

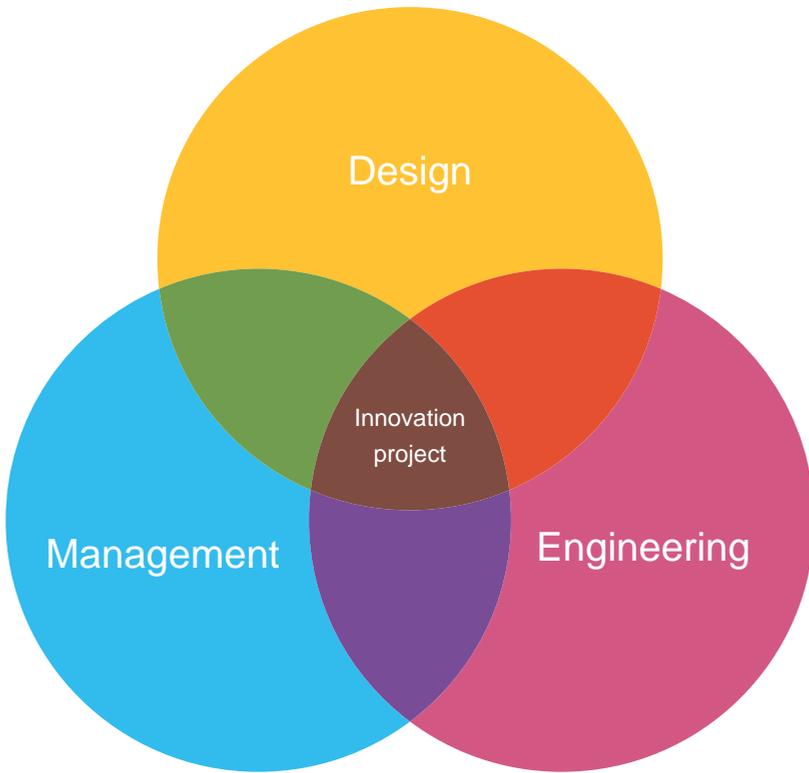
Master of Science in Integrated Innovation for Product and Business Development - Innokick

2019

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Hes·so

Haute Ecole Spécialisée
de Suisse occidentale
Fachhochschule Westschweiz
University of Applied Sciences and Arts
Western Switzerland



Foreword

The Innokick Master offers students the interdisciplinary skills they need to develop innovative products and services and successfully bring them to market. It also offers students the opportunity to develop the kind of business ideas that most customer-focused businesses want.

It aims to meet market demands for managers who are innovative, agile and active within their professional environments, people who are creative thinkers and can readily respond to the major societal and technological challenges of the world today.

This interdisciplinary course is unique in Switzerland, and brings together students from the HES-SO's three Faculties: Business, Management and Services; Engineering and Architecture; and Art & Design.

Design Thinking

The Innokick Master is a Design Thinking graduate degree programme — it focuses on user experience (desirability), it harnesses technology (feasibility), and it promotes an understanding of economics (profitability).

Design thinking transforms the designer's sensibility and methods to match people's needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.

The application form, terms and conditions and relevant deadlines are available on www.hes-so.ch/innokick.

Study programme

This study programme adopts an innovative teaching approach centred on project-based learning. It closely combines academic teaching with practical training — students carry out real assignments in collaboration with SME/SMIs, multinationals and startups.

It also draws on strategic partnerships that we have built up with partners who are active in supporting innovation, alongside a number of companies established here in Switzerland.

The Innokick Master offers:

- A practical, career-oriented project in close collaboration with locally embedded companies. The project provides the bedrock for our courses and framework for our theoretical and practical modules.

- An interdisciplinary approach and a systematic mix of students and teachers. Professors coming from the academic and industrial sectors.

- An emphasis on reflective, personalised learning to enable graduates to plan their future careers on the basis of their professional and personal skills.

- An interdisciplinary Master's thesis carried out in groups of two or three students.

