



REFERENCE

BA7723 № 0000010575

CONTROL NUMBER

P - 0012 - 9678

The purpose of the supplement is to provide sufficient independent data to improve the international «transparency» and fair academic and professional recognition of qualifications (diplomas, degrees, certificates, etc). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition.

Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

Extra long life paper.

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1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1 Family Name(s)

ПОПОВ

Попов

1.2 Given Name(s)

VITALII

Виталий Леонидович

1.3 Date of Birth

26 November 2001

1.4 Student Identification Number

BA7723 № 0000010575

2. INFORMATION IDENTIFYING THE QUALIFICATION

2.1 Name of Qualification and Title Conferred

Bachelor

Бакалавр

2.1.1 Date of Award

22 June 2023

22 июня 2023

2.2 Main Field(s) of Study for the Qualification

Software Engineering

Программная инженерия

2.2.1 Concentration

Software Engineering

Программная инженерия

2.2.2 Educational Programme

Software Engineering

Программная инженерия

2.3 Name of Institution Awarding Qualification

National Research University Higher School of Economics (Higher School of Economics/HSE)
Федеральное государственное автономное образовательное учреждение высшего образования
«Национальный исследовательский университет «Высшая школа экономики» (Высшая школа
экономики/НИУ ВШЭ)

2.4 Name of Institution Administering Studies

Same as in 2.3

2.5 Language(s) of Instruction/Examination

Russian and English

Русский и частично английский

3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

3.1 Level of Qualification

Bachelor

First stage tertiary university level education according to the International
Standard Classification of Education (ISCED) (According to the
National Qualifications Framework of the Russian Federation - Level 6).

3.2 Official Length of Programme

4 years, 240 credits

4 года, 240 кредитов

3.3 Access Requirements(s)

A Certificate of completed general secondary education and results of the unified state
examinations or entrance examinations

4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

4.1 Mode of Study

Full Time Education

4.2 Programme Requirements

The Degree provides a more academically than professionally oriented education. Teaching consists of
lectures, seminars, workshops, laboratory works, etc. Forms of assessments: tests, exams, term papers,
internships, the Final Assessment (includes the State Interdisciplinary Examination and the public defence of
Graduation Thesis). Students are admitted to the Final Assessment after they have achieved passing grades in
each subject of the curriculum.

4.3 Programme Details

Содержание программы

Physical Training, Project Proposal, Independent English Language Test and Project Activity are not considered in GPA calculation.

