

Master of Science

Engineering

A practice-oriented Master jointly offered by the eight Universities of Applied Sciences in Switzerland

SUPSI

MSE

MASTER OF SCIENCE
IN ENGINEERING



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Studying at DTI

Theory and practice

Strong practical and vocational orientation, with lectures, experiments and laboratory activities.

In-company experiences

Internships, semester projects and diploma thesis carried out in collaboration with/at companies and institutions.

Up-to-date

Constantly updated curricula for perfect alignment with market requirements.

Cutting-edge technology

Cutting-edge teaching and research activities relying on specialized technology laboratories.

Professional contacts

Active involvement of external lecturers from business and initiatives to foster continuous contact with the professional world.

Promoting excellence

Numerous support opportunities, prizes and scholarships for deserving students.

Internationality

Several mobility opportunities to study abroad thanks to numerous active partnerships with international universities.

Entrepreneurship

Targeted initiatives and projects to develop entrepreneurial skills.

Work-study reconciliation

Full and part-time study paths for balancing study, work and personal activities.

Master of Science in Engineering

The background of the slide is a gradient of blue colors, ranging from a light, almost white blue at the top to a darker, more saturated blue at the bottom. In the center of the slide, there is a large, faint, glowing oval shape that appears to be a stylized representation of a planet or a celestial body, with a bright white core and a soft, ethereal glow around it. The overall aesthetic is clean, modern, and professional.



The Master of Science in Engineering represents a unique collaborative program, jointly offered by eight Universities of Applied Sciences and Art across Switzerland.

It includes 16 different specializations, 11 of which are offered by SUPSI in the fields of Engineering and IT and Construction and Planning. It stands out for its high standard of excellence and its flexible structure, allowing students the opportunity to attend courses in Lugano as well as in Zürich and Losanne and to choose among a broad array of specializations and career paths in the engineering sector.



Partner universities

University of Applied Sciences and Arts
of Southern Switzerland

SUPSI

FH GR Fachhochschule Graubünden
University of Applied Sciences

Hes·so

OST
Ostschweizer
Fachhochschule

B
Bern University
of Applied Sciences

zhaw

n|w University of Applied Sciences and Arts
Northwestern Switzerland

HSLU Lucerne University
of Applied Sciences
and Arts

Language

English

Study modes

Full time ^{TP}
90 ECTS on 3–4 semesters
Part-time ^{PT}
90 ECTS on 5–6 semesters

Business Engineering

It prepares for a future in a company active in industry, services or consulting, where to perform tasks in Business Development and Business Engineering occupying managerial positions.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Business Engineering can find employment in:

- ♦ *Business Development*
- ♦ *Business Engineering*
- ♦ *Quality, risk, technology and innovation management*
- ♦ *Life cycle management*
- ♦ *Logistics*
- ♦ *Supply Chain Management*

Admission requirements

The MSE specialization profile in Business Engineering is generally eligible for students with one of the following Bachelor's degrees:

- ♦ *BSc in Industrial Engineering*
- ♦ *BSc in Business Engineering*

The eligibility of applicants and candidates will be checked individually.

Double degree

Students enrolled in this profile also have the option of applying for the EIT Manufacturing Double Degree.



«This educational experience has not only enriched me professionally, but also personally and culturally, giving me a unique perspective on international business dynamics and sustainability challenges».

Jennifer Nika



Civil Engineering

It trains a professional figure involved in the design, operation and maintenance of the built environment, as well as in the development of sustainable construction and infrastructure to protect against natural hazards.

Professional perspectives

SUPSI graduates from the Master of Science in Engineering programme with a profile in Civil Engineering can find employment in:

- ♦ *Engineering studies*
- ♦ *Construction companies*
- ♦ *Laboratories and research and development centres*
- ♦ *Cantonal and federal technical offices*

Admission requirements

The MSE specialization profile in Civil Engineering is generally eligible for students with one of the following Bachelor's degrees:

- ♦ *BSc in Civil Engineering*
- ♦ *BSc in Geomatics, major in Construction and Infrastructure (BSc released by HES-SO)*

The eligibility of applicants and candidates will be checked individually.

