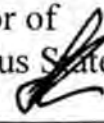


Educational Establishment
Belarus State Economic University

APPROVED

Rector of
Belarus State Economic University



V. Y. Shutilin

“ 28 ” 06 2019

Registration № УД 3941-19 /уч.

DIGITAL ECONOMY

The higher education establishment course program for the major
1-25 80 02 “World Economy”

2019

AUTHORS:

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RECOMMENDED FOR APPROVAL:

World Economy Department, Belarus State Economic University (Protocol № 10, 14.05.2019);

Scientific and Methodological Council of the Belarus State Economic University (Protocol № 6, «25» 06- 2019)

COURSE INTRODUCTION

The course focuses on theoretical and practical aspects of the digital economy.

The purpose of the course is to equip students with knowledge, tools and skills to analyze various aspects of digital economy.

The aims of the module:

- to provide detailed knowledge and in-depth understanding of the basic principles of digital economy;
- to explore the structure of digital economy;
- to evaluate trade related aspects of digital economy.

Interdisciplinary relationships. The Digital Economy course builds on a number of undergraduate courses including Economics, World Economy, as well as graduate-level courses Commercialization and Management of Innovations, World Commodity Markets and Prices.

On completion of the Digital Economy course, Master's Degree students should

know:

- major theoretical aspects of digital economy;
- key developments in various segments of digital economy;
- key trade related aspects of digital economy;

be able to:

- estimate the level of digital technology penetration in various sectors of world economy;
- evaluate the readiness of economy to digital technology absorption;
- develop suggestions on the digitalization of various business segments.

master:

- methods of digital technology efficiency assessment;
- digital toolkit in various business segments and policy-making sectors;
- risk assessment in digital economy.

Total student study time of the Digital Economy course, major -25 81 02
“World Economy”

(full-time form of study) – 108 hours, including 36 in-class hours: lectures – 20 hours, seminars – 16 hours.

The form of knowledge control – pass-test.

CONTENTS

Topic 1. Introduction to Digital Economy

Digital Economy: course subject and methodology. Course structure.

The concept and evolution of digital economy. Knowledge society as a precondition of digital economy. Globalization as a basis of digital economy. Objects and subjects of digital economy. MNE's role in digital economy.

Topic 2. Smart economy as a basis of the digital development model

The concept of "smart economy". Key theories of smart economy. Outcomes and risks of the intellectualization of economy.

Topic 3. Digital economy structure

Key elements of digital economy: industry, finance, services. Disproportion in the elements' development. Digital technologies' transmission into modern economy: enabling factors. Diffusion of innovation as a factor of digital economy development.

Topic 4. Key technologies and infrastructure of the digital economy

Advanced robotics, artificial intelligence, Internet of things, cloud computing, big data analytics, blockchain, 3D printing, augmented and virtual reality. Measuring world digital infrastructure: quantitative and qualitative metrics.

Topic 5. Digital economy in the world industrial sector

Technological divides as a backbone of the industrial sector. Features of the modern technological divide: robotics, 3D printing, augmented and virtual reality. Economic effectiveness of new technologies: benefits and risks assessment.

Topic 6. Digital economy in the world services sector

Services as the leading digital economy sector. New service providing technologies: uberization, chatbots, services aggregator websites. Offshore programming as a dynamic services subsector. Digitalization as an impact factor in the services market.

Topic 7. Digital economy and the world financial system

Developments in the world financial services sector. Key online currency and stock markets: quantitative and qualitative metrics. International and regional electronic payment systems. Crypto-currencies and blockchain technologies in payment systems: pros and cons.

Topic 8. Digital economy and the world education system

The globalization of education: the role of digital technologies. Advantages of online education. Systems of distant education and virtual universities. Edtech and transnational business.

Topic 9. Trade aspects of the digital economy

The ICT sector: structure, production, employment issues. Trade in ICT services. Trade in ICT-enabled services. Trade in ICT goods. Cross-border e-trade. Novel aspects of digital trade. Online work and trade in tasks. Digitalization of global value chains.

Topic 10. Policies for trade and development in the digital economy

Regulatory framework for digital trade. International trade agreements and e-commerce. Cross-border data flow regulation. Policy instruments for the digital economy.

INFORMATIONAL AND METHODOLOGICAL PART

LITERATURE

Required reading

1. Bambara, J. Blockchain: a practical guide to developing business, law, and technology solutions / Joseph J. Bambara, Paul R. Allen. – McGraw-Hill, 2018. – 302 p.
2. Bouyon, S. The Future of Retail Financial Services: what policy mix for a balanced digital transformation? / Sylvain Bouyon // Centre for European Policy Studies and European Credit Research Institute. – London: Rowman & Littlefield International, Ltd., 2017. – 94 p.
3. Information Economy Report 2017: Digitalization, Trade and Development / UNCTAD. – N.Y. and Geneva: UNCTAD, 2017. – 130 p.
4. Lee, D. Inclusive Fintech: Blockchain, Cryptocurrency and ICO / David Lee Kuo Chuen, Linda Low. – Singapore: World Scientific Publishing Co. Pte. Ltd., 2018. – 523 p.
5. Tapscott, D. Blockchain Revolution: how the technology behind bitcoin is changing money, business, and the world / Don Tapscott, Alex Tapscott. – New York: Penguin Random House LLC, 2016. – 352 p.
6. World Development Report 2019: the Changing Nature of Work/ World Bank. – Washington, DC: the World Bank, 2019. – 140 p.
7. World Investment Report 2017: Investment and the Digital Economy/ UNCTAD. – N.Y. and Geneva: UNCTAD, 2017. – 238 p.
8. World Trade Report 2018: The future of world trade: How digital technologies are transforming global commerce/ World Trade Organization. – Geneva: WTO, 2018. – 234 p.

