

Entrepreneurship and Intellectual Property (096815)

Teacher: Mr. Yonathan Lerner
Office hours: by appointment
Cell: 050-5763977
Room:
ylerner@013.net.il

Teaching assistant: Mr. Yaron Amir
Office hours: by appointment
Cell: 054-2274025
Room: Cooper 410
yaam@technion.ac.il; yaronamir08@gmail.com

Time: Lecture: Tuesday 13:30-16:30
Location:
Credit points: 3
Students: 3rd & 4th year Technion undergraduates and graduates
(Maximum 24 students)

Course overview:

Creating new technologies and their commercialization is a key competitive advantage. The high tech entrepreneurial process involves the creation of a new technology, the discovery of the business opportunity for the technology, protecting the intellectual property and organizing the resources (people, capital and social network) to exploit the opportunity. **The course will provide students with an understanding of these early stage entrepreneurial processes through the study of theory, real-world examples and practical exercises.** Moreover, the course will provide the students insights into their own entrepreneurial capabilities and motivations.

Course objectives:

1. Understanding the entrepreneurial process and its different phases;
2. Understanding Intellectual Property from legal, policy and management stand points;
3. Learning and applying Patent Search and Patent Filing;
4. Learning to pitch an idea;
5. Getting acquainted with the high tech industry and its echo system in Israel;
6. Learning to budget a new startup firm;
7. Learning to prepare a Business Plan (BP) and investor Presentation;
8. Gaining insight into one's personal entrepreneurial capabilities and motivations for entrepreneurship career;
9. Learning from experienced entrepreneurs and practitioners;
10. Learning by doing.

Course Outline:

- **Teams of 3 students each** (maximum 8 teams) **will create and develop an idea for a new business**, preferably in high-tech areas.
- During the course, the teams will be required to prepare **a business plan and executive summary** for the commercialization of their idea and **to present it at the end of the course**.
- Teams will apply the concepts taught in the course to perform technology assessment, patent search, propose possible applications for the technology, perform preliminary market validation, and accordingly to develop a first cut business model and a resource plan.
- **Teams are expected to gather information** on the technology, industry and markets by interviewing potential customers, competitors, interested players and potential partners and searching public databases.
- **The teaching team will assist the teams** develop their ideas and an executive summary of their business plan through in-class and off-class appointments.

Course Assignments:

Each team will propose an idea or select one from the Technion's patents portfolio and develop such idea to a business of a new product/service.

The idea will be selected and submitted for approval by the lecturing team no later than April 21 (week 4 upon return from Passover Holiday).

Team assignments:

- 1. Patent Search and Assessment**
- 2. Pitch & Business Plan Presentations**
- 3. Executive Summary of a Business Plan for a new startup**

Personal assignment

A Personal Assessment of Entrepreneurial Teaching Capabilities and Motivations

Assignments in details

1. Patent Search and Assessment (team grade) - Due: April 28

Each team will use tools taught in class to conduct a 3-5 hours patent search of their idea and answer the following questions:

- 1) Is it patentable (Give the arguments to your answer)?
- 2) Analyze and describe to what extent existing patents may limit the patentability of your patent/idea? Enclose your patent search results.
- 3) Who are the potential competitors you have found?
- 4) Indicate 2 additional potential applications for your patent/idea?

2. Business Plan Presentations (team grade) – Due May 26 / June 9/16

- a. Each team will prepare and present in class an **Elevator Pitch** (2 minutes) and submit a one page executive summary (up to 150 words) (**May 26**).
- b. Each team will prepare and present a **PPT presentation of the executive summary Business Plan** during Sessions 12 & 13 (**June 9 & 16**) in front of a panel of experts and the other students. Each team will have 20 minutes to present a 15-20 slides presentation (Slides and presentation will be in English) followed by a 10 minutes Q&A and feedback to be given by the Panel. Each team member is required to take part in the presentation and should be well familiar with the entire presentation.

3. Executive Summary of a Business Plan for a new startup (team grade) – Due June 26

During the course the teams will develop an Executive Summary of a Business Plan covering the various necessary topics taught in class. Each team will submit its Executive Summary (4-5 pages – 1500-1800 words long, in English) along with supporting material and annexes, due latest by **June 26**.

