УНИВЕРСИТЕТ ЗА НАЦИОНАЛНО И СВЕТОВНО СТОПАНСТВО

THE UNIVERSITY OF NATIONAL AND WORLD ECONOMY

Adopted by the Faculty Council Decision of

Faculty of *General economics*

protocol № ….. / ……

Approved by:

Dean of Faculty
Prof. Georgi Petrunov, PhD

SYLLABUS

Course	**ECONOMICS OF INNOVATIONS**	
Course Category	**OPTIONAL**	
Area of Study	**SOCIAL SCIENCES, ECONOMICS AND LAW**	
Field of Study	**ECONOMICS**	
DegreeProgramme	**ECONOMICS TAUGHT IN ENGLISH**	
Educational and Qualification Degree	**BACHELOR**	
Faculty	**GENERAL ECONOMICS**	
Department	**ECONOMICS**	
Academic Hours	**Full Time**	**60 hours**
	Distance Learning	
Extracurricular Academic Hours	**Full Time**	**60 hours**
	Distance Learning	
Credits	**4** **4**	
Lecturer	**Assoc. prof. Nikolay Velichkov, PhD** **Chief assist. prof. Antoan Shotarov, PhD**	

Course Description

1. The course "Economics of Innovation" has been taught since 1992 to students of the specialty "ECONOMICS TAUGHT IN ENGLISH" in the Bachelor's degree program.

2. Content.

The aim is to gain knowledge about the main categories and regularities in the technological development of society, the specifics, and the mechanism of management of innovation processes in the economic system at the micro and macro level, about the transition to the new knowledge-based economy and innovation.The material is structured into 13 topics.The first three themes are an introduction to innovation issues and reveal the relationship between technological development and long-term trends of change in society. They trace the development of innovation theory from its founder J. Schumpeter, to his contemporary followers. It examines scientific, technical, and technological progress through the agrarian, industrial and microprocessor revolutions. It traces the background, nature, and characteristics of the new knowledge-based economy and innovation. It analyses the relationship and changes that innovation has on the production frontier, the division of labor, specialization, market forces, and market equilibrium.The next three topics introduce the different approaches that entrepreneurs take in creating and targeting corporate innovation structures and the models by which they are built. The different types of innovation formations for inter-firm integration in innovation activity are characterized. The impact of firm innovation on the main indicators characterizing the firm's activity in the product cycle is examined, focusing on the impact of innovation. This is inferred as the basis of the firm's behavior in the short and long term and determining its development path in search of its market and technological niche. The firm's behavior under the three main market structures - monopolistic, monopoly, and oligopoly - is analyzed. Intellectual property rights are seen as a natural outcome of the firm's innovation activity to gain comparative advantage, technological rents, and higher competitiveness.The following topics are dedicated to macro-innovation policy. The theoretical concept of the formation of the national innovation system is presented. The structure, scope, institutions, linkages, and flows that shape the modern national innovation system is characterized. The main concepts and dependencies in the knowledge-based economy are derived, the main systems for monitoring innovation activity are distinguished, and aggregate indicators for accounting for innovation activity at the input and output of the national innovation system are shown. It analyses the relationship between technological development and economic changes related to economic growth, volatility and the business cycle, the structure of the economy, employment and unemployment, etc.The last three themes examine trends in technological specialization, the division of labor, and the use of absolute and comparative advantages in international S&T exchanges in the ongoing globalization of economic relations. An overview is given of innovation policy in the Republic of Bulgaria, innovation-leading countries, and the European Union. It introduces the specifics of the mechanism for managing innovation processes in them and gives an idea of the achievements and pursuit goals of their innovation policy. The general trends, good practices, strengths, and weaknesses in the development of innovation policy are highlighted.

