



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.03.04 Applied Mathematics

Educational Programme "Applied Mathematics"

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

2 nd, 2023/2024 academic year

APPROVED

28.04.2023

Vice Rector

ROSHCHIN S.Y.

Signed with EDS

Length of Programme: 4 years

Years of Study: 2022/2023 - 2025/2026

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 | 2 442 | 1 142 | 332 | 274 | 314 | 308 | |
| Data Culture | | | | | | 4 | | | | | |
| 1 | External Examinations on Digital Skills. Entry-level | C | отдел развития цифровых компетенций | | | 2 | | 2A | | | |
| 2 | External Examinations on Digital Skills. Intermediate Level | C | отдел развития цифровых компетенций | | | 2 | | | | 2A | |
| Major | | | | 46,00 | 1 748 | 840 | 194 | 200 | 240 | 232 | |
| Core Professional Block (Major) | | | | 40,00 | 1 520 | 768 | 142 | 176 | 228 | 222 | |
| 1 | Algorithmization and Programming | C | Department of Applied Mathematics | 9,00 | 342 | 186 | 40A | 38 | 56 | 52A | |
| 2 | Differential Equations | C | Department of Applied Mathematics | 4,00 | 152 | 74 | 38 | 36A | | | |
| 3 | Calculus | C | Department of Applied Mathematics | 5,00 | 190 | 60 | 28 | 32A | | | |
| 4 | Theoretical Mechanics | C | Department of Applied Mathematics | 4,00 | 152 | 86 | | | 42A | 44A | |
| 5 | Probability Theory and Mathematical Statistics | C | Department of Applied Mathematics | 6,00 | 228 | 120 | | 34 | 46A | 40A | |
| 6 | Theory of Complex Functions | C | Department of Applied Mathematics | 4,00 | 152 | 90 | | | 44 | 46A | |
| 7 | Physics | C | School of Electronic Engineering | 4,00 | 152 | 72 | 36 | 36A | | | |
| 8 | Functional Analysis | C | Department of Applied Mathematics | 4,00 | 152 | 80 | | | 40 | 40A | |
| Elective Professional Block (Major) | | | | 6,00 | 228 | 72 | 52 | 24 | 12 | 10 | |
| Дисциплины по выбору ОП | | | | 3,00 | 114 | 32 | 16 | 16 | | | |
| 1 | Computer Practicum 2 | C | Department of Applied Mathematics | 3,00 | 114 | 32 | 16 | 16A | | | |

| | | | | | | | | | | | |
|---|--|---|-----------------------------------|--------------|------------|------------|-----------|-----------|-----------|-----------|---|
| | Научно-исследовательский/Проектный семинар | | | 3,00 | 114 | 40 | 10 | 8 | 12 | 10 | |
| 1 | Research Seminar "Modern Computer Calculation Tools" | C | Department of Applied Mathematics | 3,00 | 114 | 40 | 10 | 8 | 12 | 10A | Foreign language |
| | Minor | | | 10,00 | 380 | 152 | 38 | 38 | 38 | 38 | |
| 1 | Minor | E | | 10,00 | 380 | 152 | 38 | 38A | 38 | 38A | |
| | English | | | | | | 28 | | | | |
| | Optional Courses | | | | | | 28 | | | | |
| 1 | English | O | | 6,00 | 228 | 104 | 28 | 32 | 44A | | Foreign language, Credits only to the cumulative rating |
| | General Courses | | | 1,00 | 200 | 144 | 72 | 36 | 36 | 36 | |
| | Optional General Courses | | | | | | | | | | |
| 1 | Elective General Courses | E | | | | | | | | | |
| | Core General Courses | | | 1,00 | 200 | 144 | 36 | 36 | 36 | 36 | |
| 1 | Physical Training | C | Department of Physical Training | 1,00 | 200 | 144 | 36 | 36 | 36 | 36A | |
| | Internship | | | 3,00 | 114 | 2 | | | | 2 | |
| | Project Internship | | | 3,00 | 114 | 2 | | | | 2 | |
| 1 | Project (2nd) | C | | 3,00 | 114 | 2 | | | | 2A | |

Curriculum agreed:

| | | |
|---|----------------|------------|
| Academic Supervisor | Presnova A.P. | 21.04.2023 |
| Dean | KROUK E.A. | 24.04.2023 |
| Head of Centre for Educational Model Design | LEPESHKIN I.A. | 28.04.2023 |

* Subject type:

Compulsory course

C

Elective course

E

Optional course

O