1. EDUCATIONAL PROGRAM
MATHEMATICAL MODELING AND ARTIFICIAL INTELLIGENCE

1- GENERAL INFORMATION	
Full name of the higher education institution and structural unit	State University of Trade and Economics Faculty of Information Technologies, Department of Digital Economics and Systems Analysis
Level of higher education and title of qualification in the original language	First (Bachelor's) Level of Higher Education Qualification – Bachelor of Applied Mathematics
Field of knowledge	F Information technology
Subject Area	F1Applied mathematics
Name of educational programme	Mathematical modeling and artificial intelligence
Restrictions on forms of education	No restrictions
Compliance with the higher education standard of the Ministry of Education and Science of Ukraine	Meets the standards of higher education of the Ministry of Education and Science of Ukraine (order №1242 of 11/13/2018)
Type of diploma and volume of educational programme	Bachelor's degree, single. The volume of the educational and professional program is 240 ECTS credits. The standard period of training is 3 years 10 months
Accreditation availability	Initial accreditation is scheduled for 2027
Cycle, level of higher education	NQF of Ukraine – level 6, FQ-EHEA – first cycle, EQF-LLL – level 6
Prerequisites for admission to the educational programme	Availability of complete general secondary education
Language(s) of teaching	Ukrainian
Duration of the educational programme	Until the approval of the new edition of the educational and professional program
Internet address of permanent placement of the educational programme description	https://knute.edu.ua/
2- PURPOSE OF THE EDUCATIONAL PROGRAMME	
To ensure that students acquire theoretical knowledge and practical skills sufficient for the successful performance of professional duties and the educational and professional program: successful use of fundamental and applied mathematical methods, forecasting, optimization and decision-making methods, artificial intelligence, machine learning, computer mathematics systems and software using modern information technologies, development and use of computer and mathematical models of complex processes, phenomena and systems of various nature to solve complex applied problems in various fields of science, technology, economics and finance, social and	

political spheres, ecology and security, regional and national economy, global and local problems of social development.

3- CHARACTERISTICS OF THE EDUCATIONAL PROGRAMME

Subject area

Object of study and activity: mathematical methods, models, algorithms and software designed for research, analysis, and design of processes and systems in various specific subject areas.

Learning objectives: training of specialists capable of: formulating, solving and generalizing practical problems using fundamental and special applied methods of mathematical and computer sciences; solving problems of mathematical modeling of processes and phenomena in conditions of uncertainty and incomplete information regarding the functioning of a system of objects; building, researching and applying mathematical models based on data and knowledge, creating and operating software.

Theoretical content of the subject area: mathematical methods used in science, engineering, business and industry, as well as algorithms and software tools for their implementation.

Methods, techniques and technologies: applied mathematical methods and algorithms; methods for solving engineering, scientific, socio-economic problems using specialized software; information technologies for conducting computer modeling and computational experiments, and intelligent data analysis.

Tools and equipment: computer, computer and social networks, specialized software.

Orientation of the educational programme

Educational and professional. Emphasis on readiness to work and acquire knowledge and skills in information technologies, computer and mathematical modeling of complex processes, phenomena and systems of various natures, forecasting, optimization, systems analysis and decision-making, intellectual analysis.

The main focus of the educational programme

Special education in the field of computer and mathematical modeling, information technology, the ability to intellectually analyze, forecast, and make decisions in complex systems of various nature.

Keywords: mathematics, applied mathematics, mathematical methods, computer modeling, mathematical modeling, information systems, information technology, software, forecasting, optimization, decision-making, artificial intelligence, expert systems, machine learning, data, databases, systems approach, systems analysis.

Program features

In-depth study and knowledge of promising areas of applied mathematics, computer and mathematical modeling, forecasting, optimization, and artificial intelligence decision-making at various stages of creating and applying information systems.

4 – EMPLOYABILITY AND FURTHER EDUCATION OPPORTUNITIES FOR GRADUATES

Employability

Jobs in the field of information technology, communication and IT project management: IT companies, financial companies, consulting companies, government agencies.