The Innokick Master offers students from different orientations a range of new employment opportunities. It also equips them with a unique skills toolkit so that they can actively pursue their professional ambitions and always be one step ahead of changing demands in the labour market.

Practical description

The study programme is delivered as follows:

- It is full time, delivered over 3 semesters (S1, S2, S3).
- It is housed in the Ateliers de Renens, in premises which suit its needs.
- Classes are delivered primarily in French, with some in English.

- Students who so wish may submit their work in English.

- Students have the opportunity to complete their Master's thesis in collaboration with a company. The Master's thesis can be conducted partially or totally abroad.

- Student mobility is achieved during the Master's thesis and the Summer Academy.



Project workshop

Curriculum

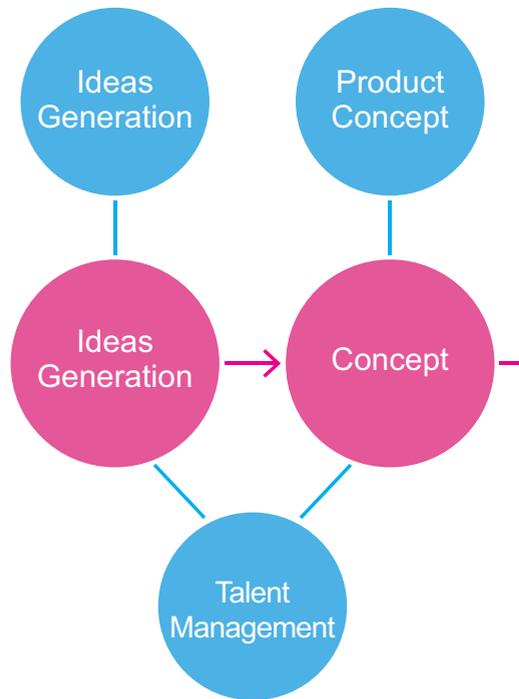
This course curriculum contains 6 theoretical and practical modules of 5 to 6 ECTS credits (a total of 32 ECTS credits). Each module comprises several class units which are delivered over semesters 1 and 2 (hereinafter S1/S2). All modules are taken by all students.

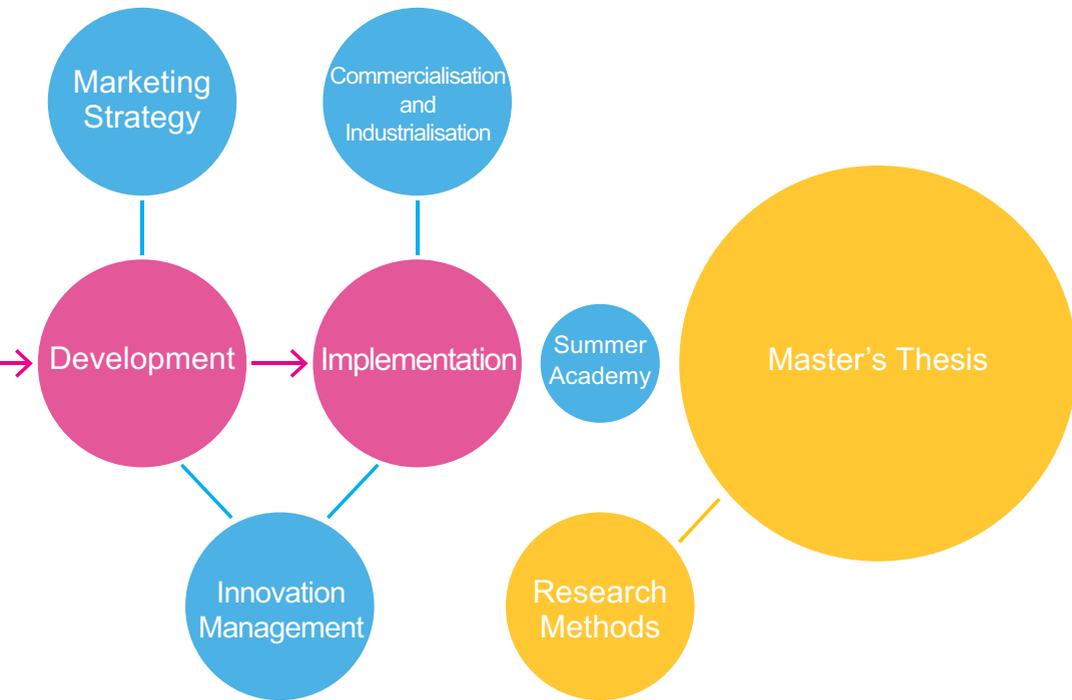
The practical applied project (2 modules of 12 ECTS credits) is at the heart of the curriculum. Students work together in interdisciplinary groups for two semesters (S1 and S2) to develop innovative products and/or services using the tools they have acquired in the theoretical and practical classes. This project is supplemented by a reflective approach focusing on the students' personal skills.