Headquarters

This specialization is offered by the Department of Environment Constructions and Design in collaboration with the Department of Innovative Technologies. Classes are held both at the Mendrisio Campus and at the East Campus in Lugano-Viganello.



«With this course, I have deepened and applied the knowledge acquired during my Bachelor's degree, always supported by the professionalism and competence of the lecturers».

Roberto Galli



Computer Science

It trains a professional with in-depth knowledge of research, development, planning and design of innovative applications, advanced information systems and ICT infrastructures, including their security.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Computer Science can find employment in:

- ♦ *Development of cloud-native applications*
- ♦ *Information and communication systems*
- ♦ *Decentralised blockchain-based systems and applications*
- ♦ *Computer security*
- ♦ *Development of advanced user interfaces, including Virtual Reality and Natural Language Processing*

Admission requirements

The MSE specialization profile in Computer Science is generally eligible for students with a Bachelor's degree in:

- ♦ *Computer Science*

The eligibility of applicants and candidates will be checked individually.



«Through my education, I have developed academic and personal skills, valuing teamwork and a hands-on approach to learning».

Giada Ferrario



Data Science

It trains a professional able to collect, engineer and analyze large amounts of data to support decision-making processes and develop innovative products.

Professional perspectives SUPSI graduates of the Master of Science in Engineering with a profile in Data Science can find employment in:

- ♦ *Advanced data analysis (data science, machine learning)*
- ♦ *Data engineering*
- ♦ *Development of innovative data-driven services*

Admission requirements The MSE specialization profile in Data Science is generally eligible for students with a Bachelor's degree in:

- ♦ *Data Science or equivalent*

The eligibility of applicants and candidates will be checked individually.

Double degree Students enrolled in this profile can also apply for the EIT Manufacturing Double Degree.



«I am very excited about my DTI education, a rich mix of knowledge and skills for my professional future».

Nicolò Rubattu



Electrical Engineering

It provides expertise in applied research, development, production and management of electrical and electronic devices and systems.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Electrical Engineering can find employment in the fields of:

- ♦ *Telecommunications*
- ♦ *Automotive, rail, aerospace, drones*
- ♦ *Assistive technology and mobility, home automation*
- ♦ *Medical equipment*
- ♦ *Sensorics, actotics and industrial process controls*
- ♦ *Operators of electricity distribution networks*
- ♦ *IoT and mobile devices*
- ♦ *Environmental and geological monitoring bodies*
- ♦ *Audio, video and consumer device*

Admission requirements

The MSE specialization profile in Electrical Engineering is generally eligible for students with one of the following Bachelor's degrees:

- ♦ *BSc in Electrical Engineering*
- ♦ *BSc in Electronic Engineering*

The eligibility of applicants and candidates will be checked individually.

«My journey from Colombia to SUPSI was driven by a scholarship and a passion for innovation and learning. Here, in the Electrical Engineering MSE program, theory, and practice merge smoothly, setting the stage for meaningful contributions back home».

Maria Camila Millan Toro





Energy & Environment

It provides in-depth knowledge and skills in the field of environmental technology and industrial process engineering, training a professional figure capable of facing the challenges of climate change.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Energy & Environment can find employment in:

- ♦ *Generation, storage and conversion of conventional and sustainable energy*
- ♦ *Energy distribution and demand management*

Admission requirements

The MSE specialization profile in Energy & Environment is generally eligible for students with one of the following Bachelor's degrees:

- ♦ *BSc in Energy and Environment*
- ♦ *BSc in Renewable Energy and Environment*
- ♦ *BSc in Electrical Engineering*
- ♦ *BSc in Electronics Engineering*
- ♦ *BSc in Mechanical Engineering*
- ♦ *BSc in Automotive Engineering*
- ♦ *BSc in Materials and Process Engineering*
- ♦ *BSc in Systems Engineering (with the exception of BSc in Systems Engineering FHNW)*

The eligibility of applicants and candidates will be checked individually.



«This path has definitely been very challenging and not without its difficulties, but overall I am very happy to have pursued it and, going back, I would do it again without any doubt».