According to the National Classifier of Occupations **DK 003:2010** with amendments and additions made by the order of the Ministry of Economy of Ukraine dated 13.12.2024 № 27751:

1236 Heads of computer services departments
1497 Managers of information technologies
2121.2 Mathematician
2121.2 Mathematician-analyst in operations research
2121.2 Mathematician (applied mathematics)
2131.2 Database administrator
2131.2 Data administrator
2131.2 Business analyst (information systems)
2131.2 Data analyst
2131.2 Artificial intelligence developer
2132.2 Software developer
2132.2 Programmer
2132.2 Business Architecture Developer (Information Technology)
2132.2 Software Architecture Developer (Information Technology)
2419.2 Economic Cybernetics Professional
2412.2 Labor Market Analyst
2412.2 Employment Analyst
2414.2 Financial and Economic Security Analyst
2433.2 Consolidated Information Analyst
2441.2 Investment Analyst
2441.2 Credit Analyst
3121 Programming Technician
3121 Systems Administration Technician
3121 Information Technology Specialist
3121 Computer Graphics (Design) Specialist
3121 Computer Program and Software Development Specialist
3434 Assistant Economist-Statistician
3434 Assistant mathematician

Further training

The possibility of studying at the second (master's) level of higher education. Obtaining additional qualifications in the postgraduate education system.

5-TEACHING AND ASSESSMENT

Teaching and learning

Problem-based learning, self-study, learning through practical training.

Assessment

The assessment of students' learning outcomes is carried out by the ‘Regulations on the assessment of students' and postgraduate students' learning outcomes at SUTE and involves the following control measures: ongoing and final assessments, and attestation.

Ongoing assessment is carried out during practical/laboratory classes and based on the results of individual assignments. It involves assessing students' theoretical knowledge during seminars and the practical skills they have acquired while performing laboratory/practical tasks.

Final assessment consists of control measures that determine the compliance (measurement, evaluation) of the learning outcomes achieved by a person with the requirements of the educational programme in terms of the relevant educational component, which is carried out at the university in the form of a credit and an exam.

The learning outcomes of students at SUTE are assessed on a 100-point scale, where: 60-100 points – learning outcomes that entitle the student to obtain ECTS credits; 0-59 points – unsatisfactory learning outcomes that do not entitle the student to obtain ECTS credits.	
6- PROGRAMME COMPETENCES	
Integral Competence	
The ability to solve complex specialized tasks and practical problems of applied mathematics, in professional activities or in the process of learning, which involves the application of mathematical theories and methods, mathematical and computer modeling and is characterized by the complexity and uncertainty of conditions.	
General Competencies (GC)	
GC1	The ability to learn and master modern knowledge.
GC2	Ability to apply knowledge in practical situations.
GC3	The ability to generate new ideas (creativity).
GC4	The ability to be critical and self-critical.
GC5	Ability to conduct research at an appropriate level.
GC6	The ability for abstract thinking, analysis and synthesis.
GC7	Ability to search, process and analyze information from various sources.
GC8	Knowledge and understanding of the subject area and understanding of professional activity.
GC9	Ability to communicate with representatives of other professional groups at different levels (with experts from other fields of knowledge/types of economic activity).
GC10	Skills in using information and communication technologies.
GC11	Ability to work in an international context.
GC12	Determination and persistence in the tasks set and responsibilities undertaken.
GC13	Interpersonal skills.
GC14	The ability to implement one's rights and responsibilities as a member of society, to realize the values of a civil (free democratic) society and the need for its sustainable development, the rule of law, and the rights and freedoms of man and citizen in Ukraine.
GC15	The ability to preserve and multiply the moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and engineering, to use various types and forms of physical activity for active recreation and leading a healthy lifestyle.
GC16	The ability to make decisions and act in accordance with the principle of non-acceptance of corruption and any other manifestations of dishonesty.
Special (professional, subject) competencies (PC)	
	Activities using mathematical methods
PC1	The ability to use and adapt mathematical theories, methods, and techniques to prove mathematical statements and theorems.
PC2	The ability to perform tasks formulated in mathematical form.
PC3	The ability to select and apply mathematical methods for solving applied

