Technology Management

General Information

Number of ECTS Credits

3

Abbreviation

TSM_TechnMgmt

Version

07.03.2017

Responsible of module

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Language

	Lausanne	Bern	Zurich
Instruction	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☒ E
Documentation	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☒ E
Examination	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☒ E

Module category

☐ Fundamental theoretical principles

☒ Technical/scientific specialization module

☐ Context module

Lessons

☒ 2 lecture periods and 1 tutorial period per week

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Brief course description of module objectives and content

The module describes the practical and theoretical framework of Technology Management, and explains the lifecycle of technologies and the related methods in Technology Management.

Aims, content, methods

Learning objectives and acquired competencies

1. Students understand the elements and the application areas of Technology Management.
2. Students are familiar with the practical and theoretical framework of Technology Management and understand the importance for innovative operating companies.
3. Students learn how companies select and work with technologies.
4. Students know how to manage technology throughout its lifecycle phases and understand the influence of technology on profitability and risk exposure for companies.
5. Students know how to deal with stakeholders relevant for Technology Management.

Contents of module with emphasis on teaching content

Technologies are among the most important strategic and operational assets of product and process driven companies. The module deals with mastering technologies to enable companies to achieve competitive advantage and differentiation by sound Technology Management. The focus of the module is on management of technology throughout its lifecycle, thus complementing topics such as Innovation, Solution, Product and Project Management, covering strategic and operational aspects including technology evaluation, planning, development/provision, implementation, distribution, exploitation and dismantling (de- and re-manufacturing). The module conveys comprehensive knowledge required for TM, e.g. technology trend analysis, technology scouting and recognition, technology roadmapping, lifecycle management, portfolio management, competitive strategies, protection, IPR- and knowledge management, corporate technology management, technology assessment, as well as technology communication and related aspects of effective stakeholder management.

Teaching and learning methods

The module is taught by theory inputs, illustrative examples, case studies, discussion of controversial questions, exercises and simulations. Content is applied in the context of a project assignment.

Prerequisites, previous knowledge, entrance competencies

Good knowledge of English

Bachelor degree in Business Administration and Engineering, Computer Sciences, Electrical Engineering or Mechanical Engineering.

Literature

[1]   Technology Management; Dilek Cetindamar, Rob Phaal, David Probert; ISBN 9780230233348.

Assessment

Certification requirements for final examinations (conditions for attestation)

A project to be compiled through independent study.

Written module examination

Duration of exam:	Case study report accounts for 1/3 of the final assessment.
	Written exam, 120 minutes, counts for 2/3 of the final assessment.
Permissible aids:	For the written exam the following aids are permitted:
	Self-written summary of 4 pages A4.