Marco De Piaz



Information and Cyber Security

The new profile, launched in 2024, provides competences in areas such as security architecture and management, in-depth security, software security, digital forensics.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Information and Cybersecurity can find employment in:

- ♦ *Security Architect*
- ♦ *Security Consultant*
- ♦ *Product Security Engineer*
- ♦ *Security and Intelligence Systems Analyst*

The MSE specialization profile in Information and Cybersecurity is generally eligible for students with a Bachelor in:

Admission requirements

- ♦ *BSc in Information and Cyber Security*
- ♦ *BSc in Computer Science*
- ♦ *BSc in Data Science*

The eligibility of applicants and candidates will be checked individually.





Medical Engineering

It trains professionals who can apply problem solving strategies to identify and analyze market needs and requirements in industrial and clinical settings, as well as to develop innovative solutions.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Medical Engineering can find employment in:

- ♦ *Biomedical industry and research*
- ♦ *Healthcare (hospitals, clinical trials, ect.)*

Admission requirements

The eligibility of applicants and candidates will be checked individually.



«This course has deepened my practical skills through projects with the industry and academic research collaborations».

Jacopo Pagnoncelli



Mechanical Engineering

It is focuses in the development, production, use and optimization of machines, materials, plants and products within the industrial, scientific and regulatory fields.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Mechanical Engineering can find employment in:

- ♦ *Management and design of industrial production systems*
- ♦ *Maintenance management of machines and plants*
- ♦ *Design of mechanical systems and products*
- ♦ *Design of production systems*

Admission requirements

The MSE specialization profile in Mechanical Engineering is generally eligible for students with one of the following Bachelor's degrees:

- ♦ *BSc in Mechanical Engineering*
- ♦ *BSc in Microtechnology*
- ♦ *BSc in Automotive Engineering*
- ♦ *BSc in Industrial Design Engineering*
- ♦ *BSc in Materials and Process Engineering*
- ♦ *BSc in Systems Engineering*

The eligibility of applicants and candidates will be checked individually.

«The possibility of alternating work and study is a key asset of this master's program: it allows you to better understand how to study and, most importantly, to directly apply what you learn in a work environment».

Marco Selva





Mechatronics & Automation

It provides skills related to the application of mechatronic and automation technologies to handle the challenges of the industrial world.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Mechatronics & Automation can find employment in:

- ♦ *Design of autonomous systems using sensors*
- ♦ *Data processing and actuators*
- ♦ *Research & development in aviation, food, automation and control, automotive and manufacturing industry, microtechnology*

Admission requirements

The MSE specialization profile in Mechatronics and Automation is generally eligible for students with one of the following Bachelor's degrees:

- ♦ *BSc in Electrical Engineering*
- ♦ *BSc in Mechanical Engineering*
- ♦ *BSc in Systems Engineering*
- ♦ *BSc in Microtechnology*
- ♦ *BSc in Industrial Systems*
- ♦ *BSc in Mechatronics Engineering*

The eligibility of applicants and candidates will be checked individually.

Double degree

Students enrolled in this profile can also apply for the EIT Manufacturing Double Degree.



«The years at SUPSI allowed me to acquire knowledge, know new realities and people who have become an integral and fundamental part of my life».

Fernando Capes



Photonics and Laser Engineering

It deepens the design and implementation of electronics and mechanical systems related to photonics and laser technology.

Professional perspectives

SUPSI graduates of the Master of Science in Engineering with a profile in Photonics can find employment in:

- ♦ *Image processing and metrology*
- ♦ *Medical technology and life sciences*
- ♦ *Additive and subtractive manufacturing*
- ♦ *Communication and sensory analysis*
- ♦ *Production industry*
- ♦ *Engineering studies*

Admission requirements

The MSE specialization profile in Photonics is generally eligible for students with one of the following Bachelor's degrees:

- ♦ *BSc in Electrical Engineering*
- ♦ *BSc in Mechanical Engineering / Machine Technology*
- ♦ *BSc in Microengineering*
- ♦ *BSc in Materials and Process Engineering*
- ♦ *BSc in Systems Engineering*
- ♦ *BSc in Photonics*
- ♦ *BSc in Medical Engineering*
- ♦ *BSc in Data Science*

The eligibility of applicants and candidates will be checked individually.

«The blend of theory and practice, combined with the proximity to experts in the field, has enabled me to develop a comprehensive set of practical, theoretical and personal skills that are essential for entering the job market».

