Overview
The Master of Science in Engineering (MSE) is offered in collaboration with the other Swiss Universities of Applied Science. The programme is structured over three semesters for a total of 90 ECTS. Theoretical lectures constitute 1/3 of the programme, while the remaining 2/3 are dedicated to professional development (projects, research, seminars).

The MSE Master’s programme is practice-oriented and is characterised by a wide range of choices. The MSE guarantees students autonomy in shaping their studies according to their personal interests and professional goals. The Master offers 15 specialisation profiles covering different engineering disciplines, 11 of which are in the Engineering and IT field and 4 in the Construction and Planning field. The Department of Innovative Technologies of SUPSI offers 10 specialisation profiles in the field of Engineering and IT, while one profile (Civil Engineering) is offered by the Department of Environment, Construction and Design. The following profiles are offered by SUPSI: Aviation / Business Engineering / Civil Engineering / Computer Science / Data Science / Electrical Engineering / Energy & Environment / Mechanical Engineering / Mechatronics & Automation / Medical Engineering / Photonics

Objectives
Students develop their professional understanding and personal skills in a focused manner, studying subjects in their specialisations. They acquire methodological know-how and are able to recognize complex relationships, think abstractly and execute tasks independently. During the programme, participation in applied research projects allows students to deepen their level of understanding and gain practical experience.

Skills
MSE graduates are able to develop products and processes using the latest methodologies and technologies. They also possess project management expertise and are able to apply their knowledge to the world of business. When confronted with complex problems, they will make vital contributions to the solution by combining analytical, conceptual, technical and planning skills with an innovative approach.

Career prospects
Students acquire the skills to become the technical/management staff of the future for industry and the public sector. Their careers typically develop in the following areas: research and development, production, logistics and consultancy. In addition, their contextual and communication skills enable them, when necessary, to lead projects and teams also at an international level.

Expectations for companies
This Master program forms a qualified engineer, ready for important positions in a specific field. MSE graduates can assume managerial roles and take responsibility for interdisciplinary projects.

Department/School
Department of Innovative Technologies
University of Applied Sciences and Arts of Southern Switzerland

Degree awarded
Master of Science SUPSI in Engineering with specialisation in [Profile]

Course type
Full-time study takes three semesters while part-time study for those in employment will take longer, as a function of the number of hours worked.

Language
The lectures are held in English in Lugano and Bern, in English or French in Lausanne, in English or German in Zurich.

Contact
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Overview
Since 2019, SUPSI is a partner of EIT Manufacturing, the Innovation Community within the European Institute of Innovation & Technology (EIT) that connects partners from business, education and research active in the manufacturing sector in Europe. In 2020, the EITM network launched the EIT Manufacturing Master School, a programme jointly developed by SUPSI and other six leading universities in Europe.

Objectives
The EIT Manufacturing programme aims to attract and empower top talents through mobility experiences and innovative opportunities to become leading innovators and entrepreneurs in manufacturing.

Course-type
The EITM master combines technical competence with skills on Innovation and entrepreneurship adopting a learning-by-doing approach. Students can follow one of four programmes (with international mobility). The following are offered by the Department of Innovative Technologies:

- People and Robots for Sustainable Work: a programme combining manufacturing science, robotic system physics and control system automation, including the design of customized manufacturing processes and production management.
- Additive Manufacturing for Full Flexibility: a combination of studying manufacturing science including physics of additive manufacturing processes, mechanical design including exploiting the design freedoms enabled for more customized products and services, and production management including the flexibility enabled for smaller lot production.
- Platforms for digitalized value Networks: a combination of studying manufacturing sciences including the usage and adoption of advanced digital solutions and platforms.
- Data Science and AI for competitive manufacturing: a combination of manufacturing science and Information and communication technology including the usage and adoption of advanced digital solutions and platforms.

Skills
The education at EIT Manufacturing Master School combines technical competences typical of engineering courses of study with skills in Innovation and Entrepreneurship. It enables students to acquire skills related to business model development and brings them closer to industry through real case studies, testimonials, tours and internships. Through mobility, mentorship and networking opportunities they will also strengthen their soft skills in communication, problem solving and adaptation.

Career prospects
As an EIT Manufacturing Master Graduate you will be able to generate start-ups or innovation within manufacturing companies and ecosystem, contributing to European competitiveness, environmental sustainability and to the creation of new jobs.

Department/School
Department of Innovative Technologies, University of Applied Sciences and Arts of Southern Switzerland

Partner universities
Technische Universität Wien (Austria), University College Dublin (Ireland), Politecnico di Milano (Italy), Ecole Centrale de Nantes (France) and University of Trento (Italy).

Degree awarded
Students receive two Master’s degrees (one per each of the two universities involved) and an EIT label certificate. Students enrolled in SUPSI get the Master of Science in Engineering degree (90 ECTS) from SUPSI and another degree of 120 ECTS from the other university.

Language
English