

### Information about the course ME2620 Technology-based entrepreneurship, Autumn 2024

#### **LEARNING OUTCOMES**

The course is aiming to give a broad introduction and overview of the field of technologybased entrepreneurship. The course is adapted for engineering students, since it supplements the technical education with conceptual models, tools and knowledge of the preconditions to establish new technology-based companies. Students who complete the course will understand the importance of technology-based entrepreneurship for the society.

After passing the course, the student should be able to:

1. Describe and analyse the challenges in connection with technology-based entrepreneurship.

2. Analyse how concepts, models, theories and practical experiences from the subject area entrepreneurship can be used to start technology-based companies.

3. Examine and explain the relationship between management and control of existing industrial activities and technology-based entrepreneurship.

4. Explain how macro- and microeconomic changes influence technology-based entrepreneurship.

5. Explain how ethical aspects, e.g. connected to intellectual property and immaterial rights, influence technology-based entrepreneurship.

6. Explain and provide arguments for how equal opportunities and diversity influence technology-based entrepreneurship and how technology-based entrepreneurship influence equal opportunities and diversity.

#### LECTURE PLAN AND LITERATURE

Note that the links below may only work when you are recognized as a KTH-student Additional materials are available on CANVAS. Please check the corresponding sessions and the preparations for each session on CANVAS. If articles are not available by clicking at the links below, please use the search tools available at the KTH library.

The main course book will be:

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York.

Note that this course book is available in several editions. Use of other versions than the above mentioned is on your own responsibility.

#### Session 1: Introduction

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapter 1.

#### Session 2: Entrepreneurship and Ethics (Åsa-Karin Engstrand)

See CANVAS for instructions about preparations

# Session 3: Macroeconomics, societal challenges and entrepreneurship (Kristina Nyström)

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapter 2

#### Session 4: Entrepreneurship around the world ((Kristina Nyström)

Global Entrepreneurship Monitor (2024) Global Entrepreneurship Monitor 2023/2024 Global Report25 Years and Growing (available at www.gemconsortium.org)

See CANVAS for information about preparations

#### Session 5: Risky business (Kristina Nyström)

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapter 7, Chapter 12

#### Session 6: Tech in focus (Kristina Nyström)

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapters 4 and 5

See CANVAS for information about preparations

#### Session 7: Economics for entrepreneurs (Kristina Nyström)

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapter 17

#### Session 8: Financial resources (Kristina Nyström)

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapter 18

See CANVAS for information about preparations

#### Session 9: Entrepreneurial performance (Kristina Nyström)

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapter 20

#### Session 10: Entrepreneurship and gender (Åsa-Karin Engstrand)

See CANVAS for information about preparations

## Session 11: Entrepreneurial ecosystems and the geography of entrepreneurship (Kristina Nyström)

Decreton B. Monteiro F. Frangos J-M, and Lisa Friedman L. (2021) <u>"Innovation Outposts in Entrepreneurial Ecosystems: How to Make Them More Successful"</u>, California Management Review 2021, Vol. 63(3) 94–117.

#### Session 12: Entrepreneurship and the rules of the game ((Kristina Nyström)

Byers, T. H, Dorf, R. C., Nelson, A. J. (2019) Technology Ventures: From Idea to Enterprise, Fifth edition. McGraw-Hill New York. Chapter 10

Baumol, W. J. (1990), <u>"Entrepreneurship, Productive, Unproductive, and Destructive, The</u> Journal of Political Economy, Vol. 98, 5:893-921.

#### Session 13: Resource seminar (Kristina Nyström)

Only for students who are missing one or two of the sessions with mandatory preparations.

#### Session 14: Tech-based entrepreneurship group project seminars (Kristina Nyström)

#### **EXAMINATION AND GRADING**

The examination consists of the following elements:

- SEM1: Preparation and active participation in five mandatory seminars/sessions (individual 1,5 ECTS graded Pass/Fail)
- INL 2: Entrepreneurship essay (individual) 3 ECTS graded A-F
- PRO1: Tech-based entrepreneurship project (group) 3 ECTS graded A-F

The **tech-based entrepreneurship project** and the **entrepreneurship essay** is graded A-F. The assessment of the tech-based entrepreneurship project and entrepreneurship essay range between 0 and 100, where 60 correspond to the grade E, 65 the grade D, 70 grade C, 80 grade B and 90 grade A. Only projects and essays delivered in time can get the grade A or B. The grading criteria can be found at the end of this document. There is no opportunity of an assignment in order to improve the grade of the project or essay further. The total grade on the course consists of the grade on the entrepreneurship essay (50%) and the grade of the tech-based entrepreneurship group project (50%). In order to pass the whole course students, need pass all parts of the examination.

