



National Research University Higher School of Economics (HSE)

Basic Curriculum

Field of study 38.03.05 Business Informatics
 Educational Programme "Business Informatics"
 Specializations: "Business Analytics", "Corporate Information Systems"
 Implementing unit: Graduate School of Business, HSE - Moscow

APPROVED
 10.06.2024
 Vice Rector
 ROSHCHIN S.Y.
 Signed with EDS

Years of Study: 2024/2025 - 2027/2028

Length of Programme: 4 years

Mode of Study: Full Time

Degree: Bachelor's degree

Block Code	Course	Subject type	Credits	Credits by Years				Planned Educational Programme Development Results
				1	2	3	4	
	Degree Programme		240,00	60,00	60,00	60,00	60,00	
	Major		149,00	46,00	34,00	32,00	37,00	
	Core Professional Block (Major)		97,00	40,00	27,00	15,00	15,00	
	Subject Areas		97,00	40,00	27,00	15,00	15,00	
1	Probability Theory and Mathematical Statistics	C	4,00		4,00			GPC-1, PC-16, PC-17, PC-20, UC-1, UC-2
2	IT Infrastructure for Business	C	3,00			3,00		GPC-1, GPC-2, GPC-3, PC-1, PC-2, PC-23, PC-25, PC-28, PC-3, PC-5, PC-7, PC-8, UC-1, UC-2
3	Strategic Management	C	3,00			3,00		GPC-1, GPC-2, PC-21, PC-22, PC-24, PC-3, PC-6, UC-2, UC-3
4	Sustainable Development and Corporate ESG Practices (offered in a foreign language)	C	3,00				3,00	GPC-2, PC-10, PC-20, PC-21, PC-22, PC-23, PC-24, PC-29, PC-30, PC-33, PC-5, PC-9, UC-3, UC-4, UC-5, UC-6
5	Management: Concepts and Technologies of the 21st Century	C	4,00	4,00				GPC-1, GPC-2, PC-21, PC-22, PC-24, PC-3, PC-6, UC-1, UC-2, UC-3
6	IT Project Management	C	3,00				3,00	GPC-1, GPC-2, GPC-3, PC-10, PC-11, PC-14, PC-20, PC-23, PC-24, PC-25, PC-26, PC-28, PC-29, PC-3, PC-30, PC-33, PC-4, PC-5, PC-6, PC-7, PC-8, PC-9, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
7	Enterprise Architecture	C	5,00			5,00		GPC-1, GPC-2, GPC-3, PC-1, PC-10, PC-11, PC-13, PC-14, PC-17, PC-2, PC-20, PC-23, PC-28, PC-3, PC-4, PC-7, PC-8, PC-9, UC-1, UC-2

