

National Research University Higher School of Economics (HSE)

Curriculum

Field of study 09.03.01 Information Science and Computation Technology

Educational Programme "Information Science and Computation Technology"

Specializations: "Automated systems", "Computer Systems and Networks", "Elements and devices of embedded systems"

Implementing unit: Tikhonov Moscow Institute of Electronics and Mathematics, HSE - Moscow

4 th, 2024/2025 academic year

Signed with EDS

APPROVED

19.04.2024

Vice Rector

ROSHCHIN S.Y.

Length of Programme: 4 years

Years of Study: 2021/2022 - 2024/2025

Mode of Study: Full Time Degree: Bachelor's degree

| | Course | Subject Department | | | | А | llocation of C | Contact Hour | | | |
|------------|---|--------------------|--|---------|----------------------------|------------------|----------------|--------------|-----|---|---------------------------------|
| Block Code | | | Department | Credits | Total Academic Hours | Contact Hours | 1 | 2 | 3 | 4 | Additional Information |
| | Degree Progamme | | | | 2 280 | 300 | 98 | 104 | 92 | 6 | |
| | Data Culture | | | | 38 | 2 | | | 2 | | |
| 1 | Data Science, AI and Generative Models Independent Test. Intermediate | С | отдел развития цифровых компетенций | 1,00 | 38 | 2 | | | 2A | | Online Course |
| | Major | | | 35,00 | 1 330 | 254 | 82 | 88 | 84 | | |
| | Elective Professional Block (Major) | 35,00 | 1 330 | 254 | 82 | 88 | 84 | | | | |
| | Дисциплины по выбору ОП | 8,00 | 304 | 14 | | 6 | 8 | | | | |
| 1 | Information Protection | С | Department of Computer Security | 4,00 | 152 | 8 | | | A8 | | Online Course |
| 2 | Mobile Applications Development | С | School of Computer Engineering | 4,00 | 152 | 6 | | 6A | | | Online Course, Foreign language |
| | Научно-исследовательский и проектный семинар | | | 4,00 | 152 | 16 | 8 | 8 | | | |
| 1 | Project Seminar "Modeling of Application Software" | С | School of Computer Engineering | 4,00 | 152 | 16 | 8 | A8 | | | Online Course |
| | Специальные дисциплины блока направления | | | 23,00 | 874 | 224 | 74 | 74 | 76 | | |
| | Автоматизированные системы | | | | 874 | 224 | 74 | 74 | 76 | | |
| 1 | High-Level Modelling and Simulation of Digital Systems | С | School of Computer Engineering | 9,00 | 342 | 76 | 20 | 20A | 36A | | |
| 2 | System Design of Digital Devices | С | School of Computer Engineering | 8,00 | 304 | 86 | 20A | 26 | 40A | | |
| 3 | Artificial Intelligence Systems | С | School of Computer Engineering | 6,00 | 228 | 62 | 34 | 28A | | | |
| | Вычислительные системы и компьютерные сети | | | | 874 | 224 | 74 | 74 | 76 | | |

| 1 | Artificial Intelligence in Multimedia | С | School of Computer Engineering | 9,00 | 342 | 76 | 20 | 20A | 36A | | |
|---|--|-------|-------------------------------------|-------|-----|----|-----|-----|-----|----|---|
| 2 | Network Administration Practice | С | School of Computer Engineering | 6,00 | 228 | 62 | 34 | 28A | | | |
| 3 | Web Application Design | С | School of Computer Engineering | 8,00 | 304 | 86 | 20A | 26 | 40A | | |
| | Элементы и устройства встраив | 23,00 | 874 | 224 | 74 | 74 | 76 | | | | |
| 1 | Intelligent Embedded and Distributed Control Systemsltimedia | С | School of Computer Engineering | 9,00 | 342 | 76 | 20 | 20A | 36A | | |
| 2 | Standard and Custom Interfaces | С | School of Computer Engineering | 6,00 | 228 | 62 | 34 | 28A | | | |
| 3 | Digital Signal Processing | С | School of Computer Engineering | 8,00 | 304 | 86 | 20A | 26 | 40A | | |
| | English | | • | 1,00 | 38 | 2 | | | 2 | | |
| | Optional Courses | | | | | | | | | | |
| 1 | Academic Writing | 0 | | 2,00 | 76 | 48 | | 28 | 20A | | Foreign language, Credits only to the cumulative rating |
| | Examinations | | | 1,00 | 38 | 2 | | | 2 | | |
| 1 | Project Proposal | С | School of Computer Engineering | 1,00 | 38 | 2 | | | 2A | | Foreign language |
| | Final State Certification (FSC) | | | | 114 | 2 | | | | 2 | |
| | Thesis Work | | | 3,00 | 114 | 2 | | | | 2 | |
| 1 | Presenting of Graduation Thesis | С | | 3,00 | 114 | 2 | | | | 2A | |
| | General Courses | | | | 152 | 30 | 14 | 16 | | | |
| | Optional General Courses | | | 4,00 | 152 | 30 | 14 | 16 | | | |
| 1 | Economics | С | Department of Theoretical Economics | 4,00 | 152 | 30 | 14 | 16A | | | Online Course |
| | Internship Research Internship | | | 16,00 | 608 | 10 | 2 | | 4 | 4 | |
| | | | | 12,00 | 456 | 6 | | | 2 | 4 | |
| 1 | Preparation of Graduation Thesis | С | | 8,00 | 304 | 4 | | | 2 | 2 | |
| 2 | Graduation Internship | С | | 4,00 | 152 | 2 | | | | 2A | |
| | Professional Internship | | | 4,00 | 152 | 4 | 2 | | 2 | | |
| 1 | Qualifying Internship | С | | 4,00 | 152 | 2 | | | 2A | | |
| 2 | Work Experience Internship | С | | | | 2 | 2A | | | | |

Curriculum agreed:

Academic Supervisor POLESSKIY S.N. 11.03.2024

KROUK E.A. Dean 12.03.2024

Head of Centre for Educational Model Design LEPESHKIN I.A. 18.04.2024

^{*} Subject type:

Compulsory course
Optional course

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