



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 01.03.02 Applied Mathematics and Information Science,
38.03.01 Economics

Educational Programme "Economics and Data Science"

Implementing unit: Faculty of Economic Sciences, HSE - Moscow

APPROVED

04.05.2022

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Years of Study: 2022/2023 - 2025/2026

Length of Programme: 4 years

Mode of Study: Full Time

Degree: Bachelor's degree

| Block Code | Course | Subject type | Credits | Credits by Years | | | | Planned Educational Programme Development Results |
|------------|--|--------------|---------|------------------|-------|-------|-------|--|
| | | | | 1 | 2 | 3 | 4 | |
| | Degree Programme | | 240,00 | 60,00 | 60,00 | 60,00 | 60,00 | |
| | Major | | 180,00 | 56,00 | 47,00 | 44,00 | 33,00 | |
| | Core Professional Block (Major) | | 117,00 | 56,00 | 32,00 | 29,00 | | |
| | Микроэкономика-2 | | 6,00 | | 6,00 | | | |
| 1 | Microeconomics-2 (offered in a foreign language) | C | 6,00 | | 6,00 | | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Microeconomics-2 (advanced course) (offered in a foreign language) | C | 6,00 | | 6,00 | | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| | Макроэкономика-1 | | 7,00 | | 7,00 | | | |
| 1 | Macroeconomics 1 | C | 7,00 | | 7,00 | | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Macroeconomics-1 (advanced course) | C | 7,00 | | 7,00 | | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| | Макроэкономика-2 | | 6,00 | | | 6,00 | | |
| 1 | Macroeconomics-2 | E | 6,00 | | | 6,00 | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Macroeconomics-2 (advanced course) | E | 6,00 | | | 6,00 | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| | Методы оптимизации | | 6,00 | | | 6,00 | | |
| 1 | Optimization in Machine Learning | E | 6,00 | | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| 2 | Dynamic Optimization in Economics and Finance | E | 6,00 | | | 6,00 | | GPC-1.AMI, GPC-3.ECN, PC-5, UC-2, UC-9 |
| 3 | Optimization Methods | E | 6,00 | | | 6,00 | | GPC-1.AMI, GPC-3.AMI, GPC-5.ECN, PC-1, UC-2 |

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|----|--|---|-------|-------|-------|-------|--|
| | Econometrics 1 | | 5,00 | | | 5,00 | |
| 1 | Econometrics 1 (Advanced course) | E | 5,00 | | | 5,00 | GPC-1.AMI, GPC-2.ECN, GPC-3.AMI, PC-1, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Econometrics 1 | E | 5,00 | | | 5,00 | GPC-1.AMI, GPC-2.ECN, GPC-3.AMI, PC-1, PC-5, PC-6, UC-1, UC-2, UC-6 |
| | Econometrics 2 | | 6,00 | | | 6,00 | |
| 1 | Econometrics 2 | E | 6,00 | | | 6,00 | GPC-1.AMI, GPC-2.ECN, GPC-3.AMI, PC-1, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Econometrics 2 (Advanced course) | E | 6,00 | | | 6,00 | GPC-1.AMI, GPC-2.ECN, GPC-3.AMI, PC-1, PC-5, PC-6, UC-1, UC-2, UC-6 |
| | Compulsory Courses | | 74,00 | 49,00 | 19,00 | 6,00 | |
| 1 | Calculus 2 | C | 3,00 | | 3,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 2 | Probabilities Theory and Math Statistics 1 (Advanced course) | C | 5,00 | | 5,00 | | GPC-1.AMI, GPC-2.ECN, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 3 | Probabilities and Math Statistics 2 (Advanced course) | C | 5,00 | | 5,00 | | GPC-1.AMI, GPC-2.ECN, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 4 | Computer Architecture and Operating Systems | C | 6,00 | | 6,00 | | GPC-1.AMI, GPC-2.AMI, PC-2, UC-1, UC-2, UC-6 |
| 5 | Machine Learning 1 | C | 6,00 | | | 6,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-2, PC-3, UC-1, UC-2, UC-6 |
| 6 | Linear Algebra and Geometry | C | 10,00 | 10,00 | | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 7 | Discrete Mathematics | C | 7,00 | 7,00 | | | GPC-1.AMI, GPC-2.AMI, GPC-3.ECN, PC-1, PC-2, UC-1, UC-2, UC-6 |
| 8 | Calculus | C | 10,00 | 10,00 | | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 9 | Economic Thinking | C | 5,00 | 5,00 | | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 10 | C++ Programming Language | C | 4,00 | 4,00 | | | GPC-1.AMI, GPC-2.AMI, PC-1, PC-2, UC-1, UC-2, UC-6 |
| 11 | Python Programming Language | C | 4,00 | 4,00 | | | GPC-1.AMI, GPC-2.AMI, PC-1, PC-2, UC-1, UC-2, UC-6 |
| 12 | Algorithms and Data Structures | C | 9,00 | 9,00 | | | GPC-1.AMI, GPC-2.AMI, PC-2, UC-1, UC-2, UC-6 |
| | Microeconomics - 1 | | 7,00 | 7,00 | | | |
| 1 | Microeconomics-1 | E | 7,00 | 7,00 | | | GPC-1.AMI, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Microeconomics-1 (advanced course) | E | 7,00 | 7,00 | | | GPC-1.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6, UC-9 |
| | Elective Professional Block (Major) | | 63,00 | | 15,00 | 15,00 | 33,00 |
| | Научно - исследовательские семинары | | 6,00 | | 3,00 | | 3,00 |