Additional reading

9. Brynjolfsson, E. GDP-B: Accounting for the Value of New and Free Goods in the Digital Economy / Erik Brynjolfsson, Avinash Collis, W. Erwin Diewert, Felix Eggers, Kevin J. Fox // NBER Working Paper No. 25695. – March 2019.
10. Burri, M. The Regulation of Data Flows Through Trade Agreements/ M.Burri // Georgetown Journal of International Law, 2017. – No.48. – pp. 407-448.
11. Burri, M. Understanding and Shaping Trade Rules for the Digital Era/ M.Burri // Future Scenarios for Global Trade Regulation / ed. by Manfred Elsig, Joseph Francois, Michael Hahn and Gabriele Spilker. – Cambridge University Press, 2019.
12. Castells, M. The Information Age. Economy, Society, and Culture. Vol. I: The Rise of the Network Society / M. Castells. – Oxford: Wiley-Blackwell, 2010. – 625 p.
13. De Backer, K. Industrial robotics and the global organisation of production / De Backer, K., DeStefano, T., Menon, C. and Jung, R. S. // Organisation for Economic Co-operation and Development (OECD) Science, Technology and Industry Working Paper, 2018. – No. 03. – 44 p.
14. Higginson, M. Blockchain's Occam Problem / Matt Higginson, Marie-Claude Nadeau, Kausik Rajgopal // McKinsey on Payment. – 2018. – October. – pp. 41-47.
15. Information Economy Report 2015: Unlocking the Potential of E-commerce for Developing Countries / UNCTAD. – N.Y. and Geneva: UNCTAD, 2015. – 136 p.
16. Measuring the Digital Economy // International Monetary Fund Policy papers. – Washington, D.C.: IMF, 2018. – Febr. – 47 p.
17. Measuring the Digital Transformation: A Roadmap for the Future // OECD. – Paris: OECD publishing, 2019.
18. Special Edition on Advanced Analytics in Banking // McKinsey on Payment. – 2018. – August. – Volume 11. – Number 28. – 89 p.
19. Technology and Innovation Report 2018: Harnessing Frontier Technologies for Sustainable Development // UNCTAD, 2018. – 114 p.
20. The Global Information Technology Report 2016: Innovating in the Digital Economy // ed. by S. Baller, S. Dutta, and B. Lanvin. – Geneva: World Economic Forum, 2016. – 290 p.
21. Trade and Development Report 2018: Power, Platforms and The Free Trade Delusion / UNCTAD. – N.Y. and Geneva: UNCTAD, 2018. – 134 p.

Educational and Methodological Course Outline
«Digital Economy»
Full-Time Form of Study

Topic No.	Topic name, topic contents	Lectures	Seminars	Practical classes	Managed (controlled) student independent learning		Literature	Form of control
					Lectures	Seminars		
1	Introduction to digital economy	1	1		1	1	1-21	Quizzes
2	Smart economy as a basis of the digital development model	1	1			1	1-21	Quizzes, assignments
3	Digital economy structure	1	1		1		1-21	Quizzes, assignments
4	Key technologies and infrastructure of the digital economy	2	1		1		1-21	Quizzes, assignments
5	Digital economy in the world industrial sector	2	2				1-21	Quizzes, assignments
6	Digital economy in the world services sector	2	1			1	1-21	Quizzes, assignments
7	Digital economy and the world financial system	2	2				1-21	Quizzes, assignments
8	Digital economy and the world education system	1	1		1		1-21	Quizzes, assignments
9	Trade aspects of the digital economy	2	1			1	1-21	Quizzes, assignments
10	Policies for trade and development in the digital economy	2	1				1-21	Quizzes, assignment
Total		16	12		4	4		Pass-Test

Educational and Methodological Course Outline
«Digital Economy»
Part-Time Form of Study

Topic No.	Topic name, topic contents	Lectures	Seminars	Practical classes	Managed (controlled) student independent learning		Literature	Form of control
					Lectures	Seminars		
1	Introduction to digital economy	1					1-21	Quizzes
2	Smart economy as a basis of the digital development model						1-21	Quizzes, assignments
3	Digital economy structure						1-21	Quizzes, assignments
4	Key technologies and infrastructure of the digital economy	1	1				1-21	Quizzes, assignments
5	Digital economy in the world industrial sector	2	1				1-21	Quizzes, assignments
6	Digital economy in the world services sector						1-21	Quizzes, assignments
7	Digital economy and the world financial system		1				1-21	Quizzes, assignments
8	Digital economy and the world education system						1-21	Quizzes, assignments
9	Trade aspects of the digital economy	2					1-21	Quizzes, assignments
10	Policies for trade and development in the digital economy		1				1-21	Quizzes, assignment
Total		6	4					Pass-Test

ДОПОЛНЕНИЯ И ИЗМЕНЕНИЯ К УЧЕБНОЙ ПРОГРАММЕ УВО
«Digital Economy» / «Цифровая экономика»
на 2019 / 2020 учебный год

№ п/п	Дополнения и изменения	Основание
1		
2		

Учебная программа пересмотрена и одобрена на заседании кафедры
_____ (название кафедры) (протокол № ____ от _____ 2019 г.)

Заведующий кафедрой

_____ (ученая степень, ученое звание)

_____ (подпись)

_____ (И.О.Фамилия)

УТВЕРЖДАЮ
Декан факультета

_____ (ученая степень, ученое звание)

_____ (подпись)

_____ (И.О.Фамилия)