

Course compendium – updated version- 2021 Batch-01

**Innovation Management and Entrepreneurship – 5 Credits Bachelor's course designed by Global Business experts, executed by Indo Nordic Academic and Industry professionals.**

*\*This compendium has been updated according to the Coronavirus outbreak. We will have no face-to-face meetings or lectures. Lectures will be via Zoom/Skype and followed with detailed instructions about related course activities.*

**Objectives and expected outcomes:**

The overall objective of the course is for the student to build a good understanding of the principles behind R&D and innovation management, in particular within larger established biotechnology and/or raw materials companies, but also in small start-up companies.

The aim of the course Innovation Management (5 credits) is to give participants a deep and broad understanding of innovation management in an established industrial setting as opposed to new or entrepreneurial businesses. This broad approach means that we will study the challenges and opportunities that innovation and innovation management brings for a company in various industries and contexts. We approach the challenges associated with innovation and innovation management using both academic literature and the reality of practitioners. More precisely after completing the course, the student should be able to:

- Account for the importance of innovation for economic growth and increased competitiveness on a firm level
- Critically discuss a firm's need to have a strategic and integrated approach to be able to successfully manage innovation and technical development
- Analyse complex innovation processes in firms both internally and externally. This incorporates for instance basic knowledge about partnerships, alliances, research and development, commercialisation and industrial marketing.

After the course the student will be able to:

- Account for different stages typically involved in a business development process
- Account for the demands upon the management and the board and/or owners in different kinds of development situations
- Briefly analyse a market situation
  - o Early market connection
  - o Strategic alliances
- Evaluate the need for resources, and identify typical obstacles, in the early business development phase
  - o Funding of R&D in different business contexts
  - o Reward systems in knowledge-based companies
- Analyse and evaluate the innovation strategy of a biotech venture/organization
- Independently formulate a business plan based on a technical development idea
- Plan and implement a development project in groups

- Account for the basic principles of legal protection of business ideas and immaterial property/resources within the biotech industry – i.e. the basic principles of intellectual property rights (IPR)

The course addresses different steps in the business development process based on technological (innovative) ideas or new, internal or external, research results. It discusses the needs of the managers and owners faced with the research-intensive company, as well as the obstacles and opportunities in bringing an idea to the market. The course has a focus on R&D and innovation processes in the established, larger company, but also involves the development problems of the newly started, entrepreneurial company. Besides theoretical knowledge about innovation processes, various tools to plan and implement a project are identified and addressed. The course is a mixture of lectures, seminars, exercises and defined projects.

### Course Structure, Organization and Execution

The pedagogical idea of the course is based on emphasising students' learning by providing various types of teaching methods including lectures, guest lectures, project group work and seminars throughout the course. The lectures, seminars and presentation of project work is mandatory, We strongly encourage students to attend the guest lectures.

### Examination

- 2 Credits of exercises and preparations related to seminars and the presentation and delivery of a project work in groups along with peer-review of other student group work. **Grades: fail or pass**
- 3 Credits individual written exam.
- **Grades: fail, 3, 4 or 5** , as a consequence the written exam determines the grade on the course.

### 1. Innovation

Basic introduction: Science to product, discovery, invention, innovation, Types of innovation, product/process innovation, adoption of innovations. How can we generate ideas? How can we develop them? What is an innovation strategy? IPR? What are the demands upon management in different development situations? How do you maintain competence within an established firm? How do you evaluate different R&D strategies? How can you form strategic alliances? Why should you partner up? Why go solo? How can we think more critically about innovation?

### 2. Entrepreneurship

What is entrepreneurship? What is the Effectuation model? Obstacles and opportunities in the early business phase. What are resources? How do you finance your business? What is a business development process? What are the stages? What is part of a Business plan? What is a market analysis? How do you perform one? What is a business model? How do you develop one?

### Attendance

The course builds on a series of lectures, assignments seminars and workshops; active participation is considered an essential part of the course and will enable you to accumulate a number of points for the examination (17 out of 50). For an overview of the points associated with each session, see the course schedule attached as IME Timeline

The following sessions are highly recommended (via Zoom):