	problems, modeling, analysis, design, control, forecasting, and decision-making.
	Design activities
PC4	Ability to develop algorithms and data structures, software tools, and software documentation.
PC5	Ability to design databases, information systems, and resources.
	Technological activity
PC6	The ability to solve professional tasks using computer technology, computer networks and the Internet, in the environment of modern operating systems, using standard office applications.
PC7	Ability to operate and maintain software for automated and information systems for various purposes.
PC8	Ability to use modern programming and software testing technologies.
PC9	The ability to conduct mathematical and computer modeling, data analysis and processing, computational experiments, and solving formalized problems using specialized software tools.
	Organizational and managerial activities
PC10	Ability to create established reporting documents, use regulatory documents.
PC11	Ability to organize the work of a team of performers, make appropriate and economically sound organizational and managerial decisions, and ensure safe working conditions.
	Research activities
PC12	The ability to search, systematically study and analyze scientific and technical information, domestic and foreign experience related to the application of mathematical methods to study various processes, phenomena and systems.
PC13	The ability to understand a task statement formulated in the language of a specific subject area, to search for and collect the necessary source data.
PC14	The ability to formulate a mathematical statement of a problem, based on the statement in the language of the subject area, and to choose a method for solving it that ensures the required accuracy and reliability of the result.
PC15	Ability to participate in the preparation of scientific reports on completed research and development work and in the implementation of the results of conducted research and development.
PC16	Ability to communicate effectively in written and oral professional language in Ukrainian and one of the official languages of the EU.
PC17	*Ability to develop mathematical models for processing and analyzing big data.*
PC18	*Ability to build, test, and interpret computer models of complex systems using advanced programming technologies, computer mathematics systems, and analytical platforms.*
7- PROGRAM LEARNING OUTCOMES	
LR1	Demonstrate knowledge and understanding of the basic concepts, principles, and theories of applied mathematics and use them in practice.
LR2	To master the basic principles and methods of mathematical, complex and

	functional analysis, linear algebra and number theory, analytic geometry, the theory of differential equations, in particular partial differential equations, probability theory, mathematical statistics and random processes, and numerical methods.
LR3	Formalize problems formulated in the language of a specific subject area; formulate their mathematical formulation and choose a rational solution method; solve the resulting problems using analytical and numerical methods, and evaluate the accuracy and reliability of the results obtained.
LR4	Perform mathematical description, analysis, and synthesis of discrete objects and systems using the concepts and methods of discrete mathematics and algorithm theory.
LR5	Be able to develop and use in practice algorithms related to the approximation of functional dependencies, numerical differentiation and integration, solving systems of algebraic, differential and integral equations, solving boundary value problems, and finding optimal solutions.
LR6	To master the basic methods of developing discrete and continuous mathematical models of objects and processes, analytically studying these models for the existence and uniqueness of their solution.
LR7	Be able to conduct practical research and find solutions to incorrect problems.
LR8	Combine mathematical and computer modeling methods with informal expert analysis procedures to find optimal solutions.
LR9	To build algorithms that are effective in terms of calculation accuracy, stability, speed, and system resource consumption for numerical study of mathematical models and solving practical problems.
LR10	Possess techniques for choosing rational methods and algorithms for solving mathematical problems of optimization, operations research, optimal management and decision-making, and data analysis.
LR11	Be able to apply modern technologies of programming and software development, software implementation of numerical and symbolic algorithms.
LR12	Solve individual engineering problems and/or problems arising in at least one subject area: sociology, economics, ecology, and medicine.
LR13	Use specialized software products and software systems of computer mathematics in practical work.
LR14	Demonstrate the ability for self-learning and continued professional development.
LR15	Be able to organize your own activities and get results within a limited time frame.
LR16	Demonstrate skills in interacting with other people and the ability to work in a team. Demonstrate skills in interacting with other people and the ability to work in a team. Demonstrate skills in interacting with other people and the ability to work in a team.
LR17	Be able to collect, process, analyze, and systematize scientific and technical information, while avoiding academic dishonesty.
LR18	Effectively communicate information, ideas, problems, and solutions with

	professionals and society in general.
LR19	Collect and interpret relevant data and analyze complexities within their specialization to make judgments that reflect relevant social and ethical issues.
LR20	Demonstrate professional communication skills, including oral and written communication in Ukrainian and at least one of the official languages of the EU.
LR21	*Solve applied mathematical modeling problems in the field of economics and business, and master methods of modeling business processes.*
LR22	*Analyze and process big data, in particular by modeling neural networks using machine learning technologies.*

8- RESOURCE PROVISION FOR PROGRAM IMPLEMENTATION

Staffing

Specialists who train bachelors in the educational program "Mathematical Modeling and Artificial Intelligence" must have specialized knowledge and professional skills in the field of computer and mathematical modeling, data analysis, and modern information technologies.

