

Syllabus “INNOVATION MANAGEMENT”

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Department responsible for the course or equivalent: Institute of Management in Economic, Ecological and Social Systems; Management and Innovative Technologies Department

Level of course unit: Bachelor level, Master level

ECTS credits: 5

Course Description

This course covers theoretical knowledge and practical skills development in organization and management of innovative activity in modern organizations from technological, organizational, marketing, investment and socio-psychological positions.

Objectives

- to understand how development of economic and technological scenarios influence the innovation strategy of a company;
- to understand the importance of organizational innovation for establishment of an innovation-oriented company;
- to understand the shift from technological to marketing innovation;
- to analyze the multiple potential sources of innovation;
- to develop and manage innovative strategy for the company and how to innovate in different scenarios.

Course contents

Session 1. Basic concepts and definitions of innovation management

• The emergence, establishment and the main features of innovation management; • Innovation and social laws; • Classification of innovations as management object, definition, importance, functions, classification of innovations; the life cycle of innovation; • Triple-helix concept.

Session 2. Organizational structure of innovation management

• Classification of innovative organizations; • Research and development (R&D) ; • Classification, typology of research organizations; • Research areas of innovation management; • Small research business; • risk (venture) business.

Session 3. Regulations of innovation activity

• Regulatory considerations; • State regulations of innovation activity; • Determination of the content and direction of innovation policy; • Methods of implementation; • Choice of policies, strategic and operational planning and used methods; • Forecasting, innovation motivation and methods used.

Session 4. Pricing of innovations

• Factors affecting the pricing process; • Price management approach; • Pricing process of an innovative product; • Pricing methods of innovation project; • Economic efficiency of innovations and methods of its analysis.

Session 5. Innovation strategic management

• The concept of strategic management in the innovation sphere; • Features and choice of strategy; • Extrapolation, search forecast, normative forecast, forecast on the basis of trend analysis, intuitive forecast; • The overall goal and model of innovation management system; • Optimal control techniques; • Basic concepts of the theory of decision-making; • Classification problems of innovative strategies' development.

Session 6: Innovation project management

• Classification of innovation projects; • Development of programs and projects; • Features of innovation project management; • Research and Development of innovation project; • High-involvement innovation approach.

Session 7. The risks of innovation projects

- Risk classification;
- Accounting risks in projects;
- Methods to reduce the impact of risks;
- Investment return terms, the accounting rate of return, net present value, internal rate of return.

Session 8. Examination of innovative projects

- Tasks and types of expertise;
- Qualitative methods;
- Quantitative methods;
- Evaluation of the project effectiveness;
- Objectives and stages of patent research;
- Legal protection of basic scientific and technological results;
- The order of registration of the application for the invention;
- Examination of an application;
- Rationalization proposals.

Session 9: Final Project Presentations

Teaching Style

Theory and practice of innovation management will be investigated through lecture/class discussion and case study examination. The course is intensive and interactive. There is an author's study guide for this course, also, a case pack with required and suggested readings and cases will be available. A willingness to discuss, critique and challenge views is also necessary. Most materials (cases and readings) will be e-mailed to students. The course will use a variety of methods including lectures, case studies, work groups, discussions and team project. Additional links to online resources are given at the end of this syllabus.

Within the course the project on high involvement innovation analyses will be presented as a final case study focusing on providing students with research program in domestic and international environment, including communication, team building and motivation in international projects, as well as innovative management approach. This research project of employees' involvement in innovation includes:

- collecting data in local businesses,
- analyzing the degree of innovation involvement in small and medium-size companies,
- providing recommendations for employee innovation involvement in this field, taking international aspects into account,
- making the final report.