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|----------------------------|---|---|-------|--|-------|------|--|
| 1 | Research Seminar "Methodology of Project Work" | C | 3,00 | | 3,00 | | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-4, UC-1, UC-2, UC-3, UC-6 |
| 2 | Methodological Research Seminar | C | 3,00 | | | 3,00 | GPC-1.AMI, PC-3, PC-4, PC-6, PC-7, PC-8, UC-1, UC-11, UC-2, UC-6 |
| Elective Courses | | | 12,00 | | 12,00 | | |
| 1 | Instrumental Methods for Digital Economics | E | 6,00 | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 2 | Differential and Difference Equations | E | 6,00 | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 3 | Python Programming Language (advanced course) | E | 6,00 | | 6,00 | | GPC-1.AMI, GPC-2.AMI, PC-1, PC-2, UC-1, UC-2, UC-6 |
| 4 | Fundamentals of Matrix Computations | E | 6,00 | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2 |
| 5 | Functional Analysis | E | 6,00 | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2 |
| 6 | Complex Analysis | E | 6,00 | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2 |
| 7 | Discrete Mathematics 2 | E | 6,00 | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2 |
| 8 | Additional Chapters of Macroeconomics-1 | E | 3,00 | | 3,00 | | GPC-1.ECN, GPC-3.ECN, GPC-4.ECN, PC-1, PC-4, PC-5, UC-1, UC-2, UC-6, UC-9 |
| 9 | Digital Transformations in HR Management | E | 3,00 | | 3,00 | | GPC-4.ECN, GPC-5.ECN, GPC-6.ECN, PC-6, UC-1, UC-2, UC-6, UC-9 |
| 10 | Applied Market Design (offered in a foreign language) | E | 3,00 | | 3,00 | | GPC-1.ECN, GPC-2.ECN, GPC-5.ECN, GPC-6.ECN, PC-5, UC-1, UC-2, UC-6 |
| 11 | Economic thought of the XX-XXI centuries | E | 3,00 | | 3,00 | | GPC-3.ECN, PC-4, UC-1, UC-2, UC-5, UC-6 |
| 12 | Economic History | E | 3,00 | | 3,00 | | GPC-1.ECN, GPC-3.ECN, PC-4, UC-1, UC-2, UC-5, UC-6 |
| 13 | Essentials of Programming and Database | E | 3,00 | | 3,00 | | GPC-5.ECN, GPC-6.ECN, PC-1, PC-3, UC-1, UC-2, UC-6 |
| 14 | Modern Methods of Data Analysis | E | 3,00 | | 3,00 | | GPC-2.ECN, PC-1, PC-5, UC-1, UC-2, UC-6, UC-9 |
| 15 | Financial Markets | E | 3,00 | | 3,00 | | GPC-1.ECN, GPC-2.ECN, GPC-3.ECN, GPC-4.ECN, PC-1, PC-6, UC-1, UC-2, UC-3, UC-6 |
| Elective Courses | | | 15,00 | | 15,00 | | |
| Elective Courses (Block 1) | | | 6,00 | | 6,00 | | |
| 1 | Combinatorial Optimization | E | 6,00 | | | 6,00 | GPC-2.AMI, GPC-3.AMI, GPC-5.ECN, PC-2, UC-2 |
| 2 | Time Series Modeling | E | 6,00 | | | 6,00 | GPC-1.AMI, GPC-2.ECN, PC-1, PC-5, UC-1, UC-9 |
| 3 | Data Analytics | E | 6,00 | | | 6,00 | GPC-1.AMI, GPC-2.ECN, GPC-4.AMI, GPC-5.ECN, PC-1, PC-3, UC-1 |