It is possible to involve foreign specialists and practitioners in teaching professional training disciplines.

Logistics and technical support

Fully complies with the Licensing requirements for conducting educational activities. For the convenience of higher education applicants, a corporate distance learning system and an automated educational process management system “MIA: Education” operate. The basis of material and technical support is made up of computer laboratories with modern hardware and software resources, which ensure high-quality training of bachelors in the educational program “Mathematical Modeling and Artificial Intelligence”. The Educational and Scientific Center for Business Simulation operates and a Smart Library is operating. All conditions have been created for the training of persons with disabilities. The social and household infrastructure of DTEU is available.

Information, educational and methodological support

For each educational program at the university, an ECTS Information Package is being developed.

Each student, through his personal account of the ACS "MIA: Education", can review and form his own individual plan, view the curriculum, points earned by disciplines, class schedule, and communicate with participants in the educational process.

Programs, work programs, discipline syllabi, and assessment criteria for educational components are posted on the corporate distance learning platform.

The university's electronic repository provides full-text access to DTEU scientific and educational literature, manuscripts of qualification works and dissertations for obtaining scientific degrees.

For the convenience of higher education applicants, the university has developed a Catalog of Academic Disciplines, according to which students have the right to choose selective educational components.

9-ACADEMIC MOBILITY

National credit mobility

National credit mobility is carried out within the framework of the concluded

memorandums of cooperation between DTEU and other higher education institutions (scientific institutions) of Ukraine in accordance with the legislation.
International credit mobility
International credit mobility is implemented through the conclusion of agreements on international academic mobility (Erasmus+), on double graduation, on long-term international projects that involve student training, issuing a double diploma, etc.
Education of foreign higher education students
It is carried out in accordance with the requirements of current legislation. Conditions and features of the educational program in the context of training foreign citizens: knowledge of the Ukrainian language at a level not lower than B1.