Grading

Grade Component	Individual / Group	Weight
Class Participation	Individual	30%
Case Assignments	Study Group	30%
Final Case write-up	Team Group	40%

Assessment methods and criteria

Criteria for evaluation:

Class Participation

- 26-30 points to the students demonstrating a thorough understanding of the problem comprehensively, consistently, correctly and logically presenting the theoretical material; correctly formulating the definition of topic questions; correctly formulating opinions during topic discussions in the group.
- 21-25 points to the students demonstrating considerable understanding of the problem, knowledge of the basic theoretical concepts; fairly consistently, correctly and logically presenting the material of topic questions; formulating opinions during topic discussions in the group.
- 11-20 points to the students demonstrating considerable understanding of the problem, knowledge of the basic theoretical concepts; fairly consistently, correctly and logically presenting the material of topic questions; not participating in topic discussions in the group.
- 0-10 points to the students demonstrating a partial understanding of the problem, a general knowledge of the material being studied by topic questions; not participating in topic discussions in the group.

Case Assignments

- 16-30 total points evaluation of "passed" is given to the students if the decision is consistent formulated, if there is a deeper problem conceived, if he demonstrates an original approach (innovation, creativity); registered alternatives, if there is the possibility of the result use;
- 0-15 total points total evaluation of "not passed" " is given to the students if the decision does not meet the ideas of modern management technologies course, is not adequate; is not sound and doesn't predict difficulties; is not applicable in practice.

Final Case write-up

- Assessment of "excellent" (35-40 points) is given to the student if he introduces a clear thesis or a clear statement of the position consistently settled into a well-organized final case study; presents a balanced argument supported with information; raises important questions; analyzing and convincing conclusions; there are no conceptual errors.
- Assessment of "good" (29-34 points) is given to the students if he introduces basic requirements for the final case study, but permit shortcomings. In particular, there are inaccuracies in the presentation of the material; there is no logical sequence in the judgment.
- Evaluation of "satisfactory" (22-28 points) is given to the students if the final case study's topic is disclosed not enough; specific position are not given; information is inaccurate, mechanical errors seriously impedes understanding.
- Evaluation of "unsatisfactory" (less than 22 points) is given to the students if the final case study topic does not match, reveals a significant lack of understanding of the problem, arguments are scattered, inconsistent, many dubious or erroneous facts, the text is untidy and hard to read, a lot of grammatical and spelling errors.

Course Learning Outcomes

- external and internal environment analyses of innovation company,
- key elements and their impact on the company;
- analyses communication processes in innovation company organization, and proposals for improvement of their effectiveness;
- skills analysis of the competitive environment sector;
- organization of team interaction using management tasks, methods and techniques of company's innovation activity.

Course literature (recommended or required)

Makarova E.L. Innovation management: study guide / Southern Federal University. - Rostov-on-Don; Taganrog: Southern Federal University Publishing House, 2018. - 94 p. ISBN 978-5-9275-3094-6

Andreassen J.-E., Makarova E.L. Khlebnikova A.I. High-involvement innovation model in border regions construction industry: comparative analysis Norway & Russia // Uddevalla Symposium 2016: Geography, Open Innovation, Diversity and Entrepreneurship, Revised papers presented at the 19th Uddevalla Symposium 30 June- 2 July, 2016, London, United Kingdom p.33-55

Bessant, J. High-Involvement Innovation: building and sustaining competitive advantage through continuous change. – Chichester, Wiley. – 2003.

Dillner, U. & Kaufmann C. Leading and Organizing for Radical Innovation // A qualitative benchmarking study of how SKF could stimulate radical innovation https://gupea.ub.gu.se/bitstream/2077/39816/4/gupea_2077_39816_4.pdf

Etzkowitz H., Ranga, M. (2013) "Triple Helix Systems: An Analytical Framework for Innovation Policy and Practice in the Knowledge Society", *Industry and Higher Education* 27 (4): 237-262

Innovation management [Elektronski vir] / authors Borut Likar ... [et al.] ; editor Borut Likar, co-editors Peter Fatur, Urška Mrgole ; translation Arslingue K. Žontar, TEFL, TBE. - 1st. ed. -

El. knjiga. - Ljubljana :Korona plus - Institute for Innovation and Technology, 2013 ISBN 978-961-90592-9-6 (pdf)

Makarova E.L., Firsova A. A. Computer Cognitive Modeling of the Innovative System for the Exploration of the Regional Development Strategy // Computer Modelling in Decision Making 2017 / Ed. by A. Althonayan, T. A. Belkina, V. S. Mkhitarian, D. Pavluk, S. P. Sidorov.— Aachen, 2017. — Vol. 2018 of CEUR Workshop Proceedings. — Pp. 113–125.