#### PREPARATION AND ACTIVE PARTICIPATION IN SESSIONS

In relation to each session, there will be information on the required preparations before each session. Individual preparation and active participation in five sessions (see below) is required for passing the SEM examination of the course (see above). Please have a look at the required preparations in advance since they need some planning and submission before the session. If you for some valid reason are unable to attend some session there is an opportunity to compensate at the resource seminar (maximum 2 seminars lacking). For the resource seminar the task is the same as for the original occasion.

#### The four sessions that you should complete are:

- Session 2: Entrepreneurship and ethics
- Session 4: Entrepreneurship around the world
- Session 6: Tech in focus
- Session 8: Financial resources
- Session 10: Entrepreneurship and gender

#### **TECH-BASED ENTREPRENEURSHIP PROJECT (GROUP)**

The project is written in groups consisting of 4-5 students. The project should contain a cover page, 6-8 pages of text (corresponds to a maximum of 4000 words)) and a list of

references. If the assignment exceeds this limit, it will influence the grading of the assignment.

This project should be presented at a seminar on October 10th. Your group (after the deadline to form a team) will be assigned to one of the seminars). At the seminar, the authors will present their paper (about 10-15 minutes) At this seminar you will also act as discussant of a project written by another group (5 minutes). The project should be uploaded on the course page on CANVAS at the latest 19:00 October 8th. Note that the assignment should only be uploaded by one of the group members!

The assignment will be checked for plagiarism. Also note that the work should be performed without any assistance of any AI tools. All members of the group are responsible for the whole content of the assignment.

The project is centered around a tech-based industry and an entrepreneurial journey in this tech-industry. The project should include three parts:

- 1) The tech-industry and its development (based on a literature review).
- 2) The entrepreneurial journey (based on an interview with an entrepreneur in the industry)
- The performance of the entrepreneurial venture (based on an analysis of the financials (official records + entrepreneurship interview of the entrepreneurial venture)
- 4) What are the challenges for the future for the venture and for the industry? (based on the interview of the entrepreneurial venture and your analysis)

For the interview the following draft questions can be used:

- Tell us about your journey as an entrepreneur. How was the idea generated? How has it developed?
- What has been the main challenges?
- What is your advice for future tech entrepreneurs?
- What are the main challenges of the company/industry for the future?

Regarding the companies / interview you will be provided with a list of suggestions of companies and entrepreneurs. However, you are also encouraged to find companies of your own interest as well. The deadline for forming teams is September 10<sup>h</sup> at 10:00. See instructions on how to do this in the module related to session 5 in CANVAS).

#### Peer review:

Immediately after deadline discussants will be posted on CANVAS. In addition, all the assignments will be posted there so you get access to them there. Submit the peer review before the seminar (you prepare your peer review as a group). The peer review and your oral discussion in class should focus on:

The discussion of the industry and the entrepreneurial journey:

- · Are relevant and sufficient information about the industry provided?
- Are relevant and sufficient information about the entrepreneurial journey provided.
- What would we like to know more about in order to understand the industry better?

Connection to concepts and framework in entrepreneurship:

• Is the discussion connected to relevant concepts and frameworks presented in the course?

Other:

- · Other strengths and weaknesses identified.
- Structure and organization of the paper?

#### ENTREPRENEURSHIP ESSAY (INDIVIDUAL)

The entrepreneurship essay should consist of maximum 2500 words and a complete list of references (not included in the word count). Please include a word count on your front page when handing in your essay!

In the essay you will individually apply the content of the lectures and the literature presented during the course. The essay question will be distributed at the lecture on September 17th and posted on CANVAS afterward. The essay should be handed in electronically (on the course page in CANVAS at the latest 19:00 September 27th 18<sup>th</sup>. The assignment will be checked for plagiarism. Also note that the work should be performed without any assistance of any AI tools.

#### INFORMATION RETRIEVAL, REFERENCES AND PLAGIARISM

We use the Harvard system for referencing. Read more about plagiarism in the KTH handbook <u>Avoiding plagiarism</u> (English version starts at page 86). Note that plagiarism is a serious matter and are handled by KTH's Disciplinary committee. Disciplinary measures may include suspension for 1-6 months.

#### CANVAS

The course has its own page on CANVAS "ME2620 Technology–based entrepreneurship Autumn 2024". This page provides information about the course, instructions on how to prepare for each session and slides used by the teachers will be available for download on this page.

