



SYLLABUS “KNOWLEDGE-BASED ECONOMY”

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

Semester when the course unit is delivered: 2nd

Level of course unit: Bachelor level, Master level

ECTS credits: 5

ADMISSION REQUIREMENTS

Applicants are expected to have completed the following courses:

- Economic History;
- Introduction to Economic Theory;
- Principles of Macroeconomics;
- Global Economy;
- Institutional economics;
- Principles of Microeconomics;
- Business Economics;
- Statistical Method in Economics;
- Labor Economics.

COURSE OBJECTIVES (AIMS)

- to develop a holistic vision of the state-of-the art, the tendencies and the challenges of the knowledge-based economy;
- to introduce the basic ideas, theories and industries of knowledge-based economy;
- to examine the main knowledge management provisions and to give a grounding in the best knowledge management practices and techniques;
- to introduce knowledge technologies used by businesses, being the basis of an effective knowledge management system;
- to demonstrate how to identify knowledge processes in practice, manage them using IT;
- to specify the criteria of human capital formation and development;
- to analyze best practices, challenges and opportunities of the implementation of knowledge-based economy in Russia and other



countries by reviewing and assessing the features of the modern state of knowledge-based economy development;

- to prepare students to operate in a dynamic enterprise environment in the context of intellectual capital management.

COURSE CONTENTS

Session 1. Knowledge-Based Economy Formation and Development

• Basic characteristics, concepts and issues; • The change of companies' nature in new economy (K-E Sveiby); • Knowledge staircase by K. Nort; • Relationship between innovation, knowledge, competitiveness; • Knowledge as a source of competitiveness.

Session 2. Knowledge-Based Economy: Trends and Implications

• Knowledge and economics; • Knowledge codification; • Knowledge and learning; • Knowledge networks; • Knowledge and employment; • Measuring knowledge, knowledge inputs, outputs, networks.

Session 3. Knowledge-Based Economy and Enterprise Management

• Knowledge in economic theories; • Knowledge-based enterprise: theories and fundamentals; • Knowledge management theories.

Session 4. Public Dimensions of Knowledge and Innovation

• Fundamental public aspects of the knowledge economy; • Privatization of knowledge; • Three E's in support of the revival of public property.

Session 5. Science System in the Knowledge-Based Economy

• Knowledge production; • Knowledge transmission; • Knowledge transfer.

Session 6. Innovation Tank and the Four Pumps: Mapping Innovation in the Education Sector

• Science-based innovation; • Collaboration between users and / or doers – horizontally organized innovation; • Modular structure, with freedom to innovate yet joined together as a whole system; • information and communication technologies; • The four pumps to fill up with innovative capacity; • the four pumps and the education sector; • Four pumps to fill up with innovative capacity.

Session 7. Intellectual Capital



- Basic characteristics, concepts and problems;
- Differences between physical and intellectual capital;
- Relationship between the notions of intellectual capital, intellectual property and intangible assets;
- Valuation techniques and measurement methods of intellectual capital.

Session 8. Analysis of Intellectual Potential

- Level of technology;
- Intellectual potential of employees;
- Intellectual potential of the enterprise;
- Intellectual potential of the university.

Session 9. Knowledge Management

- The concept of knowledge management;
- In-house control technology of companies' knowledge;
- Model of dynamic knowledge transformations;
- Process-based knowledge management models;
- Decision-making structures and practices in knowledge models;
- Forms of knowledge management;
- Successful knowledge management;
- Knowledge management scheme.

Session 10. Lifelong Learning and Self-development

- Learning values and self-development;
- Learning organization;
- Creative organization;
- Intellectual organization.

LEARNING OUTCOMES

Knowledge:

- to understand knowledge management processes, solutions, strategies in companies;
- to know the main indicators characterizing the knowledge-based economy, global and national innovation systems;
- to know the specifics of the formation and characteristics of the knowledge-based economy in various countries and regions of the world;
- to understand the significance of innovation for economic growth, the increase in competitiveness of national economies and businesses;
- to determine the strategy for transition to the knowledge economy in various countries / regions of the world;

Skills:

- free orientation in sources and scientific literature on the issue exchange rate;
- analysis of different concepts of the transition to the knowledge-based economy and innovation development;



- identification and assessment of trends in the development of modern knowledge-based economy and innovation.

