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## INTRODUCTION TO TECHNOPRENEURSHIP

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Below you can find what I intend to cover in the course on Technopreneurship.

The course will have an interactive character (case discussions) which requires that you duly prepare. So please read the cases and prepare to answer the study questions on the following pages, where necessary by consulting the supporting materials. The **bold-printed materials and questions** are the ones to focus on.

To complete the course, you will need to submit a (green) paper on creating university spin-off companies. Details of this assignment you will find at the end of this note.

## PROGRAM

### 1: Patents, licensing, technology transfer

1. Course introduction
- 2. Case discussion: DeDrug Patents**
3. The importance of patents and licensing
4. Academic vs Surrogate Entrepreneurship

Background information on Patents:

- **Patent Questions and Answers**
- Foley-Hoag Patenting Guidebook
- EPO Teaching Kit
- Patents Instruction Video: <http://www.fjc.gov/jed/patent/ips.wmv> (N)

### 2: Science vs Business

- 1. Case discussion: Spudspy**
2. The art of University Technology Transfer
3. Appropriateness of creating a university spin-off company

Background reading:

- **Merton's ethos of science**
- Money grabbers?
- Technology Transfer at US universities

### 3: University Spin-off Companies Development and Technology Strategy

- 1. Case discussion: A123**
2. Phases and Critical Junctures in the Development of University Spin-offs
3. Gans Stern Framework: start-up strategies

Background reading:

- Vohora et al., Critical junctures in the development of university high-tech spinout companies
- Joshua S. Gans and Scott Stern, Research Policy 32 (2003) 333-350, The product market and the market for "ideas": commercialization strategies for technology entrepreneurs

### 4: Venture Capital, Business Plan Evaluation, closing the deal

- 1. Case discussion: DeDrug Investments**
2. What is Venture Capital?

3. Equity Distribution and Venture Valuation
4. How do VCs evaluate Investment Opportunities?

Background reading:

- Funding New Ventures Valuation, Financing and Capitalization Tables
- Valuation from Starting-up New Venture Guide
- [How Venture Capital Works](#)
- [Invest Europe 2016 Report on Private Equity Activity](#)
- Twenty Questions asked by VC

5: Discussion on creating university spin-offs: Why is it so difficult and what can we do about it?

## CASES STUDY QUESTIONS

### DEDRUG PATENTS:

1. Identify at least 3 potential threats with regard to DeDrug's IPR position. (Note: going through the document with Q&A on patents may be helpful)
2. Why is the company GrossPhar both a threat and an opportunity?
3. If you were Olga, what would you decide with respect to Tom's willingness to become involved in developing the business opportunity? Why?

### SpudSpy:

1. **Who is responsible for this mess?**
2. Was the behavior of Simcoe and Rothman unethical?
3. Was their behavior in conflict with Harvard University's Patent Policy (Exhibit 2 of the case)?
4. How might the perception of their behavior be influenced by the Mertonian norms of science?

### A123:

1. A123 has the following 4 options:
  - Stay focused on self-assembly
  - Change the direction and focus on the new cathode material and either
    - make and sell batteries
    - make and sell the cathode material
    - license the material to battery makers

**Which of the options should A123 go for? Why?**

### DeDrug Investments:

1. On the arrangements in the Termsheet:
  - a. Identify at least 3 different ways in which the investors try to protect their investment with the arrangements in the termsheet?
  - b. Why is it necessary to make such arrangements?

## POST-COURSE ASSIGNMENT

### Creating university spin-offs: Why is it so difficult and what may be done about it?

You are the newly appointed founding director of an (as yet one-person) economic regional development agency.

In your region there is a university with a considerable number of internationally renowned research groups in the natural, life- and medical sciences. At the same time, there is hardly any technology company in the area. Alumni need to go elsewhere to find a job that fits their academic accomplishments.

You have been appointed to stimulate the creation of so-called academic spin-off companies based on new technology developed at the university. Your budget is limited and the most important means you have for now is your power to influence people and organizations who can help you to successfully accomplish your mission, e.g. by raising funds (subsidies) for measures that stimulate new business creation.

You decide to start with writing a **green paper** on creating university spin-off companies. The paper will consist of two parts. The first part describes why it is so difficult. It aims to explain to the many people who do not understand why there are no spin-offs created what aspects are blocking the process. This lays the foundation for the second part describing what may be done about it.

Length: 1500 words (around 3 pages)