Innovation & entrepreneurship in engineering
Michaud Véronique, Weber Thomas

<table>
<thead>
<tr>
<th>Cursus</th>
<th>Sem.</th>
<th>Type</th>
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<tbody>
<tr>
<td>Electrical and Electronical Engineering</td>
<td>MA1, MA3</td>
<td>Opt.</td>
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<td>Managmt, tech et entr.</td>
<td>MA1, MA3</td>
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<tr>
<td>Materials Science and Engineering</td>
<td>MA1, MA3</td>
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<tr>
<td>Mechanical engineering</td>
<td>MA1, MA3</td>
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**Language of teaching**: English
**Credits**: 10
**Withdrawal**: Unauthorized
**Session**: Winter
**Semester**: Fall
**Exam**: During the semester
**Workload**: 300h
**Weeks**: 14
**Hours**
- Lecture: 2 weekly
- Project: 8 weekly
**Number of positions**: 50

Il n'est pas autorisé de se retirer de cette matière après le délai d'inscription.

**Remark**
Inscription nécessitant l'autorisation préalable des enseignants

**Summary**
This course is a joint initiative between the School of Engineering and the College of Management to encourage and promote entrepreneurship and management skills, engineering design, hands-on experience, teamwork, and awareness of social and ethical implications in engineering and management.

**Content**
The material is taught in four modules, including Systems Engineering, Product Design Principles, Business Economics, and Prototyping Practice. A key component of the course consists of a team project, usually conducted in collaboration with an industry partner, addressing a significant commercial need and/or societal issue. Lectures will be given by domain experts. The first part of the course focuses on product design. Students will be working in multidisciplinary teams to define a product concept, draft a prototype and propose a plan for product commercialization. At the conclusion of the course, the projects will be entered in a prize competition, judged by a panel of industry experts and faculty.


**Keywords**
Business economics, product design, systems engineering, technology commercialization, hands-on practice

**Learning Prerequisites**
**Required courses**
To be able to register for this course, instructor permission is required. For this, students are asked to prepare a 1-page motivation statement, to be sent per email by September 21 at the very latest to the course coordinator (philipp.schneider@epfl.ch).

**Learning Outcomes**
By the end of the course, the student must be able to:
• Translate specifications into product design
• Assess / Evaluate the economic viability of product at different development phases
• Manage the production of a prototype
• Develop a plan for the commercialisation of the product
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Transversal skills
• Communicate effectively, being understood, including across different languages and cultures.
• Evaluate one’s own performance in the team, receive and respond appropriately to feedback.
• Set objectives and design an action plan to reach those objectives.

Assessment methods
• 40% Presentation
• 50% Report/prototype
• 10% Collaboration

Supervision
Office hours  No
Assistants  Yes
Forum  Yes

Resources
Virtual desktop infrastructure (VDI)  No

Moodle Link
• https://go.epfl.ch/MGT-555