3. Language of teaching: English

Content

№	Topic	Academic hours			
		Full time		Distance learning	
		L	S	L	S
1.	**Introduction** It traces the development of innovation theory from its founder J. Schumpeter to his modern followers. It examines the relationship between scientific, technical, and technological progress through the agrarian, industrial and microprocessor revolutions It analyses the preconditions, nature, and characteristics of the new economy. The functions and impact of the various activities and environments that stimulate the emergence and implementation of innovation are clarified.	4,5		-	-
2.	**Innovation and economic system** The essence of innovation, its nature, and manifestation as an activity, process, result, and its impact on the economic systemize revealed. The classic and new factors of development are systematized. Their functions and influence in stimulating the emergence and implementation of innovation are clarified. A link is made between production possibilities, the three main issues of the economic system, and the impact on the production possibilities frontier. The role of technological development in the social division of labor, the exploitation of technological advantages, and the restructuring of the national economy are clarified.	4,5		-	-
3.	**Market forces and innovation** Analyses the relationship and mutual influence between innovation and market forces - demand, supply, and competition. Their impact on market equilibrium is detailed. The individual stages of research, experimentation, development and innovation activities are characterized. It analyses the different phases through which innovation activity passes and the life cycle of novelty and their relationship to market processes. Different types of life cycles are presented depending on the course of the economic cycle and the market conjuncture. Different types of life cycles are presenteddepending on the course of the economic cycle and the market conjuncture. Different types of life cycles are presented.	4,5		-	-
4.	**Entrepreneurship and corporate innovation** The diverse approaches that entrepreneurs take in creating and targeting corporate innovation structures and the models by which they are built are shown. Different types of innovation formations for inter-firm integration in innovation activity are characterized. The sources and methods used for idea generation are systematized, and the	4,5		-	-

	main tasks, activities, and processes in the implementation of firm innovation are highlighted. The stages in the implementation of innovation projects are examined and the barriers faced by innovating firms are pointed out.				
5.	**Economic aspects of the company's innovation activity** The impact of company innovation on the main indicators characterizing the company's activity is examined. It traces the determining economic indicators in the product cycle, focusing on the effectiveness of innovation. Different approaches to the formation of innovation projects and methods for their evaluation are justified. The capabilities of SWOT, PEST, TOWS, A'WOT, and other approaches to analyze the firm innovation system are demonstrated. This is derived as a basis for determining the firm's technological development path in the short and long term in finding its market and technological niche. Intellectual property rights are seen as a natural outcome and comparative advantage of firms to obtain technological rents and higher competitiveness.	4,5		-	-
6.	**Innovation activity based on different market structures** The behavior of the firm under the main market structures - monopolistic, monopoly, and oligopoly are analyzed. Characteristics of the firm's innovation strategy and policy are made, focusing on the criteria, components, stages, and the selection of the most appropriate ones depending on the peculiarities of the market structure, the firm's personnel, and resource potential. The types of innovation strategy and policy of the firm are considered according to the sources of innovation, market positions, conditions and rates of market entry, and the advantage of developing own cooperated, or purchased product and/or process innovations.	4,5		-	-
7.	**Innovation activity and macroeconomic indicators** The basic concepts and dependencies in the knowledge economy are derived, the established systems for monitoring innovation activity are distinguished and the established common indicators for reporting innovation activity are shown. Their relationship to aggregate indicators of the national economy - gross domestic product, net national product, and national income - is shown. The impact of innovation on aggregates of aggregate demand and aggregate supply and their dynamics in the short and long run is analyzed.	4,5		-	-
8.	**National innovation system** The theoretical concepts for the formation of the national innovation system are reviewed. The essence is revealed and the structure, the scope, the institutional elements, and the links between them, the main flows that move and shape the modern national innovation system are	4,5		-	-