4. Personal Assessment of Entrepreneurial Teaching, Capabilities and Motivations (individual grade) – June 29

At the end of the course each student will be asked to submit by **June 29** a paper (maximum three pages, 1000-1200 words, in English) divided into 2 sections:

- a. Teaching Entrepreneurship – is entrepreneurship teachable?
 - 1) If not, why? Which referral topics could be taught and which could not?
 - 2) If yes, what should be the method used and what should be the main topics?
- b. Personal entrepreneurial capabilities and motivation –
 - 1) Do you intend to pursue a career as: (a) a founder/entrepreneur in a start-up; or as a, (b) a technical/management career in an established firm?
 - 2) Describe the reasons for your choice above?
 - 3) Describe the subjects you would like to learn more about, and the capabilities you have to develop further, in order to succeed in your chosen career path.

Course grading:

Assignment 1: Patent Search and Assessment (team grade)	15% [*]
Assignment 2: Business Plan Presentation (team grade)	35% [*]
Elevator pitch & 1 pager summary	(15%)
PPT Presentation	(85%)
Assignment 3: Executive Summary of a Business Plan (team grade)	30% [*]
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Executive Summary	(70%)
Interviews Summaries	(15%)
Supporting Material	(15%)
Assignment 4: Personal Entrepreneurial Assessment (individual grade)	15%
Participation in Class: (individual grade)	5%
<u>Total:</u>	<u>100%</u>

Reading material for course will be posted on Moodle.

Recommended Reading:

-*The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*, By Eric Ries

- *Finding fertile ground: identifying extraordinary opportunities for new ventures*, By Scott Shane

Part of each session will be devoted to face to face meetings with the teaching team whereas each group will present its progress and discuss difficulties and next steps.

Course Plan:

Week 1 (24/3/2015): Introduction

- Course overview
- Course requirements
- Start Team Formation in class.
- **Guest Lectures – Introductions of T3 – Technion Technology Transfer Office and of BEC – Beronica Entrepreneurship Center**

Week 2 (31/3/2015): Guest Lecture: Patent Attorney

- **Reading material: Finding Fertile Ground, Ch. 7**
- Lecture on intellectual property and patent laws and filings in the US, Europe, Israel and the Far East. The lecture will provide students with an understanding of technology assessment, intellectual property and the tools used to prepare invention for patent filing by patent attorneys.

Week 3 (14/4/2015) Searching in Patent Databases

- **Guest Lecture: Chief Intellectual Property Officer**
- Reading material: Finding Fertile Ground pp 134-144
- Why is a patent search necessary? Demonstration and explanation of public databases used in patent searches.

The Entrepreneurial Process

- **Reading material: Finding Fertile Ground, CH. 2,3 pp. 19-61**
- The entrepreneurial process and entrepreneurs characteristics
- Progress opportunity discovery

Week 4 (21/4/2015) Introduction to Business Plan

- Introduction to business plan, Business models and revenue models.
- The purpose of the business plan, what should be included and what should not?
- The format of a business plan and the requirements for the course project.

Entrepreneurship in Israel

- **Reading material: Start-up Nation: The Story of Israel's Economic Miracle**

Weeks 5 (28/4/2015) Business Plan (cont.) & Business Models

Guest Lecturer: Start Up Founder

- From idea to commercialization – the story of a startup
- Business and Revenue Models in different industries
- Competitive Strategies
- Networks and alliances

Week 6 (5/5/2015): Marketing (1)

- Marketing plans and the 4 P's of marketing: product, price, promotion and place
- High-tech marketing: B2B and B2C; business life cycles

Week 7 (12/5/2015): Marketing (2)

- Market research
- Sales: channels (indirect-direct), cycles, when to start

Week 8 (19/5/2015): Accounting and finance fundamentals

- Developing revenue projections
- Developing cost projections
- Balance sheet, Income statement, and Cash-flow Statement
- Burn-rate and Break-even analyses
- **Rehearsals – Pitching your venture**

Week 9 (26/5/2015): Managing a Startup - Mandatory Attendance

- The Lean Start Up Approach
- Building the Team
- **PITCHING**

Week 10 (2/6/2015) Guest lecturer from Venture Capital Fund

- **How to Present a Business Plan and Raise Venture Capital.**
- **Guest lecture by VC manager**
- The process of raising Venture Capital
 - Preparing the Business Plan
 - What investors look for?
 - What is a sustainable competitive advantage?
 - The VC presentation
- **Rehearsals – Pitching your venture**

Week 11 and 12 (9/6/2015 & 16/6/2015) – Mandatory Attendance

- Final Presentations
 - Submit and present a 15-20 PowerPoint slides presentation of Business Plan looking for venture/angel funding
 - Each team member needs to actively participate the presentation

Week 13 (23/6/2015)

- Motivations and Characteristics of Entrepreneurs;
- In-class discussion of groups' future plans.
- The individual personal assessment assignment;
- Course wrap up.