BIO-490 **Entrepreneurship in life sciences**

Merten Christoph

Cursus	Sem.	Type
Life Sciences Engineering	MA1, MA3	Opt.

Language of teaching	English
Credits	4
Withdrawal	Unauthorized
Session	Winter
Semester	Fall
Exam	During the semester
Workload	120h
Weeks	14
Hours	**4 weekly**
Courses	2 weekly
Exercises	2 weekly
Number of positions	**25**

It is not allowed to withdraw from this subject after the registration deadline.

Summary

Based on real-world examples, hypothetical or own inventions, students are provided with a skill set for translating scientific innovation into a convincing investor pitch (including a comprehensive slide deck on all relevant aspects) and applications for funding of a startup project

Content

The course provides background information to prepare a roadmap for the establishment of a startup company, from the initial scientific innovation and market analysis to regulatory and IP issues and finally funding and investment opportunities.
The course is also supported by guest speakers introducing specific EPFL funding opportunities (e.g. Catalyze4Life) and startup support (Launchpad initiative).

Keywords

Market and competitor analysis, customer needs, business models, product development, growth and scalability, intellectual property and freedom to operate, regulatory issues and seed funding

Learning Prerequisites

Required courses

none

Important concepts to start the course

Solid knowledge and understanding in the life science domain and a strong interest in entrepreneurship

Learning Outcomes

By the end of the course, the student must be able to:

- Analyze Market and competitor data
- Perform Convincing investor pitches (10 min group effort and 3 min individual pitch)
- Formalize Funding applications

Transversal skills

- Plan and carry out activities in a way which makes optimal use of available time and other resources.
- Assess one's own level of skill acquisition, and plan their on-going learning goals.
- Communicate effectively with professionals from other disciplines.
- Give feedback (critique) in an appropriate fashion.
- Demonstrate a capacity for creativity.

Teaching methods

(i) Detailed discussion of real work examples
Examples and concepts are introduced by the teacher and discussed in an interactive way. This provides the basis for preparing a studentâ##s own case study, funding application and investor pitches.
(ii) Independent follow-up work by the students in groups and individually
In parallel to the topics discussed in each lecture, students apply the newly learned concepts on their own example innovations. Supervision and support are provided by the teaching assistants.
(iii) Example pitches by the teaching assistants
During one lecture the teaching assistants give example pitches with particular strengths and weaknesses, which are subsequently discussed and evaluated.
Maximum number of course participants is limited to 25 to enable a truly interactive format.

Expected student activities

Preparation of a written funding application including data base searches (papers, patents and business figures)
Preparation of a group pitch (10 min with slides)
Preparation of an individual pitch (3min with slides)
The best group and individual pitch will be awarded with a trophy!

Assessment methods

Evaluation of the written funding application (25%)
Evaluation of the group pitch (35%)
Evaluation of the individual pitch (35%)
Evaluation of participation in the discussions related to pitches of other students (5%)

Supervision

Office hours	Yes
Assistants	Yes
Forum	No
Others	Office hours upon appointment