



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.03.02 Applied Mathematics and Information Science

Educational Programme "Applied Mathematics and Information Science"

Implementing unit: Faculty of Informatics, Mathematics and Computer Sciences, HSE - Nizhny Novgorod

4 th, 2023/2024 academic year

APPROVED

17.03.2023

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2020/2021 - 2023/2024

Mode of Study: Full Time

Degree: Bachelor's degree

| Block Code | Course | Subject type | Department | Credits | Total Academic Hours | Contact Hours | Allocation of Contact Hours | | | | Additional Information |
|------------|--|--------------|---|--------------|----------------------|---------------|-----------------------------|------------|------------|----------|------------------------|
| | | | | | | | 1 | 2 | 3 | 4 | |
| | Degree Programme | | | 60,00 | 2 280 | 372 | 110 | 120 | 136 | 6 | |
| | Data Culture | | | 6,00 | 228 | 56 | 28 | 28 | | | |
| 1 | Data Analysis and Data Mining | C | Department of Applied Mathematics and Information Science | 6,00 | 228 | 56 | 28 | 28A | | | |
| | Major | | | 28,00 | 1 064 | 246 | 56 | 56 | 134 | | |
| | Core Professional Block (Major) | | | 10,00 | 380 | 62 | 28 | 28 | 6 | | |
| | Subject Areas | | | 10,00 | 380 | 62 | 28 | 28 | 6 | | |
| | Optimization Methods | | | 6,00 | 228 | 56 | 28 | 28 | | | |
| 1 | Risks and random processes | C | Department of Applied Mathematics and Information Science | 6,00 | 228 | 56 | 28 | 28A | | | |
| | Probability Theory and Mathematical Statistics | | | 4,00 | 152 | 6 | | | 6 | | |
| 1 | Introduction to multiple hypothesis testing procedures | C | Department of Applied Mathematics and Information Science | 4,00 | 152 | 6 | | | 6A | | Online Course |
| | Elective Professional Block (Major) | | | 18,00 | 684 | 184 | 28 | 28 | 128 | | |
| 1 | Computational Linguistics | C | Department of Applied Mathematics and Information Science | 4,00 | 152 | 44 | | | 44A | | Foreign language |
| 2 | Research seminar | C | Department of Applied Mathematics and Information Science | 4,00 | 152 | 40 | | | 40A | | |
| 3 | The Internet of Things in Practice | C | Department of Applied Mathematics and Information Science | 4,00 | 152 | 44 | | | 44A | | |

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|---|--|---|---|--------------|------------|-----------|-----------|-----------|----------|----------|---|
| 4 | Distributed Computing | C | Department of Applied Mathematics and Information Science | 6,00 | 228 | 56 | 28 | 28A | | | |
| | English | | | 1,00 | 38 | 2 | | | 2 | | |
| | Optional Courses | | | | | | | | | | |
| 1 | Academic Writing in English | O | | 2,00 | 76 | 48 | | 28 | 20A | | Foreign language, Credits only to the cumulative rating |
| | Examinations | | | 1,00 | 38 | 2 | | | 2 | | |
| 1 | Project Proposal | C | Department of Applied Mathematics and Information Science | 1,00 | 38 | 2 | | | 2A | | Foreign language |
| | Final State Certification (FSC) | | | 4,00 | 152 | 2 | | | | 2 | |
| | Thesis Work | | | 4,00 | 152 | 2 | | | | 2 | |
| 1 | Presenting of Graduation Thesis | C | | 4,00 | 152 | 2 | | | | 2A | |
| | General Courses | | | 8,00 | 304 | 60 | 24 | 36 | | | |
| | Optional General Courses | | | 8,00 | 304 | 60 | 24 | 36 | | | |
| 1 | Legal Literacy | C | департамент права цифровых технологий и биоправа | 4,00 | 152 | 30 | 10 | 20A | | | Online Course |
| 2 | Philosophy | C | Школа философии и культурологии | 4,00 | 152 | 30 | 14 | 16A | | | Online Course |
| | Internship | | | 13,00 | 494 | 6 | 2 | | | 4 | |
| | Research Internship | | | 8,00 | 304 | 2 | | | | 2 | |
| 1 | Preparation of Graduation Thesis | C | | 8,00 | 304 | 2 | | | | 2 | |
| | Professional Internship | | | 5,00 | 190 | 4 | 2 | | | 2 | |
| 1 | Graduation Internship | C | | 5,00 | 190 | 2 | | | | 2A | |
| 2 | Work Experience Internship | C | | | | 2 | 2A | | | | |

Curriculum agreed:

| | | |
|---|----------------|------------|
| Academic Supervisor | KOLDANOV P.A. | 01.03.2023 |
| Dean | ASEEVA N.V. | 01.03.2023 |
| Deputy Director | FOMENKOV D.A. | 01.03.2023 |
| Head of Centre for Educational Model Design | LEPESHKIN I.A. | 14.03.2023 |

* Subject type:

Compulsory course

C

Elective course

E

Optional course

O