Students take part in a Summer Academy between S2 and S3 (4 ECTS credits).

The course is completed by a Master's thesis (24 ECTS credits) carried out in interdisciplinary groups in S3, or, in exceptional cases, part-time in S3 and S4. The Master's thesis is complemented by a class unit on research methods (6 ECTS credits).

This course awards a total of 90 ECTS credits and is structured as follows:





- Practical Applied Project
- Theoretical and Practical Modules
- Master's Thesis

Module breakdown

	S1	S2	Summer	S3
Practical applied project 1 (12 ECTS)				
Ideas Generation	40%			
Concept	40%			
Reflective practice	20%			
Ideation process (5 ECTS)				
Creativity tools and techniques	30%			
Trends observation, business intelligence, technology watch	40%			
Evaluation methods	30%			
Product concept (5 ECTS)				
Product/service design development	20%			
Product scenario & concept	30%			
Materials & technologies, prototyping	50%			
Talent and project management (6 ECTS)				
Project management techniques	20%			
Communication	40%			
Interdisciplinary teams & innovation leadership	40%			

	S1	S2	Summer	S3
Practical applied project 2 (12 ECTS)				
Development		40%		
Implementation		40%		
Reflective practice		20%		
Marketing strategy (6 ECTS)				
User research & ethnography		40%		
Industrial and intellectual property strategy		20%		
Marketing strategy		40%		
Commercialisation and Industrialisation (5 ECTS)				
Industrialisation		40%		
Go-to-market strategy		30%		
Ecodesign		30%		
Management of innovation (5 ECTS)				
Innovation management		30%		
Financial issues and risk management		40%		
Negotiation		30%		
Summer Academy (4 ECTS)				
Summer Academy			100%	
Master's Thesis (30 ECTS)				
Master's Thesis				80%
Research methods				20%

Practical applied project

Practical applied project (2 modules of 12 ECTS)

During the practical applied project, students work in groups and adopt an innovative approach concentrating on technology (technology push) or business opportunities (market pull), selected from the developments put forward by different companies (startups, SMEs, NGOs, multinationals or public companies).

The practical applied project is overseen by the supervisors of the Innokick Master and receives support from a pool of professionals from the industry and innovation ecosystem in French-speaking Switzerland.

This is a practical and down-to-earth project, which is divided into four main stages:

1. Ideation

The first phase – ideas generation – consists in reformulating the proposed challenge, then researching information and developing a portfolio of potential new applications of the technology or business opportunity.

2. Concept

A selection and validation stage where students identify the most commercially viable ideas and develop communication tools - drawings, models, videos. These tools enable the students to select the most promising ideas evaluated by present users.

3. Development

A development stage which involves conducting market research and describing a business opportunity consistent with the strategy of the business partner.

4. Commercialisation and Industrialisation

An implementation stage which involves testing the technological feasibility of the project, deploying the marketing and production plan for the product and/or service and including it in the portfolio of existing products and new product development.

At the end of the process, students provide their partners with a wide range of deliverables to help the future development of their product portfolio. For the most promising ideas, students provide communication tools (demonstrators, models, films, etc.), an analysis of the potential market, the company's marketing plan and a means of integrating into the company's strategy.

