

National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.03.04 Applied Mathematics

Educational Programme "Applied Mathematics"

Tikhonov Moscow Institute of Electronics and Mathematics,
HSE - Moscow

1 st, 2020/2021 academic year

APPROVED by
Vice Rector

ROSHCHIN Y.S.

Length of Programme: 4 years

Years of Study: 2020/2021 - 2023/2024

Mode of Study: Full Time

Degree: Bachelor's degree

Number of Students: 133

Number of Groups: 5

| 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 | 2 584 | 1 312 | 276 | 280 | 384 | 372 | |
| | Major | | | 47 | 1 786 | 928 | 164 | 204 | 290 | 270 | |
| | Core Professional Block (Major) | | | 44 | 1 672 | 912 | 164 | 204 | 284 | 260 | |
| | Subject Areas | | | 44 | 1 672 | 912 | 164 | 204 | 284 | 260 | |
| | Natural Sciences and Engineering | | | 7 | 266 | 136 | | 36 | 52 | 48 | |
| 1 | Physics | C | School of Electronic Engineering | 7 | 266 | 136 | | 36 | 52A | 48A | |
| | Algebra and Discrete Mathematics | | | 8 | 304 | 160 | 38 | 42 | 40 | 40 | |
| 1 | Algebra | C | Department of Applied Mathematics | 4 | 152 | 80 | 38 | 42A | | | |
| 2 | Discrete Mathematics | C | Department of Applied Mathematics | 4 | 152 | 80 | | | 40 | 40A | |
| | Real, Complex and Functional Analysis | | | 13 | 494 | 282 | 56 | 56 | 88 | 82 | |
| 1 | Курсовая работа по дисциплины "Математический анализ" | C | | | | 2 | | | | 2A | |
| 2 | Calculus | C | Department of Applied Mathematics | 13 | 494 | 280 | 56 | 56A | 88 | 80A | |
| | Linear Algebra and Analytical Geometry | | | 10 | 380 | 204 | 42 | 42 | 60 | 60 | |
| 1 | Linear Algebra and Analytical Geometry | C | Department of Applied Mathematics | 10 | 380 | 204 | 42 | 42A | 60 | 60A | |
| | Programming | | | 6 | 228 | 130 | 28 | 28 | 44 | 30 | |
| 1 | Algorithmization and Programming | C | Department of Applied Mathematics | 6 | 228 | 130 | 28 | 28A | 44 | 30A | |
| | Elective Professional Block (Major) | | | 3 | 114 | 16 | | | 6 | 10 | |
| | Научно-исследовательский\Проектный семинар | | | 3 | 114 | 16 | | | 6 | 10 | |

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|---|--|---|---|----------|------------|------------|-----------|-----------|-----------|-----------|--|
| 1 | Career-oriented Seminar "Introduction to Profession" | C | Department of Applied Mathematics | 3 | 114 | 16 | | | 6 | 10A | |
| | English | | | | 304 | 146 | 24 | 32 | 44 | 46 | |
| | Optional Courses | | | | 304 | 144 | 24 | 32 | 44 | 44 | |
| 1 | English | O | | 8 | 304 | 144 | 24 | 32A | 44 | 44A | Foreign language, Credits only to the cumulative rating |
| | Examinations | | | | | 2 | | | | 2 | |
| 1 | English Language Integrative Exam | C | School of Foreign Languages | | | 2 | | | | 2A | |
| | General Courses | | | 5 | 190 | 190 | 82 | 36 | 36 | 36 | |
| | Optional General Courses | | | 4 | 152 | 28 | 28 | | | | |
| 1 | History | C | School of History | 4 | 152 | 28 | 28A | | | | Online Course |
| | Core General Courses | | | 1 | 38 | 162 | 54 | 36 | 36 | 36 | |
| 1 | Safe Living Basics | C | центр поддержки студенческих инициатив | 1 | 38 | 18 | 18A | | | | Online Course |
| 2 | Physical Training | C | Department of Physical Training | | | 144 | 36 | 36 | 36 | 36A | |
| | Internship | | | 8 | 304 | 48 | 6 | 8 | 14 | 20 | |
| | Project Internship | | | 8 | 304 | 48 | 6 | 8 | 14 | 20 | |
| 1 | "Python in science and engineering" Computer practice | C | Department of Applied Mathematics | 3 | 114 | 12 | | | 4 | 8A | Online Course |
| 2 | Computer Practicum 1 | C | Department of Applied Mathematics | 3 | 114 | 34 | 6 | 8 | 10 | 10A | |
| 3 | Проект 1 курс | E | | 2 | 76 | 2 | | | | 2A | |

Academic Supervisor

BUROVSKIY E.A.

Dean

KROUK E.A.

Head of Degree Programmes
Development Office

MAMONOVA M.A.

* Subject type:

Compulsory course

C

Elective course

E

Optional course

O