



RTU Course "Innovation Technology"

22161 Starptautisko programmu nodaļa

General data

Code	IUE530
Course title	Innovation Technology
Course status in the programme	Compulsory/Courses of Limited Choice
Course level	Post-graduate Studies
Course type	Professional
Field of study	Innovations
Responsible instructor	Elīna Gaile-Sarkane
Academic staff	Uldis Cimdiņš
Volume of the course: parts and credits points	1 part, 6.0 Credit Points, 9.0 ECTS credits
Language of instruction	LV, EN
Possibility of distance learning	Not planned
Abstract	Innovation is a novelty in the activities of an enterprise if it is characterized by having positive economic or strategic result. The course covers different actual theoretical concepts about innovations in different real life situations. The course provides conceptual and technical skills required to manage innovation related issues and develops students' understanding that creation of innovation friendly environment will facilitate establishment and development of innovative companies. Topics include: innovations in product life cycles, kinds of innovation, commercialization methods, corporate entrepreneurship process model or „Salmon model” and its comparison with open innovation concept, innovation support systems in Latvia and abroad, creative thinking techniques, financing innovation.
Goals and objectives of the course in terms of competences and skills	The goal is to provide students with theoretical insight and give possibility to obtain practical skills in managing innovative entrepreneurship. The objectives: to understand essence of innovation and its role; to analyze innovation in product life cycles; to understand innovation development methods; to gain capabilities for practical usage of corporate entrepreneurship process model; to understand open innovation concept; to discuss advantages and shortages of innovation support systems; to have knowledge of creative thinking techniques, and to be able to find appropriate technique and use it; to have knowledge of financing innovation and selecting appropriate source of funding.
Structure and tasks of independent studies	Case analysis, solving tasks, preparing presentations, improving skills to work in groups, tests, course project (group work), final exam in form of essay.
Recommended literature	1. Inovatīvās darbības pamatelementi. Rokasgrāmata maziem un vidējiem uzņēmumiem (Otrais papildinātais izdevums) – Rīga, LIAA, 2007 – 276 lpp. Ieteicamā literatūra: 1. Atklāsme par inovāciju būtību. - Rīga, LIAA, 2004 – 44 lpp. 2. Inovatīva domāšana / tulk. no angļu val. Agnese Orupe. - Rīga : Lietišķās informācijas dienests, 2007. - 203 lpp. - (Harvard Business Review on) Oriģ. nos.: Harvard Business Review on Breakthrough Thinking 3. Veiksmes kods. Uzņēmēju stāsti un atziņas. - Rīga, LIAA, 2010 – 61 lpp. 4. Hamel, Gary. 2002. Leading the Revolution. Boston, Mass.: Harvard Business School Press
Course prerequisites	Fundamentals of entrepreneurship

Course outline

Theme	Hours
1. Introduction. Concept of innovation. Innovation necessity. Examples of innovation. Innovation in the product life cycle	6
2. Organization of innovation process within a company: Innovation culture; Corporate entrepreneurship model.	6
3. Types of innovation: Sustaining and disruptive; Business model; Concept of open innovation; Radical innovation.	12
4. Creativity and innovation: Creative thinking; Human brain operations; Creative thinking techniques; Idea assessment.	16
5. Innovation support systems in Latvia and abroad.	6
6. Innovation commercialisation methods.	6
7. Financing innovation: Determination of financial needs; Financing methods; Sources; Venture capital; State financing.	12
8. Protection of intellectual property rights: Types of intellectual property rights; methods of protection.	8
9. Course project „Business idea acid test” (group work).	16
10. Final examination – an individual essay on the topic selected from the list of suggested topics.	8

Learning outcomes and assessment

Learning outcomes	Assessment methods
1. Students will comprehend the concept of innovation and its importance in the development of company, industry and society as a whole. Students will be able to analyze the role of innovation within the product life cycle.	Individual assignment “Innovations in my company”

2. Students will be able to apply the corporate entrepreneurship model and explain why and how to perform product development and commercialisation within the incubation stage.	1. Test – 15 min 1. Questions and answers to review the test.
3. Students will be able to distinguish between innovation types and explain similarities and differences. Students will be able to select the most suitable implementation strategy for each type of innovation.	2. Test – 15 min 2. Questions and answers to review the test.
4. Students will comprehend the concept of creativity and explain the influence of human brain operations on the innovation creation process. They will be familiar with creative thinking organization processes and techniques. Students will be able to apply various idea assessment techniques.	1. Group work and presentation of the results.
5. Students will be able to discuss strengths and weaknesses of the innovation support systems in Latvia and abroad.	2. Group work and presentation of the results.
6. Students will be familiar with innovation commercialisation methods and will be able to choose and apply the most suitable method in practise.	3. Test – 15 min 3. Questions and answers to review the test.
7. Students will be able to identify financial needs. Students will have a good knowledge on financial opportunities and be able to choose the most appropriate sources of financing. Students will be able to evaluate cooperation possibilities with different holders of financial sources.	4. Test – 15 min 4. Questions and answers to review the test.
8. Students will be able to differentiate between various types of intellectual property rights and protection methods. Students will be able to use patent search data bases and will have an understanding on various methods of selling patents.	3. Group work and presentation of the results.
9. Students will be able to analyse the market situation within the industry related to the analysed product in the frame of the course project „Business idea acid test”.	Written assignment including public presentation
10. Final assessment. Students will be able to analyse, apply and compare various innovation development methods. They will be able to compare different types of innovation and to identify the most appropriate commercialisation method.	Written exam - an individual essay on the topic selected from the list of suggested topics.
Students will be able to analyse market situation and creatively search for solutions to various problems. Students will comprehend and be able to apply the theories discussed in this course.	The exam is mandatory. If it is not passed, the student does not receive the final grade and the course is considered as failed. Students may earn extra 10 points for active class participation; however the total number of points shall not exceed 100.

Study subject structure

Part	CP	ECTS	Hours per Week			Tests		
			Lectures	Practical	Lab.	Test	Exam	Work
1.	6.0	9.0	3.0	3.0	0.0		*	