#### **COMPENSATORY SUPPORT**

For students with functional variations who have a statement from KTH's FUNKA unit on recommended support measures in the examination the following applies:

- Support actions under code R (i.e., adjustments relating to space, time and physical circumstances) are granted by the examiner.
- Support actions under code P (i.e. pedagogical adaptation) are granted or rejected by the examiner after contact made by the student in accordance with KTH's rules. Normally, support actions under code P will also be granted.

#### REGISTRATION

In order to take the course, you need to register for the course. Registration should be done through the web. Please find information about registration here: <u>General information</u> <u>about course registration | KTH</u>. If you have problems related to admission and registration, please contact your student counsellor/coordinator at the educational office to make your course election. Once you are properly admitted and registered for the course you will have

access to the course page at CANVAS. It is necessary to be registered for the course in order to participate in the course and take exams.

### **COURSE COORDINATOR, EXAMINER AND TEACHERS**

Kristina Nyström, Professor (course coordinator, examiner and teacher) E-mail: <u>kristina.nystrom@indek.kth.se</u>

Åsa-Karin Engstrand, Associate Professor (teacher) E-mail: <u>asa-karin.engstrand@indek.kth.se</u>

SCHEDULE						
Date	Time	Room	Content	Teachers		
27 August	10-12	V32	Session 1: Introduction	Kristina Nyström		
29 August	10-12 or 13-15 or 15-17	Room 443 Lindstedtsv. 32	Session 2: Entrepreneurship and ethics (mandatory session preparation)	Åsa-Karin Engstrand		
3 September	10-12	U31	Session 3: Macroeconomics, societal challenges and entrepreneurship	Kristina Nyström		
5 September	10-12 or 13-15 or 15-17	Room 443 Lindstedtsv.32	Session 4: Entrepreneurship around the world (mandatory session preparation)	Kristina Nyström		
10 September	10-12	V34	Session 5: Risky business	Kristina Nyström		
12 September	10-12	M33	Session 6: Tech in focus (mandatory session preparation)	Kristina Nyström		
17 September	10-12	Q34	Session 7: Economics for entrepreneurs Handing out the individual assignment	Kristina Nyström		
19 September	8-10 or 10-12 or 13-15	Room 443 Lindstedtsv.32	Session 8: Financial resources (mandatory session preparation)	Kristina Nyström		
25 September	15-17	K2	Session 9: Entrepreneurial performance	Kristina Nyström		
26 September	10-12 or 13-15 or 15-17	Room 443 Lindstedtsv.32	Session 10: Entrepreneruship and gender (mandatory session preparation)	Åsa-Karin Engstrand		
1 October	10-12	W42	Session 11: Entrepreneurial ecosystems and the geography of entrepreneurship	Kristina Nyström		
3 October	10-12	W25	Session 12: Entrepreneurship and the rules of the game	Kristina Nyström		
8 October	10-12	W37	Session 13: Resource seminar	Kristina Nyström		
10 October	8-10 or 10-12 or 13-15 or 15-17	Room 443 Lindstedtsv.32	Session 14: <b>Tech-based</b> entrepreneurship group project seminars	Kristina Nyström		

## 

## ASSESSMENT CRITERIA

Cue dine enite rie				
Grading criteria				
Tech hazad				
Tech-based				
entrepreneurship group				
project		~		
E	D	C	В	A
To some extent connect to	All .	Connect to relevant	All .	At an advanced level connect
relevant concepts and	requireme	concepts and	requireme nts for C	to relevant concepts and
frameworks presented in the	nts for E and at	frameworks presented in the course.	and at	frameworks presented in the
course.	least half	the course.	least half	course.
	the	Provide a	the	Provides an <b>advanced level</b>
	requireme	comprehensive critical	requireme	critical discussion and analysis.
	nts for C.	discussion and analysis	nts for A	critical discussion and analysis.
		and and going		Present a well-structured and
		Present a well-structured	The	well-written project report.
		venture project report.	assignme	······
		1 5 1	nt is	The assignment is delivered
			delivered	before deadline.
			before	
			deadline	
Grading criteria				
Entrepreneurship essay	D	C	D	4
E The linear is to see	D	C Provides a	B	A Provides an <b>advanced level</b>
The discussion is to some	All		All	
extent based on and	requirem	comprehensive	requirem	discussion of theories and
makes reference to	ents for	discussion of theories	ents for	material presented in the
relevant parts of the	E and at	and material presented	C and at	course.
course literature.	least half	in the course.	least half	
	the .		the .	At an <b>advanced level</b>
	requirem	Connect to relevant	-	connect to theories presented
	ents for	theories presented in		in the course.
	C.	the course.	А.	
				Present a well-structured and
		Present a well-	and	well-written assignment.
		structured		
		assignment.	The	The exam is delivered before
			exam is	deadline
			delivered	
			before	
			deadline	
1	1	1		