Learning Outcomes:

- to be skilled in carrying out comparative studies of innovative systems and national characteristics of the knowledge-based economy;
- to operate modern methods to measure the indicators characterizing the knowledge-based economy and innovation;
- to know the methodology studies of the affective behavior of companies in the transition to the knowledge-based economy.

PLANNED LEARNING ACTIVITIES AND TEACHING METHODS

Each session lecturing accounts for about 60% of time, students' participation in discussion accounts for 40%. Specifically, the lecturer will invite students to speak during the lecture. At the end of each session, questions are presented for discussion.

During the seminars, students will have an opportunity to analyze some knowledge processes, to work with open source software for knowledge management and recognize how to deal with linguistic values (as knowledge) by using information technologies.

Comprehensive development of student discipline involves:

- students involvement in problem-based presentation;
- students self-guided reading of the further literature;
- students participation in case studies;
- written essay;
- interview and testing.

ASSESSMENT METHODS AND CRITERIA

Criteria for evaluation:

Interview

- 10 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 3 questions; completion of a test assignment;



- 7 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 2 questions; completion of a test assignment;
- 5 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 2 questions; not completion of a test assignment;
- 3 point to the students demonstrating a partial understanding of the problem, a general knowledge of the material being studied by 1 question; not completion of a test assignment;
- 0 points to the students not demonstrating the possession of the conceptual apparatus of the discipline; not answering a single question; not completion of a test assignment.

Case studies

- 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;
- Assessment of "not passed" " is given to the students if the decision does not meet the ideas of modern HRM, is not adequate to HR market; is not sound and doesn't predict difficulties; is not applicable in practice.

Essay

- Assessment of "excellent" (10 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 essay; presents a balanced argument supported with information; raises important questions; analyzing and convincing conclusions; there are no conceptual errors.
- Assessment of "good" (8 points) is given to the students if he introduces basic requirements for the essay, 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" (6 points) is given to the students if the essay's topic is disclosed not enough; specific position are not given; information is inaccurate, mechanical errors seriously impedes understanding.
- Evaluation of "unsatisfactory" (less than 6 points) is given to the students if the essay 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 LITERATURE (RECOMMENDED OR REQUIRED)

1. Advancing Knowledge and The Knowledge Economy. Edited by Brian Kahin and Dominique Foray (<https://mitpress.mit.edu/books/advancing-knowledge-and-knowledge-economy>);
2. The Economics of Knowledge. Edited by Dominique Foray (<https://www.amazon.com/Economics-Knowledge-MIT-Press/dp/0262562235>);
3. The Knowledge-Based Economy: Modeled, Measured, Simulated. Edited by Loet Leydesdorff (<http://www.bookpump.com/upb/pdf-b/1129378b.pdf>);
4. Doing business in the knowledge-based economy: facts and policy challenges / edited by Louis A. Lefebvre, Élisabeth Lefebvre and Pierre Mohnen (<https://books.google.ru/books?id=jBDpBwAAQBAJ&pg=PA60&lpg=PA60&dq=knowledge+based+economy+textbook&source=bl&ots=ierrHvFVBY&sig=X0MNvhbpJUfXOmeiOIWn32OvhTI&hl=ru&sa=X&ved=0ahUKEwj7g-zW1IQAhUEiywKHdLaCWoQ6AEISjAG#v=onepage&q=knowledge%20based%20economy%20textbook&f=false>);
5. Services industries and the knowledge-based economy / general editors, Richard G. Lipsey & Alice O. Nakamura (<https://books.google.ru/books?id=0-jUlsICogC&pg=PA611&lpg=PA611&dq=knowledge+based+economy+textbook&source=bl&ots=fxJvbxFFhy&sig=BZ7q7EsLo8HK6Vh9d2Fq8rU5hws&hl=ru&sa=X&ved=0ahUKEwj7g-zW1IQAhUEiywKHdLaCWoQ6AEIXTAJ#v=onepage&q=knowledge%20based%20economy%20textbook&f=false>);
6. Innovation in the Knowledge Economy. Implications for Education and Learning. Editors by Organisation for economic co-operation and development (OECD) (http://www.keepeek.com/Digital-Asset-Management/oecd/education/innovation-in-the-knowledge-economy_9789264105621-en#page3);
7. The knowledge-based economy. Editors by Organisation for economic co-operation and development (OECD) (<https://www.oecd.org/sti/sci-tech/1913021.pdf>).