

From Science to Business – Concepts in Biotechnology

Course content

The knowledge intensive field of biotechnology has apart from being subject to high expectations from a macroeconomic perspective also attracted a strong interest from the large pharmaceutical companies and venture capitalists.

The course deals with the development and management of biotechnology businesses, with a focus on commercialising discoveries and inventions. The course consists of seminars based on practice and theory of the different stages of business development as well as a group-project presented in writing and orally.

In the seminars students meet practitioners and researchers with a Swedish and international background. The practitioners present specific experiences from starting and running knowledge intensive young businesses or from the financial, legal, political or corporate strategy fields. The broad picture is given by researchers in sociology or business administration with an insight in academic discoveries, start-up companies, venture capital, business expansion and selling of companies.

In the group-project and case studies students from different schools will work together on topic of their choice from one of the main areas of the course.

The course is divided into four components:

1. innovation and entrepreneurship
2. law and regulations
3. finance
4. strategy

Course goal

The learning outcomes for the course can be subdivided into two broad areas; i) Biotech business including finance, strategy, law and regulations and ii) Entrepreneurship and innovation. After the course the students should be able to:

Biotech business

- broadly understand the field of biotechnology business
- understand the development and management of biotechnology businesses
- be aware of the overall legal and regulatory framework for science based businesses (EU and US corporate law, patenting law, regulatory authorities)
- understand the basics of public and private financing of early stage companies
- be aware of basics in strategy and tools for science based companies (business plan, collaboration between large and small companies, corporate intelligence, role of boards, human resource management etc)
- use key skill-sets for early-stage entrepreneurship such as market and IP analysis, target product profile, business plan and budgeting.

Entrepreneurship and innovation

- be aware of the basics of innovation and entrepreneurship
- understand basics in the theory of clusters of innovation
- be aware of the role of universities in the innovation system
- analyse and discuss the context of entrepreneurship
- understand how discoveries and inventions are commercialized

Structure

This is a 7,5 credit (7.5 ECTS credit) course. There will be 2 weekly sessions lasting 3 hours each for 9 weeks. In addition to these sessions, students will work with their thesis and case studies outside of class.

Teaching methods

This course consists of 6 hours of class/week, approximately 10 hour reading/week, a case study as well as a group-thesis corresponding to 2 weeks of work.

Assignments

Assignments will be based on presentations, interdisciplinary case studies involving all SSES schools and discussions of selected reading material. The reading material will complement the workshops and the presentations.

Term paper assignment

The term paper is an opportunity to learn more about an issue of special interest. The students will work in groups where the group members preferably will represent the different universities in order to benefit from the various knowledge backgrounds and experiences. The topics of the term papers will lie within the four components of the course presented above. The term paper work will be presented in a written and an oral format at the end of the course.

Case study assignment

The assignment will be a practical and real case study addressing different aspects in the field of biotechnology. The Case study should be reported through a written report and a convincing oral case presentation.