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| 4 | Java Programming | E | 6,00 | | | 6,00 | GPC-2.AMI, GPC-5.AMI, PC-2, UC-2 |
| 5 | Stochastic Calculus | E | 6,00 | | | 6,00 | GPC-2.AMI, PC-1, UC-2 |
| 6 | Recommender Systems | E | 6,00 | | | 6,00 | GPC-1.AMI, GPC-5.AMI, GPC-6.ECN, PC-1, PC-3, UC-2 |
| 7 | Generative Models in Machine Learning (advanced course) | E | 6,00 | | | 6,00 | GPC-2.AMI, GPC-5.AMI, GPC-6.ECN, PC-3, UC-1 |
| 8 | Deep Learning Methods in Natural Sciences | E | 6,00 | | | 6,00 | GPC-2.AMI, GPC-5.AMI, GPC-6.ECN, PC-2, PC-3, UC-1 |
| 9 | Machine learning in applied problems | E | 6,00 | | | 6,00 | GPC-1.AMI, GPC-4.AMI, GPC-6.ECN, PC-2, PC-3, UC-2, UC-9 |
| 10 | Process-mining | E | 6,00 | | | 6,00 | GPC-2.AMI, GPC-6.ECN, PC-1, UC-1 |
| 11 | Topological data analysis | E | 6,00 | | | 6,00 | GPC-3.AMI, GPC-5.ECN, PC-1, UC-2 |
| 12 | Computer Networks | E | 6,00 | | | 6,00 | GPC-2.AMI, GPC-4.AMI, GPC-5.ECN, PC-2, UC-2 |
| 13 | Deep Learning | E | 6,00 | | | 6,00 | GPC-2.AMI, GPC-5.AMI, GPC-6.ECN, PC-3, UC-1 |
| Elective Courses (Block 2) | | | 9,00 | | | 9,00 | |
| 1 | Introduction to Economics of Digital Platforms | E | 6,00 | | | 6,00 | GPC-1.ECN, GPC-2.ECN, GPC-3.ECN, GPC-4.AMI, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Global value chains and competitiveness | E | 3,00 | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-4, UC-9 |
| 3 | Additional Chapters of Macroeconomics-2 | E | 3,00 | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-6, UC-1 |
| 4 | Cooperative and Noncooperative Decision Making (offered in a foreign language) | E | 6,00 | | | 6,00 | GPC-3.AMI, PC-7, UC-1 |
| 5 | International Trade (offered in a foreign language) | E | 6,00 | | | 6,00 | GPC-1.ECN, GPC-3.ECN, PC-8, UC-9 |
| 6 | Tail Risks and Global Economic Policy (offered in a foreign language) | E | 3,00 | | | 3,00 | GPC-1.ECN, PC-7, UC-9 |
| 7 | Behavioral Economics (offered in a foreign language) | E | 3,00 | | | 3,00 | GPC-4.ECN, PC-6, PC-8, UC-2, UC-3 |
| 8 | Socioeconomics | E | 6,00 | | | 6,00 | GPC-3.ECN, PC-6, UC-5 |
| 9 | Industrial Policy: Modern Practices and Lessons | E | 3,00 | | | 3,00 | GPC-3.ECN, GPC-4.ECN, PC-7, UC-9 |
| 10 | Recent Advances in Auction Theory (offered in a foreign language) | E | 3,00 | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 11 | Game Theory | E | 6,00 | | | 6,00 | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 12 | Choice and Decision Theory (offered in a foreign language) | E | 6,00 | | | 6,00 | GPC-3.AMI, PC-7, UC-1 |
| 13 | Financial Stability and Financial Crises (offered in a foreign language) | E | 3,00 | | | 3,00 | GPC-3.ECN, PC-7, UC-9 |
| 14 | Financial Institutions and Risks | E | 3,00 | | | 3,00 | GPC-1.ECN, GPC-4.ECN, PC-6, UC-9 |
| 15 | Economics of Information (offered in a foreign language) | E | 3,00 | | | 3,00 | GPC-3.ECN, PC-6, UC-1 |
| 16 | Labour Economics | E | 6,00 | | | 6,00 | GPC-4.ECN, PC-7, UC-9 |
| 17 | Economic Growth and Development (offered in a foreign language) | E | 3,00 | | | 3,00 | GPC-3.ECN, PC-4, UC-1, UC-5 |