Sebastiano Marinelli









Characteristics of the study course

Cooperation with other Swiss UAS	The Master of Science in Engineering is delivered in collaboration with all Swiss universities of applied sciences (UAS). Students have the opportunity to attend classes in Lugano, but also at other locations (e.g. Zurich or Lausanne), depending on their preference.
Individualisation of the study programme	The MSE is characterised by a broad freedom in the choice of specialization activities. Each student is assigned an Advisor, a senior profile in the chosen specialisation profile, who provides support throughout the study and for the drafting of the Individual Study Agreement (ISA).
Practice orientation	Opportunity to carry out semester and diploma projects in collaboration with local companies and institutions, or at the Department's research institutes, in order to confront actual issues and gain insight into the industrial world.

Costs and study grants

Admission Applications for admission can be made by 31 May via the SUPSI Student Portal to start during the Fall Semester. After May 31, it is possible to enroll subject to available places. It is also possible to start during the Spring Semester.



Application fee A fee of CHF 200 is required with the submission of the application for admission. The fee is not refundable or deductible from the semester fee.

After May 31 the fee amounts to CHF 300. SUPSI reserves the right to close enrollment if the maximum number of scheduled available places is reached.

Semester fee The fee amounts to CHF 800 for students with Swiss nationality or civil and tax domicile in Switzerland or in Liechtenstein. For students of other nationalities the fee is CHF 1600. For residents of Campione d'Italia, specific agreements apply.

Administrative costs CHF 150 for semester.

Scholarships For deserving students there are various possibilities of institutional scholarships and those offered by private foundations.



EIT Manufacturing Double Degree Master Program



Double degree sponsored by SUPSI as the only Swiss partner in collaboration with a network of leading partner universities within the European Institute of Technology (EIT).

It integrates innovation and entrepreneurship topics with traditional engineering knowledge in a dynamic and international context.



Partner universities



Language

English

Study modes

Full time ^{TP}
120 ECTS on 4 semesters

Specialization programs

Additive Manufacturing for Full Flexibility

It provides expertise in using additive manufacturing technology to improve process quality, enabling customised design of products and services and optimising production management for smaller batches.

Associated MSE specialization profile: Mechatronics & Automation

Partner universities: Technische Universität Wien, University College of Dublin

Data Science and AI for Competitive Manufacturing

It integrates manufacturing science and information and communication technology, including the use and adoption of advanced digital solutions and platforms.

Associated MSE specialization profile: Data Science

Partner university: Università di Trento

Digital Manufacturing for Innovative Ecosystems

It studies how digital advances are transforming business processes and value chains, supporting their use to innovate and create new businesses.

Associated MSE specialization profile: Mechatronics & Automation

Partner universities: École Centrale de Nantes, Grenoble INP, University College of Dublin

Human-robot Interaction for Sustainable Manufacturing

It focuses on the evolution of industrial engineering towards sustainable, flexible and efficient production, integrating new technology trends in automation systems and robotics.

Associated MSE specialization profile: Mechatronics & Automation

Partner university: Technische Universität Wien

Characteristics of the study course

Double degree	Two master's degrees are awarded, one from each of the universities included in the study pathway, and an EIT label certificate. SUPSI students receive the Master of Science in Engineering degree (90 ECTS) and a degree (120 ECTS) by the other university involved in the study pathway.
International mobility	The course involves training in two different universities. One academic year is attended at each university; activities, such as Summer Schools, may also take place at other locations during the study period.
Focus on the industrial world	Several activities are offered in close collaboration with companies, such as the Summer School or the mandatory in-company experience for all the specialization profiles. The Master School is also supported by an industry advisory board for the program design and development process.
Networking	Participation in EIT Manufacturing-organized events, collaborative activities with companies, and engagement with fellow master's students create networking opportunities that extend beyond the conclusion of the studies.
Costs and study grants	The annual fee for participation is €8,000/year. A number of scholarships are available each year from the Master School. More information can be found on the enrollment portal:



Mobility and Summer School

SEMP Programme

SUPSI joins the Swiss-European Mobility Programme (SEMP) which allows students to carry out a period of mobility for the purposes of study or traineeship at partner universities abroad.