UNIT TITLE / НАИМЕНОВАНИЕ ДИСЦИПЛИНЫ	CREDITS / КРЕДИТЫ	FINAL GRADE / ИТОГОВАЯ ОЦЕНКА	ECTS GRADE / ОЦЕНКА
CURRICULUM (COMPULSORY AND ELECTIVE COURSES) / ПРОГРАММА ОБУЧЕНИЯ (ОБЯЗАТЕЛЬНЫЕ КУРСЫ И ДИСЦИПЛИНЫ ПО ВЫБОРУ)			
Agile in Enterprise Environment / Agile в корпоративной среде	10	8/отлично	A
Algebra / Алгебра	8	6/хорошо	B -
Algorithms and Data Structures / Алгоритмы и структуры данных	8	9/отлично	A+
Analysis and Modeling of Business Processes / Анализ и моделирование бизнес-процессов	5	8/отлично	A
Computer System Architecture / Архитектура вычислительных систем	4	8/отлично	A
Databases / Базы данных	5	9/отлично	A+
Safe Living Basics / Безопасность жизнедеятельности	1	9/отлично	A+
Introduction into Software Engineering / Введение в программную инженерию	4	8/отлично	A
Group Dynamics and Communication in Software Engineering Professional Practice / Групповая динамика и коммуникации в профессиональной практике программной инженерии	4	8/отлично	A
Discrete Mathematics / Дискретная математика	8	6/хорошо	B -
Project Proposal / Защита концепции выпускной квалификационной работы (на английском языке)		7/хорошо	B +
Intellectual Property Law / Интеллектуальное право	5	8/отлично	A
History / История	4	10/отлично	A++
Computer-based Workshop on Algebra on Python / Компьютерный практикум по алгебре на языке Python	3	9/отлично	A+
Computer-based Workshop on Mathematical Analysis on Python / Компьютерный практикум по математическому анализу на языке Python	3	9/отлично	A+
Software Design / Конструирование программного обеспечения	8	7/хорошо	B +
Information Systems and Organisations / Корпоративные информационные системы	5	8/отлично	A
Mathematical Methods for Data Analysis (Studied in English) / Математические методы анализа данных (изучена на английском языке)	5	8/отлично	A
Calculus / Математический анализ	8	8/отлично	A
Independent English Exam / Независимый экзамен по английскому языку		6/хорошо	B -
Software Quality Assurance and Testing / Обеспечение качества и тестирование	5	10/отлично	A++
Operating Systems / Операционные системы	4	7/хорошо	B +
Applied Methods of Mathematical Statistics / Прикладные методы математической статистики	6	10/отлично	A++
Programming / Программирование	10	6/хорошо	B -
Software Systems Architecture Design / Проектирование архитектуры программных систем	5	8/отлично	A
Development and Analysis of Requirements / Разработка и анализ требований	5	7/хорошо	B +
Distributed Databases and Data Warehouses (Studied in English) / Распределенные базы и хранилища данных (изучена на английском языке)	5	9/отлично	A+
Modern Information Technologies in Business / Современные информационные технологии в бизнесе	5	10/отлично	A++
Probability Theory and Mathematical Statistics / Теория вероятностей и математическая статистика	5	5/удовлетворительно	C +
Queuing Theory / Теория массового обслуживания	10	8/отлично	A
Software Project Management / Управление программными проектами	5	7/хорошо	B +
Physical Training / Физическая культура	1	зачтено	Passed
Philosophy of Science / Философия науки	5	8/отлично	A
Software Engineering Economics / Экономика программной инженерии	4	9/отлично	A+
IoT Ecosystems (Studied in English) / Экосистемы интернета вещей (изучена на английском языке)	5	9/отлично	A+
Electronic Business / Электронный бизнес	5	7/хорошо	B +
TERM PAPERS / КУРСОВЫЕ РАБОТЫ			
API for Authentication in Internet-Services / API для аутентификации в различные интернет сервисы, используя лицо	5	8/отлично	A
PROJECT ACTIVITY / ПРОЕКТЫ	16	Passed / зачтено	
INTERNSHIPS, RESEARCH WORKS AND SEMINARS / ПРАКТИКИ И НАУЧНО-ИССЛЕДОВАТЕЛЬСКАЯ РАБОТА			
Research Seminar "Data Engineering" / Научно-исследовательский семинар "Дата-инжиниринг"	3	9/отлично	A+
Research Seminar "iOS App Development" / Научно-исследовательский семинар "Разработка iOS-приложений"	3	8/отлично	A
Research Seminar "Development of Cyber-Physical Systems" / Научно-исследовательский семинар "Создание киберфизических систем"	3	9/отлично	A+
Research Seminar "Data and Knowledge Management" / Научно-исследовательский семинар "Управление данными и знаниями"	3	10/отлично	A++
Graduation Internship / Преддипломная практика	6	6/хорошо	B -
Work Experience Internship / Производственная практика	3	10/отлично	A++
Educational (Technological) Internship / Учебная (технологическая) практика	6	8/отлично	A
GRADUATION THESIS / ВЫПОЛНЕНИЕ И ЗАЩИТА ВЫПУСКНОЙ КВАЛИФИКАЦИОННОЙ РАБОТЫ			
News Aggregator on Geographic Map / Агрегатор новостей на географической карте	10	7/хорошо	B +
NUMBER OF CREDITS / ИТОГО ПО ОСНОВНОЙ ПРОГРАММЕ	241		