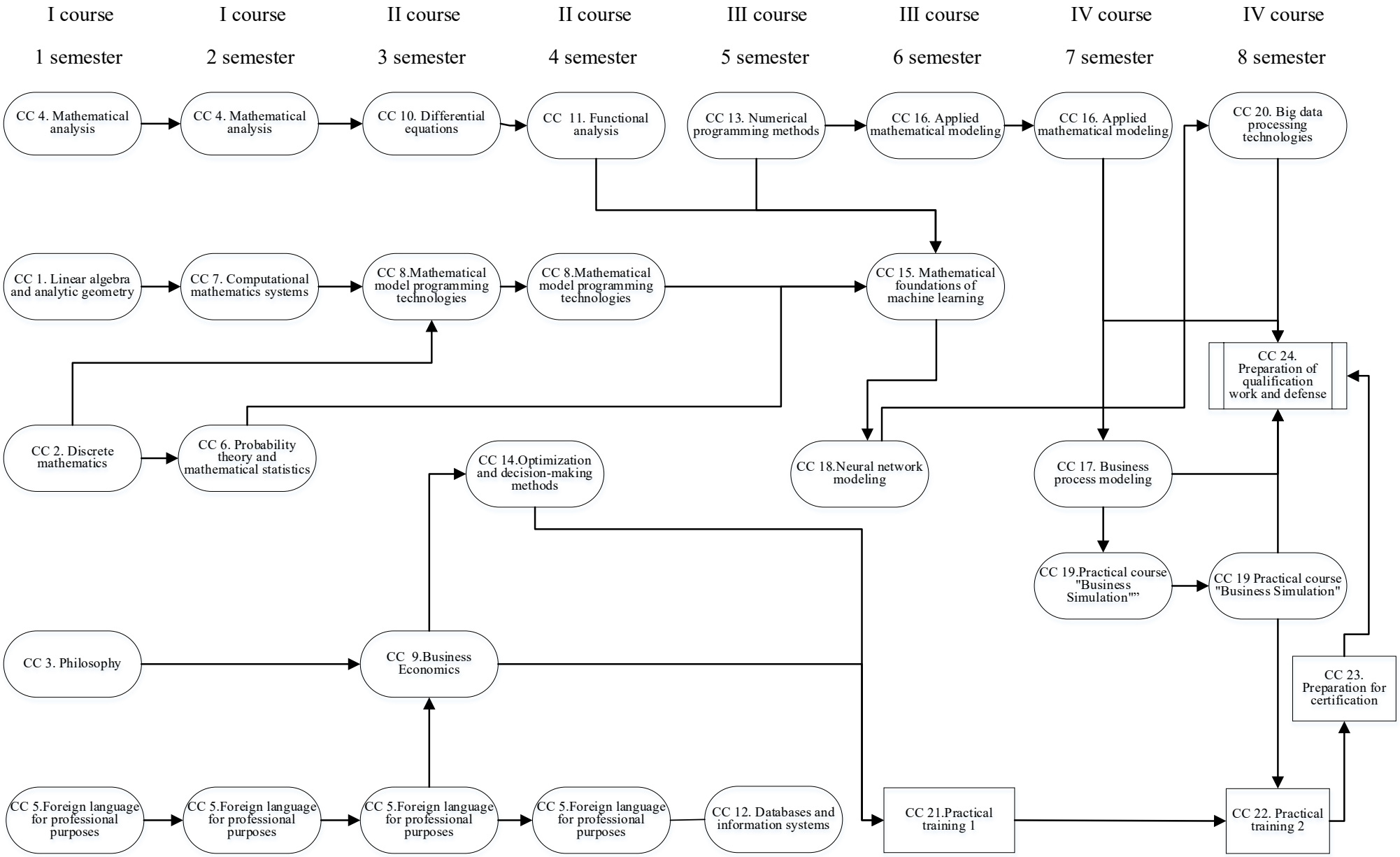
2. LIST OF PROGRAMME COMPONENTS AND THEIR LOGICAL SEQUENCE

2.1. List of educational programme components

Code	Educational components of the programme	ECTS credits	Control form
Compulsory components			
CC 1	Linear algebra and analytic geometry	6	Exam
CC 2	Discrete mathematics	6	Exam
CC 3	Philosophy	6	Exam
CC 4	Mathematical analysis	12	Exam
CC 5	English for Information Technology	24	Exam
CC 6	Probability theory and mathematical statistics	6	Exam
CC 7	Computational mathematics systems	6	Exam
CC 8	Mathematical model programming technologies	12	Exam
CC 9	Enterprise economics	6	Exam
CC 10	Differential equations	6	Exam
CC 11	Functional analysis	6	Exam
CC 12	Databases and information systems	6	Exam
CC 13	Numerical programming methods	6	Exam
CC 14	Optimization and decision-making methods	6	Exam
CC 15	Mathematical foundations of machine learning	9	Exam
CC 16	Applied mathematical modeling	12	Exam
CC 17	Business process modeling	6	Exam
CC 18	Neural network modeling	6	Exam
CC 19	Practical course "Business Simulation"	9	Exam
CC 20	Big data processing technologies	6	Exam
CC 21	Internship 1	3	Credit
CC 22	Internship 2	6	Credit
CC 23	Preparation for certification	3	Test
CC 24	Preparation of qualification work and defense	6	Defense
Total volume of compulsory components		**180**	
Elective components			
SC 1	Educational component 1	6	Exam
SC 2	Educational component 2	6	Exam
SC 3	Educational component 3	6	Exam
SC 4	Educational component 4	6	Exam
SC 5	Educational component 5	6	Exam
SC 6	Educational component 6	6	Exam
SC 7	Educational component 7	6	Exam
SC 8	Educational component 8	6	Exam
SC 9	Educational component 9	6	Exam
SC 10	Educational component 10	6	Exam
Total volume of elective components		**60**	
TOTAL VOLUME OF THE EDUCATIONAL PROGRAMME		**240**	

