



National Research University Higher School of Economics (HSE)

Curriculum

Field of study 01.04.02 Applied Mathematics and Informatics
Educational Programme "Data Analysis for Biology and
Medicine"

Trajectories: "Data Analysis in Biology and Medicine"

Implementing unit: Faculty of Computer Science, HSE - Moscow
2 nd, 2023/2024 academic year

APPROVED
05.04.2023

Vice Rector

ROSHCHIN S.Y.
Signed with EDS

Length of Programme: 2 years

Years of Study: 2022/2023 - 2023/2024

Mode of Study: Full Time

Degree: Master's degree / MBA

| 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 | 292 | 140 | 140 | 8 | 4 | |
| Data Analysis in Biology and Medicine (General track) | | | | 60,00 | 2 280 | 292 | 140 | 140 | 8 | 4 | |
| Major | | | | 24,00 | 912 | 224 | 112 | 112 | | | |
| 2 year 2 semester | | | | 24,00 | 912 | 224 | 112 | 112 | | | |
| 1 | Bioinformatics for Next Generation Sequencing | C | Department of Big Data and Information Retrieval | 6,00 | 228 | 56 | 28 | 28A | | | |
| 2 | Methods for modeling the 3-D structure of proteins | C | Joint Department of Mathematical Methods in System Analysis with RAS Institute of System Analysis | 6,00 | 228 | 56 | 28 | 28A | | | |
| 3 | Molecular Modeling | C | Department of Big Data and Information Retrieval | 6,00 | 228 | 56 | 28 | 28A | | | |
| 4 | Systems Biology and Personalized Medicine | C | Department of Big Data and Information Retrieval | 6,00 | 228 | 56 | 28 | 28A | | | |
| Final State Certification (FSC) | | | | 3,00 | 114 | 2 | | | | 2 | |
| 1 | Final Qualification Paper | C | | 3,00 | 114 | 2 | | | | 2A | |
| Key Seminars | | | | 6,00 | 228 | 64 | 28 | 28 | 8 | | |
| 1 | Mentor's Seminar "Biomedical Data Analysis" | C | Department of Complex Systems Modelling Technologies | 6,00 | 228 | 64 | 28 | 28 | 8A | | |
| Magolego | | | | 9,00 | 342 | | | | | | |
| 1 | All-university Pool MAGOLEGO Courses | E | | 9,00 | 342 | | | | | | |
| Internship | | | | 18,00 | 684 | 2 | | | | 2 | |
| Research Internship | | | | 18,00 | 684 | 2 | | | | 2 | |
| 1 | Graduation Thesis | C | | 18,00 | 684 | 2 | | | | 2 | |

Curriculum agreed:

| | | |
|------------------------------------------------|-----------------|------------|
| Academic Supervisor | POPTSOVA M.S. | 28.03.2023 |
| Dean | ARZHANTSEV I.V. | 28.03.2023 |
| Head of Centre for Educational Model Design | LEPESHKIN I.A. | 03.04.2023 |

* Subject type:

Compulsory course

C

Elective course

E