MSE Asia Module

The MSE Asia Module is organized by SUPSI in collaboration with the University of Applied Science of Zurich (ZHAW). The module gives MSE students the opportunity to live a direct onsite experience of the Asian industry, by showing the difficulties for the Swiss industry to enter the local market and by highlighting the possibilities to overcome those problems. The module also aims at bridging the cultural differences between MSE students and at facilitating their mutual cooperation.



East Campus, in the heart of Lugano

The Department of Innovative Technologies is located in Sector B of the Lugano-Viganello East Campus.

The building houses teaching rooms, specialised technology laboratories, administrative offices and numerous services, including a cafeteria and canteen, gymnasium, individual and group study areas.

Some classrooms and laboratories are also located at the Balestra Building, a branch headquarter easily reachable on foot from the East Campus.



How to reach us

By train

Take the train in the direction of Lugano and get off at Lugano - FFS Station. East Campus is easily accessible by bus (10 min) or on foot (15 min).

By bus

The building is located near the "Campus Universitario" bus stop served by the following city transportation lines:

- Number 5
- Number 6
- Autopostale 461: direction Villa Luganese

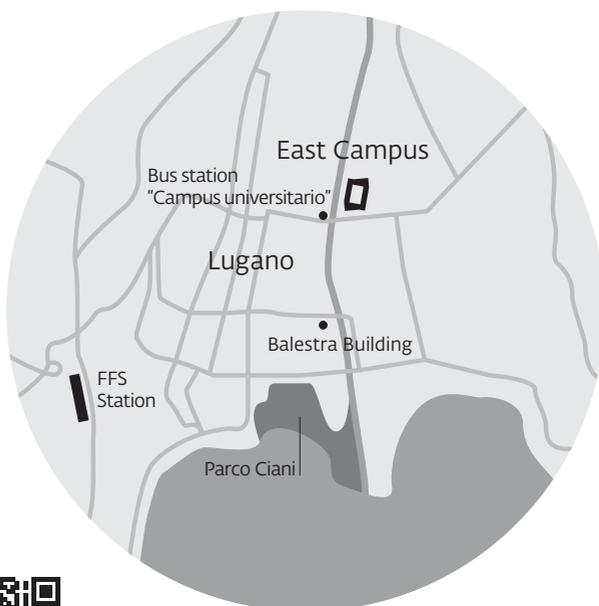
By bike

PubliBike rental stations are located near the venue. Several parking sheds for bicycles are also available.

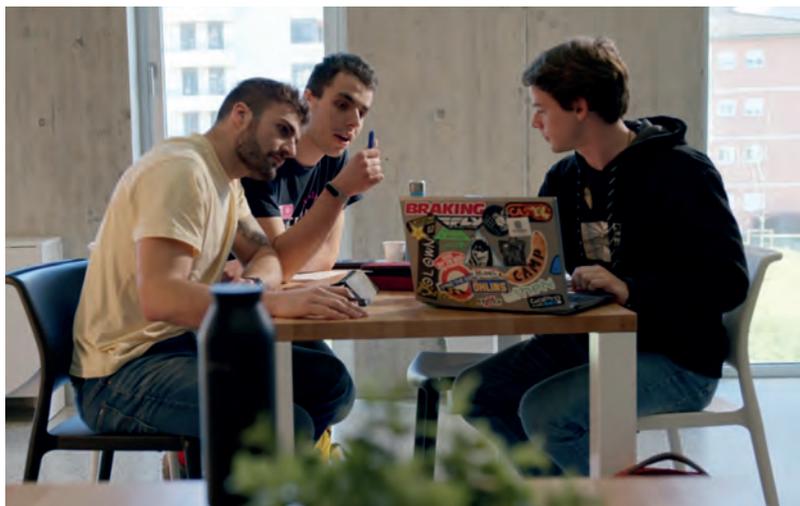
By car

From the Lugano Nord or Sud highway exits, it is possible to reach the Campus by car and take advantage of various parking facilities.

- Car park East Campus
- Car park West Campus
- Car park Ospedale italiano



Living the Campus









Bachelor and Master

University of Applied
Sciences and Arts
of Southern Switzerland

Department of Innovative
Technologies

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