Theoretical and practical modules

The practical applied project is supported by a range of theoretical and practical modules. The course curriculum contains 7 modules of 4 to 6 ECTS credits. Each module comprises several class units which are delivered over S1 and S2. They aim to support students by providing the tools they need to complete their project and to facilitate knowledge sharing between students and lecturers from the different disciplinary areas.

Ideation process (5 ECTS)

The learning objective of the Ideation process module is to introduce students to the main theoretical concepts, tools and methods that are most useful in the generation and selection of ideas: identifying a problem, observation, ideation process and selection of ideas.

It also initially seeks to provide an introduction to the specific and complementary contributions of the disciplines of engineering, design and management to the innovation process.

Product concept (5 ECTS)

The Product concept module aims to provide an introduction to the main tools and methods used to transform an idea of a product or service into a mock-up or prototype which can then be tested for feedback from potential future customers. Through the different units in this module, students will develop an understanding of the various stages involved in product or service development,

and gain deeper insight into product concept. They will also acquire knowledge about materials and technologies that transform their ideas into reality.

Talent and project management (6 ECTS)

The Talent and project management module aims to equip participants with a more in-depth understanding of their professional and personal skills so that they can manage multidisciplinary teams in an innovative environment.

It also seeks to develop their leadership skills and powers of persuasion and communication in a variety of professional situations.

Marketing strategy (6 ECTS)

The Marketing strategy module aims to build students' understanding of the main tools and methods used to ensure the successful launch of innovative products/services on to the market. Users should be involved in an iterative co-creation process in order to improve the product/service designed in the previous stages. Aspects of intellectual property protection (patents, design and trademark) are discussed from the point of view of a deployment strategy accompanied by a suitable business model.

Theoretical and practical modules

Commercialisation and Industrialisation (5 ECTS)

The Commercialisation and Industrialisation module offers an introduction to the main theoretical concepts, tools and methods underlying the production and placement of products/services in the context of a globalised market and the need for sustainable development. Company visits are organised during this module.

Management of innovation (5 ECTS)

The Management of innovation module aims to provide students with an understanding of the tools they need to implement a culture of innovation in businesses of varying sizes in different industries. This module will also help students understand the strategies required to overcome the barriers (human, technical and financial) that stand in the way of introducing an innovative project to an organisation. Finally, students will receive an in-depth understanding of the financial tools needed to launch innovative products/services.

Summer Academy (4 ECTS)

Students participate in an exchange programme at a foreign university with an excellent reputation for innovation, between S2 and S3. This exchange offers students the opportunity to gain some insight into the social and economic issues facing other countries. It also enables Swiss and foreign students to get to know each other better.

Master's Thesis Module

Master's Thesis (24 ECTS)

The course is completed by a Master's thesis (24 ECTS credits) carried out in interdisciplinary groups (of 3 students where possible, and a minimum of 2 from different disciplines) in S3. The thesis should have a practical grounding and must demonstrate innovation or creativity. It could focus on the introduction of an innovative process into a company, on a startup project or on the development of a product/service. It is supervised by a team of lecturers representing the 3 disciplines concerned.

Research methods (6 ECTS)

This Master's thesis module includes theoretical classes whose main objective is to enable students to develop and further their methodological and scientific skills. A successful Master's thesis should use appropriate research methodologies and research tools with a specific perspective according to each discipline (social sciences, science and economics). This course will also cover methodological approaches in interdisciplinary research.

Admissions criteria

You may apply to study for an Innokick Master if you have:

- one of the following degrees: Swiss University of Applied Sciences and Arts undergraduate degree in the disciplines of Design and Visual Arts; Business, Management and Services; Engineering and Architecture; or a degree in a related area from a Swiss University of Applied Sciences;
- the equivalent of EQF level 6 in the area of design, economics or engineering or in a related field from a Swiss or foreign university of applied science and proof of at least one year of professional practice in an area linked to your undergraduate degree and satisfactory language proficiency. Level B2 in French is required in French-speaking Switzerland (DELF B2 or TFI 785 points for applicants who did not complete their degree in Switzerland).