8	Business Processes Modelling and Analysis	C	4,00		4,00			GPC-1, GPC-2, GPC-3, PC-1, PC-10, PC-11, PC-13, PC-14, PC-15, PC-2, PC-25, PC-28, PC-4, PC-5, PC-6, UC-1, UC-2, UC-3
9	Python Programming	C	3,00		3,00			GPC-1, GPC-3, PC-18, UC-1, UC-2, UC-3
10	Financial and Managerial Accounting	C	6,00		6,00			GPC-1, GPC-2, PC-21, PC-22, PC-24, PC-3, PC-7, UC-2, UC-4
11	Financial Management	C	4,00			4,00		GPC-1, GPC-2, PC-2, PC-21, PC-22, PC-24, PC-7, UC-1, UC-2
12	Technological Entrepreneurship (offered in a foreign language)	C	3,00				3,00	GPC-2, PC-10, PC-20, PC-21, PC-22, PC-23, PC-24, PC-33, PC-5, PC-9, UC-3, UC-4, UC-5, UC-6, UC-9
13	Leadership and Team Management	C	3,00				3,00	GPC-2, PC-10, PC-20, PC-21, PC-22, PC-23, PC-24, PC-29, PC-30, PC-33, PC-5, PC-9, UC-3, UC-4, UC-5, UC-6, UC-8
14	Business Communications	C	3,00				3,00	GPC-2, PC-10, PC-21, PC-22, PC-23, PC-24, PC-26, PC-29, PC-30, PC-33, PC-5, PC-7, PC-9, UC-11, UC-3, UC-4, UC-5, UC-6
15	Software Engineering	C	4,00	4,00				GPC-1, GPC-3, PC-18, PC-25, UC-1, UC-2
16	Introduction to Programming with Java, Part 1: Starting to Code with Java	C	6,00	6,00				GPC-1, GPC-3, PC-18, UC-1, UC-2
17	Macroeconomics	C	6,00		6,00			GPC-2, PC-11, UC-9
18	Quantitative Methods for Management Decisions	C	4,00		4,00			GPC-3, PC-16, PC-6, UC-9
19	Calculus	C	8,00	8,00				GPC-1, PC-16, PC-17, PC-20, UC-2
20	Linear Algebra	C	6,00	6,00				GPC-1, PC-16, PC-17, PC-20, UC-2
21	Microeconomics	C	6,00	6,00				GPC-2, PC-12, PC-17, UC-9
22	Discrete Mathematics	C	6,00	6,00				GPC-6, PC-31, PC-32
	Elective Professional Block (Major)		52,00	6,00	7,00	17,00	22,00	
	Научно-исследовательский / Проектный / Профориентационный семинар		13,00	6,00	2,00	2,00	3,00	
	Research seminar		3,00				3,00	
1	Research Seminar "Information Business Intelligence"	E	3,00				3,00	GPC-3, PC-1, PC-10, PC-11, PC-12, PC-13, PC-14, PC-16, PC-17, PC-19, PC-2, PC-20, PC-27, PC-28, PC-29, PC-3, PC-30, PC-32, PC-33, UC-1, UC-2
2	Research Seminar "Management of Information Systems"	E	3,00				3,00	GPC-3, PC-10, PC-12, PC-13, PC-15, PC-19, PC-20, PC-25, PC-26, PC-27, PC-28, PC-29, PC-3, PC-30, PC-32, PC-33, PC-9, UC-1, UC-2

3	Research Seminar "Innovation and Business in Information Technology"	E	3,00				3,00	GPC-3, PC-1, PC-10, PC-11, PC-12, PC-13, PC-14, PC-17, PC-2, PC-21, PC-22, PC-23, PC-27, PC-28, PC-29, PC-3, PC-30, PC-32, PC-33, UC-1, UC-2
4	Research Seminar "Mathematical Modeling of Complex Systems"	E	3,00				3,00	GPC-3, PC-1, PC-10, PC-11, PC-12, PC-13, PC-14, PC-17, PC-2, PC-21, PC-22, PC-23, PC-27, PC-28, PC-29, PC-3, PC-30, PC-32, PC-33, UC-1, UC-2
	Project Seminar		6,00	2,00	2,00	2,00		
1	Project Seminar "IT Consulting"	C	2,00			2,00		GPC-3, PC-10, PC-13, PC-20, PC-25, PC-28, PC-29, PC-3, PC-30, PC-32, PC-33, PC-7, PC-8, UC-1, UC-2, UC-3, UC-5, UC-6
2	Project Seminar "Modeling of Organization"	C	2,00		2,00			GPC-3, PC-10, PC-13, PC-2, PC-20, PC-25, PC-28, PC-29, PC-3, PC-30, PC-32, PC-33, PC-7, PC-8, UC-1, UC-2, UC-3, UC-5
3	Project Seminar "SWOT Analysis"	C	2,00	2,00				GPC-3, PC-10, PC-13, PC-20, PC-25, PC-28, PC-29, PC-3, PC-30, PC-32, PC-33, PC-7, PC-8, UC-1, UC-2, UC-3, UC-5, UC-6
	Профорориентационный семинар		4,00	4,00				
1	Career Guidance Seminar "Introduction to Business Informatics"	C	4,00	4,00				GPC-3, PC-1, PC-2, PC-21, PC-22, PC-23, PC-25, PC-26, PC-27, PC-28, PC-3, PC-32, PC-33, PC-9, UC-1
	Compulsory Courses		8,00				8,00	
1	Introduction to Information Security	C	3,00				3,00	GPC-1, GPC-3, GPC-4, PC-11, PC-12, PC-14, PC-15, PC-20, PC-23, PC-25, PC-27, PC-4, PC-9, UC-2
2	Big Data	C	5,00				5,00	GPC-1, GPC-3, PC-11, PC-12, PC-14, PC-16, PC-17, PC-18, PC-19, PC-20, PC-27, UC-1, UC-2
	Корпоративные информационные системы		23,00		5,00	9,00	9,00	
	Elective courses 3rd year		9,00			9,00		
1	Digital Product Development	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-18, PC-19, PC-20, PC-26, PC-28, PC-29, PC-3, PC-30, PC-6, PC-7, PC-9, UC-1, UC-2
2	Digital Business Models	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-18, PC-19, PC-20, PC-26, PC-28, PC-29, PC-3, PC-30, PC-6, PC-7, PC-9, UC-1, UC-2
3	Sale and Customer Relationship Management Systems	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-26, PC-28, PC-29, PC-3, PC-30, PC-6, PC-7, PC-9, UC-1, UC-2