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4.4 Grading Scheme

ECTS Grades		10-point scale (Exam)	5-point scale	Pass/Fail Test
A++	Excellent	10	отлично (существенно превосходит ожидания)	зачтено (Passed)
A+	Very good	9	отлично (превосходит ожидания)	зачтено (Passed)
A	Very good	8	отлично	зачтено (Passed)
B+	Good	7	хорошо	зачтено (Passed)
B-	Good	6	хорошо	зачтено (Passed)
C+	Satisfactory	5	удовлетворительно	зачтено (Passed)
C-	Satisfactory	4	удовлетворительно	зачтено (Passed)
F	Fail	3	неудовлетворительно	не зачтено (Fail)
F	Fail	2	неудовлетворительно	не зачтено (Fail)
F	Fail	1	неудовлетворительно	не зачтено (Fail)

4.5 Overall Classification

In the Russian Federation Diplomas with Distinction (degrees with honors) are awarded to students who have passed the state examination and defended the final qualifying work perfectly (ECTS - A) and have only good (ECTS - B) and excellent (no less than 75 % of the total) marks for all examinations, which they passed while studying at the university.

5. INFORMATION ON THE FUNCTION OF THE QUALIFICATION

5.1 Access to Further Study

The Degree allows to access the master's degree courses.

5.2 Professional Status

Graduates of BSc in Software Engineering can work in companies engaged in industrial development of software. Along with strong skills in both software research and development, graduates can manage software projects and lead development teams. They are also adroit at identifying project objectives, finding best working solutions within limitations of cost, time, knowledge and systems available. Other competencies include but are not limited to solid negotiation and communication skills.

6. ADDITIONAL INFORMATION

6.1 Additional information

Higher School of Economics was founded on November 20, 1992 in Moscow (Russia) on the initiative of renowned Russian economists and leading reformers. In August 2008 the HSE became one of three Russian Universities operating under the auspices of the Government of the Russian Federation. In October 2009 the Higher School of Economics was awarded the status of a National Research University. Higher School of Economics is licenced to held educational activities in the field of higher education and accredited by Federal Service for Supervision in Education and Science.

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hse@hse.ru

6.2 Additional Information Sources

Official website of the National Research University Higher School of Economics (HSE) - www.hse.ru

Official website of the Ministry of Education and Science of The Russian Federation - mon.gov.ru

Official website of the National Accreditation Agency - www.nica.ru

7. CERTIFICATION OF THE SUPPLEMENT

7.1 Capacity
Rector

7.2 Signature
N. Anisimov

7.3 Date of Signature
30 June 2023



Credits. Workload of student's training activity in National Research University Higher School of Economics (HSE) is defined in academic hours and credits. One academic hour is equal to 40 astronomic minutes of students' studies (both in theory and in practice). One credit is equal to 38 academic hours (apr. 25 astronomic hours) depending on complexity of studied discipline.

Academic Performance Rating. There are two forms of final academic performance rating in HSE: examination and test. As a rule educational institutions in Russian Federation apply 5- point grading scale in respect for students' knowledge. Educational outcomes of students in HSE are estimated by 10- point grading scale. Disciplines with final control in test form may also contain the mark in 10-point grading scale. Students of HSE are taught according to annual approved curriculum based on educational standards defining the contents, the forms, the goals and the terms of education. Regulatory time limit for full-time courses is the following: four years for obtaining the bachelor's degree, five years for obtaining the specialist's degree, two years for obtaining the master's degree. Student's pass to the next year of education is possible after getting the "pass" grade or higher in all disciplines of the current year of studies. Students who have completed the plan of studies in full size receive the diploma of higher education and obtain the qualification corresponding to their educational level.

Percentile indicates the share (in a percentage) of students out of an entire selection that demonstrates study results above that of the student in question.

Grade Point Average (GPA) means an indicator showing the average weighted results of all students' grades, whereby the total number of credits for a given course shall serve as the weight coefficient.

8. RUSSIAN EDUCATIONAL SYSTEM