Additionally, applicants are selected on the basis of a portfolio (letter of application and curriculum vitae) and on an individual interview. We assess each applicant's potential and ability to think out of the box and work in a multidisciplinary team. Broad general culture and the capacity to deploy a rich, original and structured vision of the world are decisive in the selection.

Professional opportunities

Graduates with an Innokick Master will find employment in a wide range of positions throughout industry (chemistry, telecommunications, mechanical engineering, IT, electronics, pharmacy, bio-chemistry, etc.) and the service sector (banks, insurance, communications, design, etc.). The main market segments open to our graduates include global industries, multinational companies, Swiss companies focusing on industry, industrial SMEs and startups. Graduates can expect to start work at junior-management level and then move up to executive and senior-management level.

The Innokick Master offers the prospect of a leadership role, in due course, particularly in one of the following areas/sectors:

- Innovation project manager;
 - Innovation management consultant;
 - Business and service creation and development;
 - Communication or marketing manager;
 - Research departments for new products, services and markets;
 - Product manager, Brand manager.
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Summer Academy, Shanghai, 2018



Innokick Master premises at the Ateliers de Renens

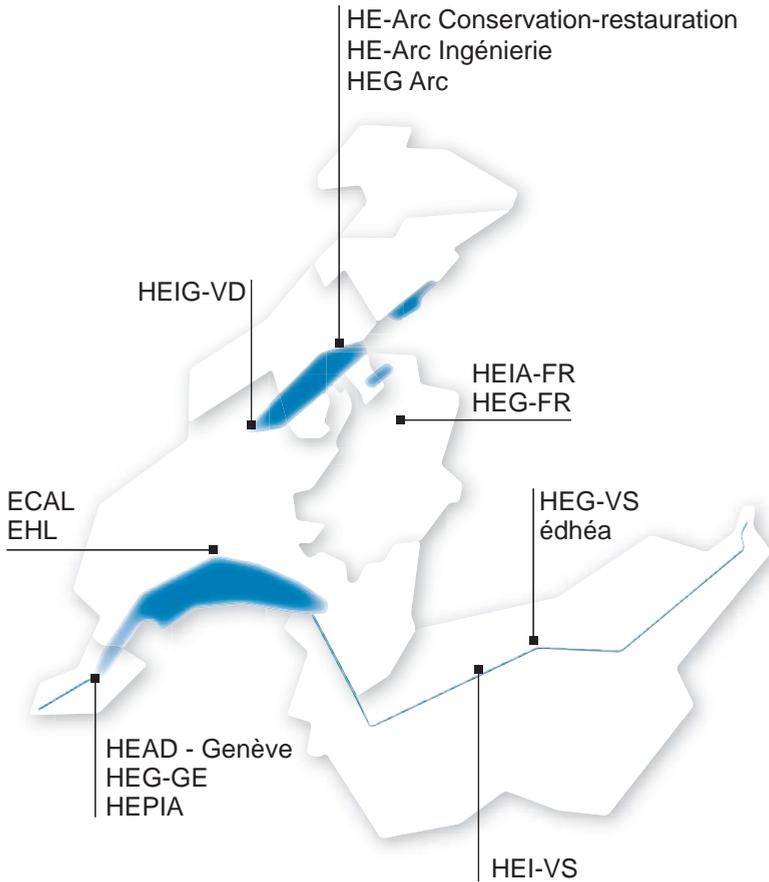


Idea generation



Innockick Master premises at the Ateliers de Renens

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Partner universities

Business, Management and Services

- Haute Ecole Arc Gestion ————— he-arc.ch
- School of Management – HEG-FR ————— heg-fr.ch
- Geneva School of Business Administration ————— hesge.ch/heg
- School of Management – HES-SO Valais-Wallis – HEG ————— hevs.ch
- School of Engineering and Management – HEIG-VD ————— heig-vd.ch
- Ecole hôtelière de Lausanne – EHL ————— ehl.edu