- Guest lecture 1
- Guest lecture 2

Session title	Type	What to do	Prepare	Reading	Points
Introduction	Web Lecture (L1+L2)	Follow instructions on SP	Course introduction and strategic management of innovation		
Idea generation assignment	Assignment A1+ SEMINAR S1	Individual assignment	Innovation and sources of innovation		3
Project discussion	Discussion/Seminar	Via Zoom	Decide on which company to study, read through the project description, write down any questions that you might have.	The project description	
Innovation theory	Web Lecture (L3+L4)	Scalable Learning	Strategic management of innovation II Strategic advantage through innovation	Schilling, Ch. 3, pp.43-65 and Ch.5, pp. 89 -105	
Guest lecture	Guest Lecture	Via Zoom	After the lecture write down comments and thoughts. Write 1 page and submit it to SP.		0.5
Jigsaw exercise on the Schilling book	Workshop 1	Follow instructions on SP	To present the chapter assigned. Submit a written document 1 page, comment on the forum on the other chapters submitted by your classmates		1
Research and development (R&D)	Web Lecture (L5+L6)	Scalable Learning	Innovation and economy A case study from health care	Schilling, Ch. 11, pages 240-252	
R&D Strategy	Workshop 2	Follow instructions on SP	Watch the R&D Lecture + read Schilling pages 240-252 /Elaborate and comment on the forum		1
Collaboration strategies	Web Lecture (L7+L8)	Scalable Learning	The innovative organisation - exploration and exploitation		
Collaboration strategies	Workshop 3	Follow instructions on SP	Watch the Collaboration strategies lecture + read Schilling, page 153-179	Schilling, pages 153-179	1
IPR	Web lecture (L9+L10)		Selecting innovations based on qualitative aspects Digital innovation in construction	Schilling page 183-205 Ch 9	
IPR assignment 2	Assignment A2 + SEMINAR S2	Individual assignment	Watch the IPR lecture + read Schilling page 183-205 Ch 9		3

Entrepreneurship	<a href="#">Web lecture (L11)</a>	Scalable Learning		Sarasvathy (2001) Sarasvathy et al (2011) extract	
			Watch the Innovation lecture as well as the Entrepreneurship lecture + read Sarasvathy (2001)		
Business development process	<a href="#">Web lecture (L12)</a>	Scalable Learning			
Business development	<a href="#">Workshop 4</a>	Follow instructions on SP	Read Vohora et al 2004, "Critical junctures in the development of university high-tech spinout companies"	Vohora et al 2004	1
Guest Lecture	Guest Lecture	Via Zoom	After the lecture write down comments and thoughts. Write 1 page and submit it to SP.		0.5
Business model canvas	<a href="#">Web lecture (L13)</a>	Scalable Learning	Osterwalder et al (2010) Business model generation,		
Value proposition canvas	<a href="#">Web lecture (L14)</a>	Scalable Learning	Osterwalder et al. (2014) Value proposition design		
Business model canvas	<a href="#">Workshop 5</a>	Follow instructions on SP	Watch the Business model canvas and the Value proposition canvas lectures		1
Finance	<a href="#">Web lecture (L15)</a>	Scalable Learning	The Quiz Mentimeter Challenge		
Finance	Assignment A3 + SEMINAR S3	Individual assignment	Watch the Finance lecture		3
Business plan	<a href="#">Web lecture (L16)</a>	Scalable Learning			
Business plan	<a href="#">Workshop 6</a>	Follow instructions on SP	Watch the business plan lecture, Read one Business Plan (choose between Raw material or Biotech) - Read, comment & contribute to discussion		1
Market analysis	<a href="#">Web lecture (L17)</a>	Scalable Learning		Schilling, Ch 6, page 109-128, Porter (1979) Aaker & Mcloughlin (2010)	

Understanding Nordic Innovation Ecosystem	Web lecture (L18)	ZOOM	innovative companies from the Uppsala/Stockholm region		
Market analysis	Workshop 7	Follow instructions on SP	Watch the market analysis lecture + read Schilling p. 109-128 Individually comment & discuss		1
Project's report	Group reports		Submit preliminary report to SP		
Project's report feedback	Group reports –	opponent group give feedback	Submit your feedback report to SP as an opponent group		
Project's report (10P) +presentation (5P)	Group report		Submit your final report to SP		15
Individual home exam					18
Extra –deadline for submitting a report				<b>Total</b>	<b>50P</b>

**Workshops/activities**

Session title	Type:	What we will do
<b>Project discussion</b>	Seminar/ discussion Via Zoom	Discussion of project assignment. We go through what you have so far and answer any questions that you might have. At least one person from each group should try to attend this workshop.
<b>Guest lecture 1</b>	Via Zoom	After the lecture write a 1 page document with your comments and thoughts on the lecture. Submit it to SP.
<b>Guest lecture 2</b>	Via Zoom	After the lecture write a 1 page document with your comments and thoughts on the lecture. Submit it to SP.
<b>Jigsaw exercise</b>	Workshop (W1)	Present a chapter from the course book to others, they will present other chapters for you. Comment on the forum.
<b>R&amp;D Strategy</b>	Workshop (W2)	You will self-select into teams who will either read different parts of a Harvard business case or be coached by the teacher into being the CEO who leads the coming strategy meeting. You will then become “experts” in that field and take that expertise with you into a role play of a strategy meeting at a biotech company.
<b>Collaboration</b>	Workshop (W3)	You will evaluate possible alliances for a biotech company.
<b>Business development</b>	Workshop (W4)	There will be a quiz about the Vohora et al 2004 article. We will then discuss the paper + possibly something more.
<b>Business model canvas</b>	Workshop (W5)	You will work with the business model canvas for your product and discuss sustainable business models
<b>Business plan</b>	Workshop (W6)	Before this you should have read the Business Plan put on SP. Discussion of this business plan. You will also write a draft of a business plan for your product.