4	Planning and Manufacturing Executive Systems	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-26, PC-28, PC-29, PC-3, PC-30, PC-6, PC-7, PC-9, UC-1, UC-2
5	Material Management Systems	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-26, PC-28, PC-29, PC-3, PC-30, PC-9, UC-1, UC-2
Дисциплины по выбору 4 курса			9,00			9,00		
1	Design Thinking	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-18, PC-19, PC-20, PC-25, PC-28, PC-29, PC-3, PC-30, PC-6, UC-1, UC-2, UC-3
2	IT Service Management Fundamentals	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-10, PC-11, PC-13, PC-14, PC-19, PC-20, PC-21, PC-22, PC-23, PC-24, PC-25, PC-28, PC-29, PC-30, PC-5, UC-1, UC-2
3	Information Systems Performance Assessment	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-19, PC-20, PC-21, PC-22, PC-23, PC-24, PC-25, PC-28, PC-29, PC-30, PC-6, PC-9, UC-1, UC-2
4	Strategic Finance Planning and Budgeting Systems	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-19, PC-20, PC-21, PC-22, PC-23, PC-26, PC-28, PC-29, PC-3, PC-30, PC-6, PC-9, UC-1, UC-2
5	Automation of End-to-End Processes of Manufacturing Enterprise	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-19, PC-20, PC-26, PC-28, PC-29, PC-3, PC-30, PC-5, PC-7, PC-9, UC-1, UC-2
6	Digital Control of Human Resource Management	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-26, PC-28, PC-29, PC-3, PC-30, PC-9, UC-1, UC-2
Обязательные дисциплины специализации			5,00		5,00			
1	Business-oriented Programming Development and Low-Code Systems	C	5,00		5,00			GPC-4, PC-16, PC-27, PC-29, PC-30, PC-35, PC-4, PC-40
Бизнес-аналитика			23,00		5,00	9,00	9,00	
Обязательные дисциплины специализации			5,00		5,00			
1	Data Mining	C	5,00		5,00			GPC-1, GPC-2, GPC-3, PC-14, PC-18, PC-31, PC-34, UC-1
Elective courses 3rd year			9,00			9,00		
1	Neural Networks and Deep Learning	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-27, PC-28, PC-29, PC-3, PC-30, UC-1, UC-2

