



THEORIES AND PRACTICE OF INNOVATION

General data

Course code:	M23VFA01E
ECTS credits:	9
Type of the course:	general core course
Semester:	Spring, Semester 1
Course restrictions:	-
Course leader (with availabilities):	<i>Dr. Tamás SEBESTYÉN, Professor</i> +36 72 501-599/ 63150 sebestyent@tkk.pte.hu office: B109
Further lecturer(s) (with availabilities):	<i>Dr. Katalin ERDŐS, Assistant Professor</i> +36 72 501-599/ 63134 erdosk@tkk.pte.hu office: B244 <i>Dr. Kármén KOVÁCS, Associate Professor</i> kovacs.karmen@tkk.pte.hu +36 72 501-599/ 23186 office: 117 <i>Dr. Beatrix LÁNYI, Associate Professor</i> <i>Dr. Péter KRISTÓF, Advisor to the Chancellor</i> <i>Dr. Ever BEDOYA, Assistant Professor</i> <i>Dávid BILICZ, PhD Student</i> david.bilicz@tkk.pte.hu

1. Description and aims

The course provides a structured insight into the most important ingredients of innovation theories and practices. The course starts with definitional aspects, measurement issues, then tackles the economic foundations of innovation from both a microeconomic and a macroeconomic perspective. Then, students are introduced into recent developments in innovation theory, especially the concept of innovation systems, innovation networks and social innovation. Then, the classes turn towards innovation policy and the practical and management aspects of innovation discussing the organizational background, challenges and strategies of innovation at the company level. Due to the relatively abundant time allocation for contact classes, the course builds on discussions about the topics, but students are also strongly exposed to teamwork and individual assignments in order to engage more deeply with the topics through in-class activities.



2. Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, students should be able to:

- CILO 1. recognize the role of innovation in company-level as well as broader economic growth and development (PILO1, PILO2);
- CILO 2. discuss the roles of actors in innovation systems (PILO2);
- CILO 3. describe the mechanisms of value creation through innovation (PILO1);
- CILO 4. demonstrate the ability to participate in innovation management teams (PILO5, PILO7);
- CILO 5. analyse complex innovative processes (PILO3);
- CILO 6. use the vocabulary of innovation and innovation management (PILO2).

3. Content, schedule

1. Definition and measurement of innovation
2. The economics of innovation, innovation and inequality
3. Innovation systems, innovation networks
4. Universities and innovation
5. Social and sustainable innovation
6. Applications of AI in business (invited speaker)
7. Market oriented innovation (invited speaker)
8. TBA (invited speaker)
9. Exponential Organizations - the Holy Grail of scalable innovation?
10. Organizational frameworks for innovation
11. From product development to innovation marketing
12. Innovation, company performance and competitiveness

4. Learning and teaching strategy, methodology

This is a master course, which means that in addition to standard lecture formats where professors introduce the basic concepts of the topic (CILO1, 3, 5, 6), students are required to actively participate in open discussions as well as group works and individual assignments. Students are required to read, present and discuss selected academic contributions to some detailed aspects of the topics (CILO 2, 3, 6), which enable them to familiarize with rigorous scientific research as well as challenging their presentation skills by requiring a clear and focused delivery of these materials to the classroom. Group works enhance collective problem solving, as well as bring some actual cases into the classroom (CILO 4, 5, 6). Finally, preparation of a semester paper develops skills in collecting, analysing and (written) presenting of information (CILO 2, 3, 6).



5. Assessment

Formative assessment elements:

- *Class activity and discussion*

Summative assessment elements:

Individual Assessment	70%	Group Assessment	30%
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Name of the element	Weight	Type	Details	Retake opportunity	Req.*	Related CILOs
Student presentations	20%	Individual, oral, coursework	For certain topics, students are assigned readings that they are called to present in the form of a short presentation in class.	No	No	CILO 1 CILO 2 CILO 3 CILO 6
Group assignments	20%	group, oral/written, coursework	For every topic, part of the class hours are devoted to group assignments in which students have to focus on a challenging aspect of the given topic.	No	No	CILO 1 CILO 2 CILO 3 CILO 4 CILO 5 CILO 6
Class activity	10%	Individual/group, written/oral, coursework	Students get points for class activity, engagement in discussions after group/individual presentations	No	No	CILO 2 CILO 5 CILO 6
Semester paper	50%	individual, written, exam	Students are required to write a semester paper by the end of the course. These are meant to be concise summaries of a given topic.	Students who fail the semester paper are provided two further opportunities to write a comprehensive exam from the semester topics.	Yes	CILO 1 CILO 2 CILO 3 CILO 5 CILO 6

* Req.: Completion of the element is required to pass the course, irrespective of the performance in other elements.

6. Learning materials

- Essential

Atkinson, R. D. – Ezell, S. J. (2016): Innovation economics – The Race for Global Advantage. Yale University Press, New Haven and London

Tidd, J. – Bessant, J. (2014): Managing innovation: integrating technological, market and organizational change. 5., reprinted ed. Chichester: Wiley. (Includes interactive e-book) ISBN 978 1 118 36063 7

- Recommended



Clark, B. R. (1998): *Creating Entrepreneurial Universities – Organizational Pathways of Transformation*. Pergamon Press

Etzkowitz, H. (2008): *The Triple Helix – University-Industry-Government Innovation in Action*. Routledge, New York and London

Freeman, C. – Soete, L.: *The economics of industrial innovation*, Routledge, London and New York 2004

Maital, S. – Seshadri, D. V. R. (2014): *Innovation Management: Strategies, Concepts and Tools for Growth and Profit*. 2. ed., 2. print. Los Angeles: SAGE. ISBN 978 81 321 0722 4

Polenske, K. R. (ed.): *The economic geography of innovation*, Cambridge University Press 2007

Swann, G. M. P.: *The Economics of Innovation*. Edward Elgar Cheltenham, UK, Northampton, MA, USA 2009

7. Further information

International aspects embedded with the course
Not directly relevant
Ethics, Responsibility & Sustainability (ERS) aspects embedded with the course
Any topic of innovation is essentially related to the sustainable conduct of economic activities. In this respect class/group discussions are expected to cover sustainability issues anytime, but one of the topics of the semester is explicitly devoted to sustainable innovation.
Connections to the world of practice of the course
The course setup includes wide space for inviting practitioners to the classes who illuminate different aspects of the course materials from the practical side.