**Biotechnology Innovation & Entrepreneurship**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | **2.5 Credit points** | **Course Number: 66525** | |
| **Time:**  **9:00-12:30**  **Room** | **Day:**  **Friday** | **Number of weeks: 8** | **Year: 2021** | **Mini-Semester:** |

Instructor: Professor Michael Wallach Biotechnology & Food Engineering Room 317, 054 2078017

Lecturers: Professor Michael Wallach, Dr. Yoav Medan and Dr. David Mencher

Office Hours: scheduled + by appointment on Wednesdays and Thursdays from 11 am, or by zoom scheduled from 11 am – 5 pm

**Course Goals and Description**

Introduce concepts surrounding the translation of an idea from the lab to the development of a viable product in the pharmaceutical, medical device and biotech industries.

Demonstrating different approaches towards translational research.

Overview of the life sciences ecosystem, from start-ups to large companies, and the role of supporting organizations.

**Learning Outcomes**

The students will understand the stages required to bring an idea in the life sciences to an approved product, the different approaches towards development of a biomedical product and the roles of different organizations along the way.

They will also learn to appreciate the uniqueness of the Israeli biotech ecosystem.

**Course Content/Topics**

1. Overview on the Global Biotech industry including Israel and the effect of COVID going forward.
2. What is needed to develop a new biotech product?
3. Business model in the biotech industry.
4. Concepts in patent law and regulatory authorities.
5. Fund raising and supporting

**Assignments and Grading Procedures**

1. Attendance – Must attend at least 80% of the lectures 10%
2. Active participating in at least 80% of workshops – 10%
3. Assignments – 40%
4. Final presentation – 40%

**Assignments and Final Presentation**

Exercise 1 – A description of the overall goals and strategy of the chosen start up biotech company.

Exercise 2 – IP and financial assessment of the chose start up biotech company.

Final Presentation – A pitch describing the chosen start-up biotech company in all aspects of its development including a SWOT analysis.

**Course Schedule (Topics, assignments, Exams)**

1. Student will form teams of 2-3 students.
2. Each team shall make a case study on an Israeli biotech company that includes the company history, the product, founders, the initial steps that were made, funding, patents, competition and regulation.
3. The teams will present their findings in a 15 min presentation and submit a seminar paper up to 10 pages.

**Class 1 24/12/2021**

**Lecture**

Overview on the Global Biotech industry including Israel and the effect of COVID going forward.

**Workshop**

Coming up with ideas and design thinking

Defining a problem and understanding the consumer

**Class 2 31/12/2021**

**Lecture**

What is needed to develop a new biotech product?

Going from the idea to a product: starting with the end in mind

Exercise demonstrating the concept of idea to market

**Workshop**

Choose an Israeli start up company in the life sciences to do a case study

**Class 3 7/1/2022**

**Lecture**

How to create a start-up biotech company.

Business model in the biotech industry.

What makes a start-up company a success.

**Workshop**

Evaluate the start-up biotech company in terms of its mission and goals.

*Exercise 1: Due on 14/1 describing the start-up company, its mission and goals.*

**Class 4 14/1/2022**

**Lecture**

Concepts in patent law and regulatory authorities.

**Workshop**

Evaluate the intellectual property of the start-up company and

**Class 5 21/1/2022**

**Lecture**

Fund raising and supporting

Case studies of successful start-ups

SWOT analysis

**Workshop**

Evaluate the start-up biotech company in terms of its funding, financial performance and stability

*Exercise 2 – IP and financial performance of the chose start-up company due on 28/1*

**Class 6 28/1/2022**

**No Lecture**

**Workshop**

Prepare for presentations

**Class 7 4/2/2022**

Presentation of a complete description (including a SWOT analysis) of the chosen start-up company in a 15 minute seminar