2	Visual data analysis	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-27, PC-28, PC-29, PC-3, PC-30, PC-7, UC-1, UC-2
3	Fuzzy Stochastic Analysis	E	9,00			9,00		GPC-1, GPC-3, PC-11, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-27, PC-28, UC-1, UC-2
4	Introduction to Data Analysis	E	9,00			9,00		GPC-1, GPC-2, GPC-3, PC-11, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-27, PC-28, PC-29, PC-30, PC-6, UC-1, UC-2
5	Process-mining	E	9,00			9,00		GPC-1, GPC-3, PC-11, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-27, PC-28, PC-29, PC-30, PC-6, PC-7, UC-1, UC-2
Дисциплины по выбору 4 курса			9,00				9,00	
1	Special chapters of decision theory	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-24, PC-25, PC-27, PC-28, PC-29, PC-30, UC-1
2	OLAP & OLTP - systems of data processing and analysis based on the platform 1C: Enterprise	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-26, PC-27, PC-28, PC-29, PC-30, PC-9, UC-1
3	Data Science using SAS technology	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-27, PC-28, PC-29, PC-3, PC-30, UC-1
4	Quantitive Methods of Investment Analysis	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-27, PC-28, PC-29, PC-30, PC-9, UC-1
5	Complex Networks and Their Applications	E	9,00				9,00	GPC-1, GPC-2, GPC-3, PC-11, PC-12, PC-14, PC-16, PC-17, PC-19, PC-20, PC-21, PC-22, PC-23, PC-25, PC-27, PC-28, PC-29, PC-3, PC-30, UC-1
Internship			31,00	5,00	3,00	10,00	13,00	
Professional Internship			3,00			3,00		
1	Work Experience Internship	C	3,00			3,00		GPC-2, UC-3, UC-4, UC-5
Project Internship			9,00			7,00	2,00	
1	Project	C	2,00				2,00	GPC-5, GPC-6, PC-2, PC-28, PC-36, PC-4, UC-1, UC-5

2	Team project "IT-consulting"	C	4,00			4,00	GPC-2, GPC-3, PC-10, PC-11, PC-12, PC-13, PC-14, PC-19, PC-20, PC-24, PC-25, PC-28, PC-29, PC-3, PC-30, PC-32, PC-4, PC-40, PC-5, PC-6, UC-1, UC-2, UC-3, UC-4, UC-5
3	An individual project on the design of an enterprise's IT infrastructure	C	3,00			3,00	GPC-2, GPC-3, PC-10, PC-13, PC-25, PC-26, PC-3, PC-32, PC-34, PC-35, PC-36, PC-37, PC-38, PC-39, PC-4, PC-40, PC-5, PC-7, PC-8, UC-1, UC-2, UC-3, UC-4, UC-5
	Research Internship		19,00	5,00	3,00	11,00	
1	Graduation Internship	C	2,00			2,00	GPC-2, GPC-3, UC-3, UC-4, UC-5
2	Preparation of Graduation Thesis	C	9,00			9,00	GPC-3, UC-1, UC-2
3	Term Paper: SWOT analysis	C	5,00	5,00			GPC-2, GPC-5, PC-11, PC-12, PC-13, PC-35, PC-37, PC-8
4	Course Project: Organization Modelling	C	3,00		3,00		GPC-1, GPC-6, PC-14, PC-18, PC-2, PC-25, PC-31, PC-33, PC-6, UC-1, UC-2
	General Courses		14,00	3,00	5,00	6,00	
	Core General Courses		2,00	1,00	1,00		
1	Physical Training	C	1,00		1,00		UC-7
2	Safe Living Basics	C	1,00	1,00			UC-8
	Optional General Courses		12,00	2,00	4,00	6,00	
1	Legal Literacy	C	3,00			3,00	PC-31, UC-1, UC-10, UC-2, UC-5
2	Philosophy	C	3,00			3,00	PC-22, PC-25, UC-3, UC-5, UC-6
3	Russian History	C	4,00		4,00		UC-1, UC-10, UC-5
4	Foundations of Russian Statehood	C	2,00	2,00			UC-5
	Minor		20,00		10,00	10,00	
1	Minor	E	20,00		10,00	10,00	GPC-1, GPC-2, GPC-3, UC-1, UC-2, UC-3, UC-4, UC-5, UC-6
	English		1,00			1,00	
	Examinations		1,00			1,00	
1	Independent English Exam (offered in a foreign language)	C					UC-4, UC-5
2	Project Proposal (offered in a foreign language)	C	1,00			1,00	UC-1, UC-2, UC-3, UC-4
3	English Language Integrative Exam (offered in a foreign language)	C					UC-3, UC-4
	Optional Courses						
1	English Language (offered in a foreign language)	O	8,00	8,00			GPC-1, PC-4, PC-7, UC-3, UC-4, UC-5
2	English Language (offered in a foreign language)	O	6,00		6,00		GPC-1, GPC-2, PC-1, UC-1
3	Academic Writing in English (offered in a foreign language)	O	2,00			2,00	UC-4
	Data Culture		22,00	6,00	8,00	8,00	
1	Databases	C	4,00		4,00		GPC-1, GPC-3, PC-1, PC-15, PC-18, PC-2, PC-20, PC-23, PC-26, PC-27, PC-4, PC-8, PC-9, UC-1, UC-2