Higher education students choose selective academic disciplines through their personal account on the portal "MIA: Education". Descriptions of academic disciplines and their prerequisites are presented in the Catalog of Academic Discipline of DTEU

2.2. Structural and logical diagram of the program



3. FORM OF CERTIFICATION OF HIGHER EDUCATION GRADUATES

Forms of certification of higher education graduates	Certification is carried out in the form of a public defence of the qualification work.
Requirements for qualifying work	The qualification work must involve solving a complex specialized problem in applied mathematics, characterized by complexity and/or uncertainty of conditions, using mathematical methods and/or software tools. The qualification work cannot contain academic plagiarism, falsification, or copying. The qualification work must be published on the official website of the higher education institution or its division where the work was performed, or in the repository of the higher education institution. The publication of qualification works containing information with limited access must be carried out in accordance with the requirements of current legislation.

4. MATRIX OF CORRESPONDENCE OF PROGRAM COMPETENCES TO COMPULSORY COMPONENTS OF THE EDUCATIONAL PROGRAM

Components / Competencies	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	CC 7	CC 8	CC 9	CC 10	CC 11	CC 12	CC 13	CC 14	CC 15	CC 16	CC 17	CC 18	CC 19	CC 20	CC 21	CC 22	CC 23	CC 24
GC 01			+		+														+					
GC 02					+														+		+	+	+	+
GC 03			+																+					
GC 04			+																+					
GC 05																				+			+	+
GC 06	+	+	+	+						+	+				+			+					+	+
GC 07												+	+							+	+	+	+	+
GC 08	+	+		+		+	+	+		+	+	+	+	+	+	+	+	+		+	+	+	+	+
GC 09			+		+				+										+		+	+		
GC 10					+		+	+				+	+		+	+		+		+	+	+	+	+
GC 11					+															+				
GC 12																			+					
GC 13			+		+																			
GC 14			+																					
GC 15			+																					
GC 16	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
PC 01	+	+		+		+				+	+			+							+	+	+	+
PC 02	+	+		+		+	+			+	+		+	+	+	+					+	+	+	+
PC 03																+	+	+	+	+	+	+	+	+
PC 04		+					+					+	+		+	+	+	+		+	+	+	+	+
PC 05												+	+							+	+	+	+	+
PC 06							+	+				+	+	+	+	+	+	+	+	+	+	+	+	+
PC 07							+	+				+					+	+		+	+	+	+	+
PC 08								+				+	+		+			+	+	+	+	+	+	+
PC 09							+	+				+	+	+	+	+	+	+	+	+	+	+	+	+
PC 10																	+		+		+	+	+	+
PC 11																			+		+	+	+	+
PC 12	+	+		+		+				+	+			+		+	+			+	+	+	+	+
PC 13				+		+								+		+	+			+	+	+	+	+
PC 14				+		+							+	+		+	+				+	+	+	+
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PC 17						+						+			+			+		+	+	+	+	+
PC 18							+	+					+			+		+		+	+	+	+	+

5. MATRIX OF PROVISION OF PROGRAM LEARNING OUTCOMES BY COMPULSORY COMPONENTS OF THE EDUCATIONAL PROGRAM

Components / Program learning results	CC 1	CC 2	CC 3	CC 4	CC 5	CC 6	CC 7	CC 8	CC 9	CC 10	CC 11	CC 12	CC 13	CC 14	CC 15	CC 16	CC 17	CC 18	CC 19	CC 20	CC 21	CC 22	CC 23	CC 24
PLO 01	+	+		+		+	+			+	+					+		+			+	+	+	+
PLO 02	+	+		+		+				+	+		+			+					+	+	+	+
PLO 03	+	+		+		+				+	+		+	+		+					+	+	+	+
PLO 04		+						+				+									+	+	+	+
PLO 05	+			+			+			+	+		+	+	+	+					+	+	+	+
PLO 06		+		+												+					+	+	+	+
PLO 07				+			+						+		+					+	+	+	+	+
PLO 08								+						+		+					+	+	+	+
PLO 09													+			+					+	+	+	+
PLO 10							+							+							+	+	+	+
PLO 11								+				+	+				+				+	+	+	+
PLO 12									+					+		+			+		+	+	+	+
PLO 13							+							+		+					+	+	+	+
PLO 14			+																+		+	+	+	+
PLO 15																			+		+	+	+	+
PLO 16																			+		+	+	+	+
PLO 17																					+	+	+	+
PLO 18			+		+																+	+	+	+
PLO 19																+				+	+	+	+	+
PLO 20					+														+		+	+	+	+
PLO 21								+								+	+		+	+	+	+	+	+
PLO 22								+							+	+		+		+	+	+	+	+