	characterized. It identifies opportunities for achieving synergistic effects from the functioning of the national innovation system.				
9.	**Government innovation policy** Systematizes the changes that have taken place since the mid-twentieth century in the functions of the state for scientific development and technological innovation. It analyses the nature of the main types of innovation strategy and policy, pointing out their anchor points and objectives. It reviews the main conceptions of the nature and scope of innovation policy, points out the main points of reference, and systematizes the main objectives that developed countries set for themselves in conducting innovation policy. The framework and functional linkages that define a country's innovation policy are presented. The instruments of innovation policy are systematized and linked to the direction of their use and action.	4,5		-	-
10.	**Technological development and economic changes in the national economy** It analyses the relationship between technological development and economic changes related to economic growth, volatility and the business cycle, the structure of the economy, employment and unemployment, etc. The impact of innovation on the different phases, amplitude, and duration of the business cycle is examined. It considers the relationship between technological change, economic growth, the manifestation of various crises, and the structure of the national economy. The main theories tracing the relationship between technical and technological development and unemployment are presented.	4,5		-	-
11.	**Scientific and technological exchange and globalization** The relationship between adaptive and rational expectations of business and its desire to develop innovative projects is shown. This is linked to the possibilities of achieving absolute and comparative economic peaks in innovation activity and technology and strengthening international technological specialization and division of labor. The impact of globalization on concentration and cooperation in research and innovation and scientific and technological exchange is examined.	4,5		-	-
12.	**Innovation policy in Bulgaria** The main institutions in the Republic of Bulgaria related to innovation activity are presented with their functions, tasks, capabilities, and levers for innovation policy implementation. The main documents regulating the relations between the different levels, departments, and units about the development of science, research, and implementation of innovations for the fulfillment of the set goals and objectives and the envisaged measures for the	4,5		-	-

	implementation of the adopted innovation strategy of the Republic of Bulgaria are selected and characterized.				
13.	**Innovation policy in European Union and some developed countries** The paper examines the achievements and successful models of innovation policy in countries with high innovation activity. It characterizes the strengths and weaknesses of the mechanism and the instruments they use to achieve the high innovativeness of national economies. The main periods after the adoption of the Lisbon Strategy are traced to the establishment of the institutional structure of the European Research Area and the deepening of innovation partnerships. It examines the Framework Programmes implemented, the creation of the Innovation Union, and the ideas and initiatives adopted in the Horizon 2020 program for the development of smart growth and knowledge and innovation-based economy.	6		-	-
	Total	**60**		-	-

Legend: L-lectures; S-seminars

TEACHING AND LEARNING METHODS

Various teaching methods are combined and implemented - lectures, discussions, answers to questions, presentations, etc. If possible, part of the training in the discipline is organized in an external business environment or appropriate public institutions. Presentations are prepared for all lectures.

The necessary training resources are: computer multimedia, e-learning platforms (Teams, etc.), additional digital tools for visualizing the material in the discipline. Microsoft software products are used.

Students' self-study includes individual and/or team research, thematic writing assignments, etc., which enhance their interest and enable them to express their potential.

EXTRACURRICULAR ACADEMIC HOURS

Components	Number of hours	
	Full time	Distance learning
1. Practical training		
2. Course project / Assignment	15	
3. Essay		
4. Case study		
5. Individual / Team activity		
6. Laboratory training		
7. Midterm exam / test	15	
8. Other: ……		
9. Exam	30	
Total	**60**	

ASSESSMENT

The course assessment consists of several components.

Students are awarded points for their work during the semester, which together with the results of the semester examination are the basis for determining the final grade. It is formed by the criteria adopted by the Department of Economics with the accumulation of points throughout the semester of comprehensive assessment in the discipline.

The course evaluation consists of several components.

For full time students the final grade is formed as follows:

FG = 0.3*MTE + 0.2*IA + 0.5*FE,

where:

FG	=	Final grade;
MTE	=	Mid-term exam;
IA	=	Individual assignment;
FE	=	Final exam.

Electronic platforms (such as MS Teams; Google Forms; Moodle) and other modern educational technologies are used, both for training and for assessing and controlling its results, including the use of a test center.