Oslo Manual. Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition <http://www.cisstat.com/innovation/Oslo%20Manual%20English.pdf>

Tidd, J., Bessant J. Managing innovation: integrating technological, market and organizational change // Chichester, Wiley. – 2009

Internet resources

Cool Hunting is synonymous with seeking inspiration. Our global team of editors and contributors sift through innovations in design, technology, art and culture to create our award-winning publication, consisting of daily updates and weekly mini-documentaries. <http://www.coolhunting.com/>

CoolBusinessIdeas is a blog about brand new promising business ideas around the world. Follow them in the hunt for the latest business concepts! <http://www.coolbusinessideas.com/>

David Report is an influential blog and online magazine that since 2006 writes about trends in the intersection of design, culture and business. Our readers share our interest and curiosity in everything from art, architecture, culture, design and fashion to food, innovation, music, sustainability and travel. <http://davidreport.com/>

Innovation Excellence: <http://innovationexcellence.com/>

Innovation management article library: <http://www.innovationmanagement.se/article-library/>

JWT Intelligence is focusing on identifying changes in the global zeitgeist so as to convert shifts into compelling opportunities for brands. They have done this on behalf of multinational clients across several categories including pharmaceuticals, cosmetics, food, and home and personal care. <https://www.jwtintelligence.com/>

Mashable is the largest independent news source dedicated to covering digital culture, social media and technology. Mashable's 20 million monthly unique visitors and 4 million social media followers have become one of the most engaged online news communities. <http://mashable.com/>

More Inspiration lets you discover innovative products and technologies from all possible domains. www.moreinspiration.com/Search

NOTCOT Inc is a growing network of design sites currently including NOTCOT.com and innovative community contributed sites NOTCOT.org + NotCouture.com + Liquirious.com. NOTCOT is a visual filtration of ideas + aesthetics + amusements. <http://www.notcot.org/>

PSFK. Over 1,000,000 readers from the design, digital, marketing, media and technology industries come to PSFK each month to read and share the emerging ideas. www.psfk.com

Springwise scans the globe for the most promising business ventures, ideas and concepts that are ready for regional or international adaptation, expansion, partnering, investments or cooperation. <http://www.springwise.com/>

TED is a nonprofit devoted to Ideas Worth Spreading. It started out (in 1984) as a conference bringing together people from three worlds: Technology, Entertainment, Design. <http://www.ted.com/>

The purpose of Alltop is to help you answer the question, 'What's happening?' in 'all the topics' that interest you. You may wonder how Alltop is different from a search engine. A search engine is good for answering questions like, 'How many people live in China?' However, it has a much harder time answering the question, 'What's happening in China?' That's the kind of question that we answer. <http://trends.alltop.com/>

Trend Hunter is the world's largest, most popular collection of cutting edge ideas, crowdsourced by 85,462 Trend Hunters. <http://www.trendhunter.com/>

Trendcentral. Powered by the research, insights and global trendsetter network of The Intelligence Group, trendcentral® focuses on what's new and what's next in the realms of lifestyle, fashion, entertainment and technology. Over the years, trendcentral has forecast the arrival of cultural phenomena well before they entered the mainstream, ranging from branded designer jeans and vampire films to videoblogging and Twitter. www.trendcentral.com

TrendOriginal is the personal consumer trends collections of Dr. Taly Weiss, CEO and head researcher for TrendsSpotting.com Market Research and founder of TendoScope-The trend spotting lab. <https://trendyoriginals.com/>

Trendwatching. One of the world's leading trend firms, trendwatching.com scans the globe for emerging consumer trends, insights and innovations.

World Future Society is to enable thinkers, political personalities, scientists and lay-people to share an informed, serious dialogue on what the future will be like. <http://www.wfs.org/>