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Course Package "Digital Economy"

Work Package	WP3: Development of Course Materials for the Reformed MA Programmes, Deliverable 3.1
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Document History

Version	Date	Author(s)	Description
1	01-25-20	Ani Avetisyan	Syllabus draft
2	02-27-20	Ani Avetisyan	Final version of syllabus

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Content

1. General information about the course

Explanation: Please fill in the table below.

Title of the course (as specified in the reformed curriculum)	Digital Economy
Name of the teacher	Ani Avetisyan
Novelty of the course (please select as appropriate)	This course is a newly developed course
Year of the course in the curriculum	2
Semester of the course in the curriculum	3
Language of instruction of the course	Russian
Number of ECTS credits	4

2. Learning outcomes of the course

Explanation: Please specify the learning outcomes of the course.

After completion of the course students are expected to:

- Know:
  - ❖ the subject and specifics of digital economy;
  - ❖ basic theoretical concepts of digital economy;
- Be able to:
  - ❖ Analyse the relevant issues of digital economy;
  - ❖ Deeply understand the principles of the functioning of digital economy;
  - ❖ Apply theoretical concepts to practical examples;
  - ❖ Deeply understand the principles of Business Intelligence
  - ❖ Apply data analyses tools to business problems.

3. Syllabus of the course

Explanation: Please provide a detailed syllabus of the course (broken down in weeks) – maximum 2 pages

Topic	Weeks (1 week for lecture/1week for case studies and discussion)
Origins of digital economy. Introduction to the course. Definition of "digital economy." Historical framework. Economic background of digital economy. Criteria for assessment of digital economy development.	1-2
Technological bases of digital economy. Fourth industrial revolution. Cloud computing, big data and internet of things. Blockchain and cryptocurrency	3
Business intelligence Financial decision making. Tableau as a tool for data analysis	4
Digital transformation of economy Information economics. Changes in production. Production function. Competitiveness and new economic relations. Economic efficiency in digital economics.	5-6
Trade and economic activities in digital economy Globalization and digital economy. New trends in trade: e-commerce, sharing economy, digital economy. Doing business in digital economy.	7-8
Development of labor relations in digital economy New paradigm of the labor market. Education and labor market. The future of employment in digital economy.	9-10
The functions of the state in digital economy The role of government in digital economy. Institutional framework. Government interventions.	11-12
Legal framework for transition to digital economy Institutional framework. Digital security	13-14
Criteria for assessment of the degree of digital economy development Main indexes of digital economy development. Advantages and disadvantages of the existing methods. Measuring digital economy in Armenia.	15-16
Development of digital economy in Armenia Current trends in economic development. Level of digitalization. Education and labor market. The future of digital economy in Armenia.	17-18

4. Teaching methodology of the course

Explanation: Please explain the teaching methodology and pedagogical approaches of the course – maximum ½ page

Teaching methodology is mostly close to teacher-centred approach to learning, nevertheless, students' class participation is equally important,

The following methods will be used in the framework of this course:

1. Lectures;
2. Discussions;
3. Workshops;
4. Self-study.

5. Labour market relevance of the course

Explanation: Please explain the labour market relevance of the course (linked to findings of WP1) – maximum ½ page

Global trends in digitization and automation are going to significantly transform manufacturing processes by reducing costs and increasing production value: imagine 3D printers building houses on their own, with self-driving vehicles providing them with the necessary raw materials. It is believed that this unprecedented development will lead to a great increase in productivity and will essentially improve living standards.

However, the Fourth Industrial Revolution can also have negative repercussions, mainly within labor markets. It can be the same problem as with the First Industrial Revolution - the replacement of vast sectors of the human labor force with machines or, in today's case, digital technologies. This can induce greater income inequality and inequality in general well-being. Digitalization will form new relationships within markets, creating new types of demand. To realize the demands of a modern consumer, there is already a need for experts who can create products based on digital technologies, specialists who can provide services for these technologies and experts that can create and ensure the development of new technologies. This new reality creates a challenge that today's education systems will need to adapt to address. This course is envisaged to give deeper understanding of global digital processes in regard with their links to the labor market and education. This will give students an opportunity to adjust their skills in accordance with the existing demand.

6. Assessment and grading

Explanation: Please explain the form of assessment of the course – maximum ½ page

There are two forms of assessment within the course: paper and group work on a research project.

Grading system includes 2 components:

- ✓ **Paper – 50%**

  Grading criteria:

- Content (critical analysis, deep understanding of related literature and theoretical background of the topic)
- Writing style and structure (scientific style of writing according to educational standards; structure: introduction, research question, literature review, research design, findings, analysis and conclusion)
- References are formulated in accordance with national standards

- ✓ **Research project (team work) – 50%**

  Grading criteria:

- Content (critical analysis, application of theoretical concepts to practical data, use of tables, graphs, econometric analysis)
- Presenting style and structure (logic of presentation, sentences stick to the point, time-management)

7. References

Explanation: Please provide the main references and recommended reading for the course – maximum 1 page

- ❖ Druica E. Digital Economy Innovations and Impacts on Society. Information Science Reference, 2012. 302p.
- ❖ Xu, Min & David, Jeanne & Kim, Suk. (2018). The Fourth Industrial Revolution: Opportunities and Challenges. International Journal of Financial Research. 9. 90. 10.5430/ijfr. v9n2p90.
- ❖ Hussin, Anealka. (2018). Education 4.0 Made Simple: Ideas For Teaching. International Journal of Education and Literacy Studies. 6. 92. 10.7575/aiac.ijels.v.6n.3p.92.
- ❖ Leading through the Fourth Industrial Revolution Putting People at the Centre. (2019). White paper.
- ❖ Brynjolfsson, E. and McAfee, A. (2014). The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. New York: W. W. Norton & Company.
- ❖ Tapscott, D. (1995). The Digital Economy: Promise and Peril in the Age of Networked Intelligence. McGraw-Hill; 1st edition. 368p.
- ❖ Schwab, K. (2016). The Fourth Industrial Revolution. World Economic Forum, https://www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab

- SADOVAYA, E.S. (2018). Digital economy and a new paradigm of the labor market. World Economy and International Relations. 62. 35-45. 10.20542/0131-2227-2018-62-12-35-45.
- Taplin J. Move Fast and Break Things: How Facebook, Google, and Amazon Cornered Culture and Undermined Democracy. Little, Brown and Company, 2017.
- Goodman M. Future Crimes: Inside the Digital Underground and the Battle for Our Connected World. Anchor; Reprint edition. 2016, 608p.

1. Course assignments

Explanation: Please provide two assignments for the course (e.g. group work, project, essay, case study, homework).

7.1 Assignment 1

Individual work: Writing Paper on digital transformation of the global economy (1500-2000 words)

Individual work is to encourage students to observe deeply the existing literature on the essence and drivers of digital economy. The goal of this assignment is to sum up the theoretical background of digital economy on macroeconomic level.

The paper should consist of introduction, research question, literature review, research design, findings, analysis and conclusion.

7.2 Assignment 2

Team Work: Data Analytics Dashboard and results interpretation (for any firm, with the use of Tableau)

Team work is for better understanding of how does the digital economy work on microeconomic level. The goal of this assignment is to check how the students apply on practical case all the skills and knowledge they gained within the course.

Each group should pick up a firm, gather the annual data on the firm`s performance, analyze it with the help of Tableau and present the results in the classroom.

Annex: Presentation slides

Explanation: Please provide presentation slides for your course (this can be done in a separate document, e.g. Power Point (Minimum: 25 slides)