Module Description, available in: EN

Novel Innovation and Design Principles

General Information

Number of ECTS Credits

3

Module code

TSM_InnoDes

Valid for academic year

2026-27

Last modification

2020-01-22

Coordinator of the module

Patrick Link (HSLU, patrick.link@hslu.ch)

Explanations regarding the language definitions for each location:

- Instruction is given in the language specified for each location and module execution.
- Documentation is available in the language(s) listed for each location and module execution. If the documentation is in multiple languages, the percentage distributed is indicated (100% = all documentation provided).
- The examination, including both questions and answers, is provided entirely (100%) in the language(s) specified for each location and module execution. The exams are on-site.

	Lausanne			Lugano	Zurich		
Instruction					**X** E 100%		
Documentation					**X** E 100%		
Examination					**X** E 100%		

Module Category

TSM Technical scientific module

Profile Recommendations

This module is recommended for the following profiles:

	Zurich
Profile	BE

Lessons

2 lecture periods and 1 tutorial period per week

Entry level competences

Prerequisites, previous knowledge

BSc Business Engineering.
Other with basic knowledge of business principles such as marketing, accounting and controlling

Brief course description of module objectives and content

NOVEL INNOVATION & DESIGN PRINCIPLES. In order to keep generating competitive advantage through innovation, both manufacturing and service industries are in need to apply novel innovation and design principles. This module will focus on reuniting the study and practice of entrepreneurship and innovation. It takes a process-oriented view of agile Innovation.
First it starts with recognizing the opportunity and understanding the problem space using design thinking and selecting appropriate tools and methods. After achieving the Problem/Solution-Fit with the Lean Start-up approach an MVP is further developed and the using agile product and customer development, business design the venture can be scaled.
Alongside this journey, different tools are selected, e.g 5Wh, customer journey, big data Analytics, business ecosystem design canvas, Lean Canvas are applied.
Approaches such as Design Thinking, user-driven innovation, lean startup and lean entrepreneurship, corporate venturing, jugaad innovation will be used to work on one real-life business cases. Different excursions complete the module to see how novel design and innovation principles are applied in practice.

Aims, content, methods

Learning objectives and competencies to be acquired

- What is agile innovation?
- what are the differences to traditional innovation processes?
- How to apply Design Thinking, Lean Start-up and other user centered approaches
- Select the right tools to achieve the targets for a given Innovation challenge
- The nature of creativity and the creative process
- Moderation of a creatity workshop
- Where innovations come from – the wide range of different source which offer opportunities
- Combine intuitive and analytical problem solving techniques
- Apply key tools like customer journey, Lean Canvas and Business Ecosystem Design Canvas
- The need for a strategy to guide search for opportunities
- Developing and using a business plan to attract resources

Module content with weighting of different components

WK1	WK2	WK3	WK4	WK5	WK6	WK7
Introduction	System Thinking	Design Thinking	Project Work	Experiments and Prototypes	Creativity Techniques	Project Work
Case presentation	Types of Innovation	Customer Journey	Project Work	First presentation	Workshop Facilitation	Project Work
Teamforming	Teamwork	Teamwork	Teamwork	Teamwork	Teamwork	Teamwork

WK8	WK9	WK10	WK11	WK12	WK13	WK14
Creativity Workshop	Innovation Culture	Lean Canvas	Backlog and User Stories	Business Ecosystem Design	Project Work	Final Presentation
Creativity Workshop	Project Work	Project Work	Second presentation	Concept Map	Project Work	Concept Maps
Teamwork	Teamwork	Teamwork	Problem Solution Fit	Teamwork	Teamwork	Final Q&A

Teaching and learning methods

Flipped Classroom didactic approach complemented by case studies, workshops and guest lectures. Units of 2x45min and 1x45 min case study. Cases are briefed and presented biweekly.
As part of the module we conduct several workshops (e.g. Design Thinking Workshop, Creativity Workshop). The student moderate their own workshop as part of the semester project.
In addition we conduct 2-3 excursions during the semester(in the past to Google, Zühlke Engineering, Trihow).

Literature

Lewrick, Link and Leifer (2018): The Design Thinking Playbook, Wiley.
Lewrick, Link and Leifer (2020): The Design Thinking Toolbox, Wiley.

Also available in German

Lewrick, Link und Leifer (2018): Das Design Thinking Playbook, 2. Aufl., Vahlen Verlag.

Lewrick, Link und Leifer (2019): Das Design Thinking Toolbook, Vahlen Verlag.

Assessment

Additional performance assessment during the semester

The module contains additional performance assessment(s) during the semester. The achieved mark of the additional performance assessment(s) applies to both the regular and the resit exam.

Description of additional performance assessment during the semester

During the semester, the student develop an own innovation project in groups. The following tasks are evaluated:
- A Journal Report about all the used methods and tools (15%)
- A management summary of the elaborated project idea (15%)

Basic principle for exams

As a rule, all standard final exams are conducted in written form. For resit exams, lecturers will communicate the exam format (written/oral) together with the exam schedule.

Standard final exam for a module and written resit exam

Kind of exam

Written exam

Duration of exam

120 minutes

Permissible aids

Aids permitted as specified below:

Permissible electronic aids

Slides and templates available on Moodle

Lewrick, Link and Leifer (2018): The Design Thinking Playbook, Wiley.
Lewrick, Link and Leifer (2020): The Design Thinking Toolbox, Wiley.

Other permissible aids

Concept Maps (2 pages A3)

Lewrick, Link and Leifer (2018): The Design Thinking Playbook, Wiley.
Lewrick, Link and Leifer (2020): The Design Thinking Toolbox, Wiley.

Exception: In case of an electronic Moodle exam, adjustments to the permissible aids may occur. Lecturers will announce the final permissible aids prior to the exam session.

Special case: Resit exam as oral exam

Kind of exam

Oral exam

Duration of exam

30 minutes

Permissible aids

No aids permitted