2	Data Warehouse	C	4,00			4,00	GPC-1, GPC-2, GPC-3, PC-1, PC-11, PC-12, PC-14, PC-16, PC-17, PC-18, PC-2, PC-20, PC-21, PC-22, PC-23, PC-26, PC-28, PC-3, PC-9, UC-1, UC-2
3	Modern Machine Learning and Artificial Intelligence Technologies	C	3,00			3,00	GPC-1, GPC-3, PC-1, PC-15, PC-18, PC-2, PC-20, PC-23, PC-26, PC-27, PC-4, PC-8, PC-9, UC-1, UC-2
4	Algorithms and Data Structures	C	6,00	6,00			GPC-1, GPC-3, PC-1, PC-11, PC-13, PC-14, PC-15, PC-16, PC-17, PC-2, PC-20, PC-23, PC-26, PC-27, PC-28, PC-6, PC-9, UC-1, UC-2
5	Data Science, AI and Generative Models Independent Test. Advanced Level	C	1,00			1,00	GPC-1, GPC-3, UC-1, UC-2
6	Applied algorithms and data structures	C	4,00		4,00		GPC-4, PC-3, PC-31, PC-4
7	Independent Programming Test. Advanced Level	C					GPC-1, GPC-3, UC-1, UC-2
8	Independent Digital Literacy Test	C					GPC-1, GPC-3, PC-5, PC-6, UC-1, UC-2
9	External Examinations on Digital Skills. Entry-level	C					GPC-5, GPC-6
10	External Examinations on Digital Skills. Intermediate Level	C					GPC-2, GPC-6
11	External Examinations on Digital Skills. Final Level	C					GPC-2, GPC-6
	Final State Certification (FSC)		3,00			3,00	
	Thesis Work		3,00			3,00	
1	Presenting of Graduation Thesis	C	3,00			3,00	GPC-1, GPC-2, GPC-3, PC-1, PC-10, PC-11, PC-12, PC-13, PC-14, PC-15, PC-16, PC-17, PC-18, PC-19, PC-2, PC-20, PC-21, PC-22, PC-23, PC-24, PC-25, PC-26, PC-27, PC-28, PC-29, PC-3, PC-30, PC-31, PC-32, PC-33, PC-4, PC-5, PC-6, PC-7, PC-8, PC-9, UC-3, UC-4
	State Examinations						

Curriculum agreed:

Academic Supervisor	Зараменских Е.П.	14.05.2024
Dean	GABRIELOV A.O.	14.05.2024
Head of Centre for Educational Model Design	LEPESHKIN I.A.	05.06.2024

* Subject type:

Compulsory course

C

Elective course
Optional course

E
O