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| 18 | Crime and Punishment: Economic and Social Studies of Law Enforcement) | E | 6,00 | | | 6,00 | | GPC-1.ECN, PC-8, UC-2 |
| 19 | Applied Market Design (offered in a foreign language) | E | 3,00 | | | 3,00 | | GPC-1.ECN, GPC-2.ECN, PC-1, UC-1, UC-2, UC-6 |
| 20 | Economic Growth: Lessons from the Past (offered in a foreign language) | E | 6,00 | | | 6,00 | | GPC-3.ECN, PC-4, UC-1, UC-5 |
| 21 | Russian Economy-1 | E | 3,00 | | | 3,00 | | GPC-1.ECN, GPC-3.ECN, UC-1 |
| 22 | Instrumental Methods for Digital Economics | E | 6,00 | | | 6,00 | | GPC-1.AMI, GPC-3.AMI, GPC-5.ECN, PC-1, UC-1, UC-2, UC-6 |
| 23 | Decision Making in the Problems of Digital Economics under Risk and Uncertainty | E | 3,00 | | | 3,00 | | PC-1, PC-5, UC-2, UC-9 |
| 24 | Institutional Economics | E | 6,00 | | | 6,00 | | GPC-1.ECN, GPC-3.ECN, UC-9 |
| 25 | Industrial Organization (offered in a foreign language) | E | 6,00 | | | 6,00 | | GPC-1.ECN, PC-6, UC-9 |
| 26 | Exchange market infrastructure | E | 3,00 | | | 3,00 | | GPC-1.ECN, PC-6, UC-9 |
| 27 | Raising Capital in the Stock Market | E | 6,00 | | | 6,00 | | GPC-1.ECN, GPC-4.ECN, PC-4, UC-9 |
| 28 | Private equity and venture capital, funding mechanisms and participants | E | 3,00 | | | 3,00 | | GPC-1.ECN, PC-6, UC-9 |
| 29 | Digital Transformations in HR Management | E | 3,00 | | | 3,00 | | GPC-1.ECN, GPC-4.ECN, PC-4, UC-9 |
| 30 | Stochastic Processes | E | 6,00 | | | 6,00 | | GPC-5.ECN, PC-1, UC-2 |
| 31 | Differential and Difference Equations | E | 6,00 | | | 6,00 | | GPC-1.AMI, GPC-3.AMI, PC-1, UC-1, UC-2, UC-6 |
| 32 | Corporate Finance (offered in a foreign language) | E | 3,00 | | | 3,00 | | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 33 | International Financial Reporting Standards (offered in a foreign language) | E | 6,00 | | | 6,00 | | GPC-2.ECN, GPC-4.ECN, PC-6, UC-9 |
| 34 | International Finance (offered in a foreign language) | E | 3,00 | | | 3,00 | | GPC-3.ECN, GPC-4.ECN, PC-8, UC-9 |
| 35 | Financial Economics (offered in a foreign language) | E | 6,00 | | | 6,00 | | GPC-1.ECN, GPC-4.ECN, PC-6, UC-9 |
| 36 | Financial Markets | E | 3,00 | | | 3,00 | | GPC-1.ECN, GPC-4.ECN, PC-6, UC-9 |
| 37 | Modern Methods of Data Analysis | E | 3,00 | | | 3,00 | | GPC-2.ECN, PC-1, PC-5, UC-1, UC-2, UC-6, UC-9 |
| 38 | Economic History | E | 3,00 | | | 3,00 | | GPC-1.ECN, GPC-3.ECN, PC-4, UC-1, UC-2, UC-5, UC-6 |
| 39 | Big Data in Macroeconomic Analysis | E | 3,00 | | | 3,00 | | GPC-1.ECN, GPC-2.ECN, PC-6, UC-1 |
| 40 | Economic Demography | E | 6,00 | | | 6,00 | | GPC-1.ECN, GPC-3.ECN, PC-4, UC-1, UC-2, UC-5, UC-6 |
| | Elective Courses | | 30,00 | | | | 30,00 | |
| | Elective Courses (Block 1) | | 10,00 | | | | 10,00 | |
| 1 | Decision Making under Risk and Uncertainty | E | 5,00 | | | | 5,00 | GPC-1.AMI, GPC-3.AMI, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Deep Learning | E | 5,00 | | | | 5,00 | GPC-1.AMI, GPC-3.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |

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| 3 | Statistical Learning Theory (offered in a foreign language) | E | 5,00 | | | | 5,00 | GPC-1.AMI, GPC-3.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| 4 | Bayesian Methods for Machine Learning | E | 5,00 | | | | 5,00 | GPC-1.AMI, GPC-3.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| Elective Courses (Block 2) | | | 10,00 | | | | 10,00 | |
| 1 | Introduction to Economics of Digital Platforms | E | 5,00 | | | | 5,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 2 | Financial Markets Analysis | E | 5,00 | | | | 5,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-5, PC-6, UC-1, UC-11, UC-2, UC-6, UC-9 |
| 3 | Banking | E | 5,00 | | | | 5,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-11, UC-2, UC-6 |
| 4 | Dynamic Optimization in Economics and Finance | E | 5,00 | | | | 5,00 | GPC-1.ECN, GPC-3.ECN, PC-1, UC-1, UC-2, UC-6 |
| 5 | Times Series Econometrics (offered in a foreign language) | E | 5,00 | | | | 5,00 | GPC-1.ECN, GPC-3.ECN, PC-1, PC-3, UC-1, UC-2, UC-6 |
| 6 | Data Analysis in Risk Management | E | 5,00 | | | | 5,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| Elective Courses (Block 3) | | | 4,00 | | | | 4,00 | |
| 1 | Large-Scale Machine Learning | E | 4,00 | | | | 4,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| 2 | Reinforcement Learning | E | 4,00 | | | | 4,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.ECN, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| 3 | Generative Models in Machine Learning | E | 4,00 | | | | 4,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| 4 | Efficient Deep Learning Systems | E | 4,00 | | | | 4,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-1, PC-2, PC-3, UC-1, UC-2, UC-6 |
| Elective Courses (Block 4) | | | 6,00 | | | | 6,00 | |
| 1 | Financial Markets | E | 3,00 | | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6, UC-9 |
| 2 | Corporate Finance (offered in a foreign language) | E | 3,00 | | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 3 | Recent Advances in Auction Theory (offered in a foreign language) | E | 3,00 | | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6 |
| 4 | Decision Making in the Problems of Digital Economics under Risk and Uncertainty | E | 3,00 | | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-11, UC-2, UC-6, UC-9 |
| 5 | Monetary Economics | E | 3,00 | | | | 3,00 | GPC-1.ECN, GPC-3.ECN, PC-5, PC-6, UC-1, UC-2, UC-6, UC-9 |
| Internship | | | 32,00 | 3,00 | 5,00 | 5,00 | 19,00 | |
| Professional Internship | | | 3,00 | 3,00 | | | | |