Engineering and Architecture

- Haute Ecole Arc Ingénierie ————— he-arc.ch
- School of Engineering and Architecture Fribourg (HEIA-FR) ————— heia-fr.ch
- Geneva School of Engineering, Architecture and Landscape – HEPIA ————— hesge.ch/hepia
- School of Engineering – HES-SO Valais-Wallis – HEI ————— hevs.ch
- School of Engineering and Management – HEIG-VD ————— heig-vd.ch

Design and Visual Arts

- Haute Ecole Arc Conservation-restauration ————— he-arc.ch
 - HEAD, Geneva School of Art and Design ————— hesge.ch/head
 - HES-SO Valais-Wallis – Edhèa Ecole de design et haute école d'art ————— edhea.ch
 - School of Art & Design – ECAL/Ecole cantonale d'art de Lausanne ————— ecal.ch
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Testimonials

Innovation is a strategic challenge, helping the company to gain and maintain a significant competitive edge over increasingly tough competition. But innovation is a sophisticated process requiring a very specific methodology, mindset and skills. It is this know-how and fresh energy that we were looking for among Innokick students and supervisors, and they exceeded our expectations. We were impressed by the working groups' involvement, the number of relevant ideas presented and the professionalism on display in both the project management and the quality of the deliverables. Our mission is well and truly accomplished and we're leaving with a fascinating piece of disruptive innovation that will be added to our digital services portfolio.

Valéry Naula, Head of IoT Services, Bobst Mex SA
Corporate partner, 2017-2018 academic year

Taking part in the Innokick Master is a wonderful opportunity to assemble a team of young students from a number of universities with skills in key project development disciplines. With a multidisciplinary team, these motivated young people will work for us and help complete a project in record time. Though high on our agenda for several months, we were unable to allocate internal resources in this area.

François Pugliese, Managing Director, Elite SA
Corporate partner, 2016-2017 academic year

Innokick offers a unique experience to both its students, who learn to grow in multidisciplinary teams, and companies whose projects underpin the learning path. At Terre des Hommes, we were lucky enough to work with two groups of students which both achieved very practical and operational outcomes. Student training and supervision is very holistic and user-centric, in line with modern-day corporate needs.

Thierry Agagliate, Head of the Disruptive Innovation Unit at the Terre des Hommes foundation, a partner institution, 2017-2018 academic year

As a Microtechnology Engineer, the Innokick Master has been an absolute revelation with a direct impact on my thinking during the product design process. This Master has allowed me to develop a holistic viewpoint, a strategic outlook and the notion of compromise to ensure a balance between usefulness, viability and feasibility – the three criteria for success. The ongoing multidisciplinary teamwork is a chance to gain essential managerial skills and, most importantly, learn from other students by pooling our knowledge. In a nutshell, I recommend it!

Luca Fazzone, BSc HES-SO in Microtechnology,
Innokick student, class of 2016-2018

The Innokick Master won me over with its balance of practice and theory and individual and group expertise. It also develops on-the-job skills as companies propose actual projects that we work on in groups for a year. Innokick's standout feature is the number of different skills and backgrounds you encounter throughout the training. The advantage of full-time training is the opportunity to get to know each other better during the project work, identify individual skills and build synergies based on our needs and ideas. It's also unusual to have so much time and the ability to advance projects during training. The result is some very accomplished concepts.

Frank Rouiller, BSc HES-SO in Business Economics,
Innokick student, class of 2016-2018

With the Innokick Master, I not only learnt to work with people whose backgrounds and working methods differ from my own, but I also worked on actual projects with companies with real issues. All these group experiences gave us the tools to put forward relevant, feasible solutions. This training also gave me an entrepreneurial drive and the desire to surround myself with the right people with the skills I lack in order to bring these projects to fruition.

Elodie Lombard, BSc HES-SO in Hospitality Management - EHL,
Innokick student, class of 2016-2018



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