	3
Optics laboratories I, II	6
Organic and printed electronics	2
Photonic micro- and nanosystems	2
Photonic systems and technology	4
Physics of photonic semiconductor devices	4
Sensors in medical instrumentation	3
Signal processing for functional brain imaging	3
Space mission design and operations	2
System identification	3
Techniques d'assemblage	3