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| 1 | Computer workshop on economics | C | 3,00 | 3,00 | | | | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-7, UC-1, UC-2, UC-6 |
| | Project Internship | | 12,00 | | 5,00 | 5,00 | 2,00 | |
| 1 | Project | C | 5,00 | | 5,00 | | | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-4, PC-7, PC-9, UC-1, UC-2, UC-3, UC-6 |
| 2 | Project | C | 5,00 | | | 5,00 | | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-4, PC-7, PC-9, UC-1, UC-2, UC-3, UC-6 |
| 3 | Project | C | 2,00 | | | | 2,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-4, PC-7, PC-9, UC-1, UC-2, UC-3, UC-6 |
| | Research Internship | | 17,00 | | | | 17,00 | |
| 1 | Preparation of Graduation Thesis | C | 11,00 | | | | 11,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, GPC-5.ECN, GPC-6.ECN, PC-4, PC-7, PC-8, PC-9, UC-1, UC-11, UC-2, UC-4, UC-6 |
| 2 | Graduation Internship | C | 6,00 | | | | 6,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-4, PC-7, PC-8, PC-9, UC-1, UC-10, UC-11, UC-2, UC-4, UC-6 |
| | General Courses | | 14,00 | 1,00 | 5,00 | 4,00 | 4,00 | |
| | Core General Courses | | 2,00 | 1,00 | 1,00 | | | |
| 1 | Safe Living Basics | C | 1,00 | 1,00 | | | | UC-8 |
| 2 | Physical Training | C | 1,00 | | 1,00 | | | UC-7 |
| | Optional General Courses | | 12,00 | | 4,00 | 4,00 | 4,00 | |
| 1 | Legal Literacy | C | 4,00 | | 4,00 | | | UC-10, UC-4 |
| 2 | Philosophy | C | 4,00 | | | 4,00 | | UC-5 |
| 3 | The Elective Course of the Basic Cycle | E | 4,00 | | | | 4,00 | UC-5 |
| | English | | 1,00 | | | | 1,00 | |
| | Examinations | | 1,00 | | | | 1,00 | |
| 1 | Independent English Exam (offered in a foreign language) | C | | | | | | UC-4 |
| 2 | Project Proposal (offered in a foreign language) | C | 1,00 | | | | 1,00 | PC-9, UC-4 |
| 3 | English Language Integrative Exam (offered in a foreign language) | C | | | | | | UC-4 |
| | Optional Courses | | | | | | | |
| 1 | English Language (offered in a foreign language) | O | 8,00 | 8,00 | | | | UC-4 |
| 2 | English Language (offered in a foreign language) | O | 6,00 | | 6,00 | | | UC-4 |
| 3 | Academic English Writing (offered in a foreign language) | O | 2,00 | | | | 2,00 | UC-4 |
| | Data Culture | | 10,00 | | 3,00 | 7,00 | | |
| 1 | Independent Programming Test. Advanced Level | C | | | | | | GPC-2.AMI, GPC-4.AMI, GPC-5.ECN, GPC-6.ECN, PC-1, PC-2, UC-1, UC-11, UC-2, UC-6 |

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|---|---|---|------|--|------|------|---|
| 2 | Algorithms and Data Structures 2 | C | 3,00 | | 3,00 | | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-2, UC-1, UC-2, UC-6 |
| 3 | External Examinations on Digital Skills. Entry-level | C | | | | | GPC-5.ECN, GPC-6.ECN |
| 4 | External Examinations on Digital Skills. Intermediate Level | C | | | | | GPC-5.ECN, GPC-6.ECN |
| 5 | External Examinations on Digital Skills. Final Level | C | | | | | GPC-5.ECN, GPC-6.ECN |
| 6 | Machine Learning 2 | C | 6,00 | | | 6,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-2, PC-3, UC-1, UC-2, UC-6 |
| 7 | Data Science, AI and Generative Models Independent Test. Advanced Level | C | 1,00 | | | 1,00 | GPC-2.AMI, GPC-4.AMI, GPC-5.AMI, GPC-6.ECN, PC-1, PC-2, PC-3, UC-1, UC-11, UC-2, UC-6 |
| 8 | Independent Digital Literacy Test | C | | | | | GPC-4.AMI, GPC-5.ECN, GPC-6.ECN, PC-1, UC-1, UC-2, UC-6 |
| | Final State Certification (FSC) | | 3,00 | | | 3,00 | |
| | Thesis Work | | 3,00 | | | 3,00 | |
| 1 | Presenting of Graduation Thesis | C | 3,00 | | | 3,00 | GPC-1.AMI, GPC-2.AMI, GPC-3.AMI, GPC-4.AMI, PC-4, PC-6, PC-7, PC-9, UC-1, UC-11, UC-2, UC-4, UC-6 |
| | State Examinations | | | | | | |

Curriculum agreed:

| | | |
|---|----------------|------------|
| Academic Supervisor | SAMONENKO I.Y. | 20.04.2022 |
| Dean | PEKARSKIY S.E. | 21.04.2022 |
| Head of Centre for Educational Model Design | LEPESHKIN I.A. | 28.04.2022 |

* Subject type:

| | |
|-------------------|---|
| Compulsory course | C |
| Elective course | E |
| Optional course | O |