The final grade is based on the six-point system. The minimum grade for successful completion is "Average (3)" compared to the European system from credits transfer:

Excellent /6/	Very good /5/	Good /4/	Average/3/		Poor /2/	
A	**B**	**C**	**D**	**E**	**FX**	**F**
Credits awarded as per syllabus					No credits awarded	

QUALIFICATION GOALS

This course is designed in compliance with the requirements of the National Qualification Framework[1] in terms of acquired knowledge, skills and competences for the corresponding EQD and Council Recommendation of Key Competences for Lifelong Learning[2].

The discipline provides students with the following basic knowledge about the main links and economic dependencies in the knowledge-based economy and innovation, about the mechanisms, levers, and tools for the management of corporate and national innovation systems, about the principles in the formation and implementation of innovation strategy and policy, about the management of the innovation process in large industrialized countries, especially those of the European Union.

[1]The National Qualification Frame of Bulgaria gives the definition of the knowledge, skills and competences which are required as a result of the education process in the corresponding EQD in higher education.

[2]Council Recommendationon Key Competences for Lifelong Learning (OJ 2018/C 189/01)

The training in the discipline forms in the students the following basic skills - to analyze the economic indicators of micro- and macroeconomic systems, to make comparisons, track and forecast trends in innovation activity of the company and the national economy.

The knowledge and skills in "Economics of Innovation" are necessary for the study of Micro- and Macroeconomic theory and the preparation of specialists in the management of the technological development of innovation processes at the micro- and macro-level.

DISSEMINATION OF THE COURSE

1. University of Bradford, Technology Management - United Kingdom
2. London Imperial College - UK
3. London School of Economics - United Kingdom
4. Helsinki School of Economics, Technology Management, and Policy - Finland
5. Linköping University, Technology Management - Sweden
6. Aalborg University, Technology Management, and Policy - Denmark
7. Karl-Franzens-Universität Graz – Austria

LITERATURE

A. Basic / Main

1. Георгиев, И. и др. Мениджмънтнафирменитеиновации и инвестиции, изд. УК-УНСС, София, 2013
2. Дамянов, Д. Иновация – технология, организация, управление, финансиране и политика, изд. ПРИМАКС, Русе, 2009
3. Керчев,Кр. Иновации и иновационнасистема, изд. ИК-УНСС, София, 2015
4.Керчев, Кр. Иновации, Учебно-методическопомагало, изд. ИК-УНСС, София, 2015.
5. Пантелеева, И. Управлениенаиновациите в индустриалнотопредприятие, изд. АИ „Ценов“, Свищов, 2013.
6. Славова, И., Банкова, Й., Иванова, Х. Клъстери и клъстерниинициативи в България: развитие и предизвикателства, Икономически и социалниалтернативи, 2018 (Относителноновизточник – публикуванпрез 2018 г.).
7.Чобанова, Р. Новапарадигмазаикономическоразвитие. Четвъртанационалнаконференцияпополитическаикономиянатема „Дигиталнатаикономика и предизвикателстватапредполитическатаикономия”, 2020.
8. Шотаров, А. Влияниенаиновациитевърхуконкурентоспособността, 2020.
9. Шотаров, А. Динамиканаиновационнатаактивност и конкурентоспособност в РепубликаБългария в периода 2007 – 2019 г., 2021.
10. Новиков, П. Икономиканаиновациите в дигиталнатаера, София, 2022.

B. Additional

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2. Вуцова, А. Иновациите – политика и практика, София, 2006.
3. Дракър, Питър Ф. Иновации и предприемачество, „Класика и Стил“, София, 2002.
4. Иновации.бг Фондация “Приложниизследвания и комуникации”, ARC FUND (Онлайнплатформа – съдържаредовноактуализиранаинформация).
5. КерчевКр. Основинаиновационнатаполитика, изд. УИ „Стопанство”, София, 2011.
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7. МинистерствонаикономикатанаРепубликаБългария. Законзаиновациите, 2020.
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Innovation Policy and Measurement – OECD Report 2022,
OECD iLibrary Publication
WIPO.
WIPO Global Innovation Index Report 2017

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