<b>Market analysis</b>	Workshop (W7)	One exercise where we put the model PEST to use. Another exercise during which we look at market segments.
<b>Individual exercises</b>		
<b>Session title</b>	Type:	What we will do
<b>Idea generation</b>	Assignment 1 (A1+S1)	Create value from any object- record a video presenting what you did, give feedback to another classmate, and receive feedback yourselves.
<b>IPR</b>	Assignment 2 (A2+S2)	Read through a Harvard business case and write down your recommendations. Give feedback on another classmates' solution. Get feedback yourselves.
<b>Finance</b>	Assignment 3 (A3+S3)	Read through a Harvard business case and write down your recommendations.

### Group assignment

For your group assignment you are expected to work in groups (of four or max five individuals). The work can be done via digital or face-to-face. We will evaluate your final presentation for higher grades; you will need to submit the final report. Students who do not take an active part in the group projects will not pass the course. Details of the group assignment can be found in the *IME Group Assignment brief* document (available on the SP- StudentPortalen- Google DRIVE ). Throughout the course online workshops will be given which are closely related to the group assignment, and successful completion of them will make your group assignment significantly easier.

### Individual assignments and Workshop activities

Details of the individual assignments can be found in the Document section under the folder Assignments 1, 2, 3 in the Student Portal. Details of the workshops can also be found in the Workshop material folder in Student Portal and at the end of this compendium.

### Course Examination and grading

The examination of the course consists of three parts: the group assignment (15P) and the individual home exam(18P), individual assignments, Individual assignments and activities like workshop and guest lectures (17P). You must pass all three parts to successfully pass the course. The preliminary scale for the grades is ( Grade 5: 44- 50 Grade 4: 37 - 43 Grade 3: 25 - 3 Fail: 0-24). The distribution of points look like these:

Group assignment	15 points
Individual home exam	18 points
Individual assignments and activities	17 points
Total	50 points

*The group project might give additional bonus points that can be used to get grade 4 or 5. It will be possible to accumulate enough points to get grade 3 and pass the course without taking the home exam. However, in order to get grades 4 or 5 you nevertheless, need to take the home exam.*

## Literature

Details of course literature for specific lectures is provided in the schedule, and on Student Portal. It is recommended that you read these.

Schilling, M. (2009). Strategic Management of Technological Innovation. McGraw-Hill Education.

Porter (1979) "How competitive forces shape strategy, Harvard Business Review, May-April, p 137-145

Sarasvathy (2001) "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency", The Academy of Management Review, Vol. 26, No. 2, pp. 243-263

Vohora et al. (2004), Critical junctures in the development of university high-tech spinout companies, Research Policy 33, p. 147-175

## Web material

Lecture slides are also available there. The course homepage will also contain running information concerning the course (such as rescheduled lectures or other unplanned events), therefore you should visit it regularly. All web-lectures are available through Scalable Learning and contain short interruptions for quiz-questions in order to facilitate learning and diminishing the risk of falling asleep during the lecture :). Please note that your replies on these web-lecture-quizzes are not graded- they are just there for learning purposes. The course material, except for Schilling's book, will be available through the course homepage at the student portal. [https://drive.google.com/drive/folders/14ZO3wr5Ull0zplCWuXg4Ug5OZjmTLS\\_?usp=sharing](https://drive.google.com/drive/folders/14ZO3wr5Ull0zplCWuXg4Ug5OZjmTLS_?usp=sharing)

## Plagiarism

All assignments will be checked for plagiarism. Cases of plagiarism will be reported. If you fail an assignment due to plagiarism or other forms of misconduct, your resubmission needs to be done during a re-examination period. You will then get a new assignment to submit. In this link you will find some good info from Biology@UU about plagiarism and how to avoid it (it also shows the consequences if you plagiarise)

[https://ibg.uu.se/digitalAssets/331/c\\_331420-l\\_1-k\\_ibg-antiplagiat-en.pdf](https://ibg.uu.se/digitalAssets/331/c_331420-l_1-k_ibg-antiplagiat-en.pdf)

This is a site from MIT which also gives very nice explanations and examples of the issue:

<https://integrity.mit.edu/handbook/academic-writing/avoiding-plagiarism-paraphrasing>

## References

All assignments in the course should use the Harvard citation system. See: <http://www.citethisforme.com/harvard-referencing>

*\*Given the Coronavirus situation these workshops will be done as individual activities and depending on the workshop you must first upload your "individual part" and then participate on the discussion Forum to discuss or comment on each other's input, this corresponds to the "discussion part". Please follow the Workshops' instructions found in the Student Portal. We will follow the workshop activities according to the course schedule and/or we will have a lecture via Zoom, depending on the nature of the workshop to explain the activity for that day. We will have no face-to-face meetings or lectures. Please follow the schedule at the end of this compendium to check on which activity corresponds to which day.*