Developed by a working group consisting of

1. Roskladka Andriy Anatoliyovych – Head of the Department of Digital Economics and System Analysis, Doctor of Sciences in Economics, Professor– Head of the working group
2. Purskyy Oleh Ivanovych – Head of the Department of Computer Sciences and Information Systems, Doctor of Sciences in Physics and Mathematics, Professor
3. Gamalii Volodymyr Fedorovych – Professor of the Department of Digital Economics and System Analysis, Doctor of Sciences in Physics and Mathematics, Professor
4. Kulyk Alla Vasylivna – Associate Professor of the Department of Digital Economics and System Analysis, PhD in Economics, Associate Professor, Director of the Educational Programme
5. Zharyuk Olha – 2nd year student of the 2nd group, educational program "Computer and Mathematical Modeling"

Reviews and feedback from external stakeholders:

1. Rallye Nataliya Viktorivna – software development and testing specialist, LLC "OMILIA NATURAL LANGUAGE SOLUTIONS UA", Ph.D. in Economics, Associate Professor
2. Vasylyk Vitaliy Bogdanovych – Deputy Director for Scientific Work of the Institute of Mathematics of the National Academy of Sciences of Ukraine, Doctor of Physical and Mathematical Sciences, Senior Researcher

LIST OF RECOMMENDED ELECTIVE COMPONENTS

Code	Educational components	ECTS credits
SC 1	Economic and mathematical modeling	6
SC 2	Economic analysis	6
SC 3	Distributed data processing tools	6
SC 4	Information systems and technologies in the economy	6
SC 5	Computer technologies for data processing and visualization	6
SC 6	Mathematical logic and algorithm theory	6
SC 7	Mathematical methods for processing sociological data	6
SC 8	Cybersecurity Basics	6
SC 9	Forecasting socio-economic processes	6
SC 10	Number theory	6
SC 11	Web application development technologies	6
SC 12	Technology for creating distributed databases and knowledge	6
SC 13	Financial mathematics	6
SC 14	Digital systems and technologies	6
SC 15	Numerical programming methods	6

Change registration sheet

№	Date	Items to be amended	Change initiator	Last name, first name of the person responsible for making changes	Signature

LETTER OF AGREEMENT
of the educational and professional program and curricula
"Computer and Mathematical Modeling"
of the first (bachelor's) level of higher education of DTEU

Agreed
First Vice-Rector for Scientific and Pedagogical Work
_____ Nataliya PRYTULSKA
(signature) (name, surname)
_____ 20_____

Agreed
Vice-Rector for Research, Pedagogical Activities and International Relations
_____ Angelika GERASYMENKO
(signature) (name, surname)
_____ 20_____

Agreed
Head of the Academic Department of DTEU
_____ Serhiy KAMINSKIY
(signature) (name, surname)
_____ 20____

Agreed
Head of the Educational and Methodological Department of DTEU
_____ Tetyana BOZHKO
(signature) (name, surname)
_____20_____

Agreed
Dean of the Faculty of Information Technology, DTEU
_____ Oleksandr KHARCHENKO
(signature) (name, surname)
_____ 20____

Agreed
Head of the Department of Digital Economics and Systems Analysis, DTEU
_____ Andriy ROSKLADKA
(signature) (name, surname)
_____20_____

Agreed
Head of the DTEU specialty support group
_____ Alla KULIK
(signature) (name, surname)
_____ 20_____

Agreed
Guarantor of the DTEU educational program
_____ Alla KULIK
(signature) (name, surname)
_____ 20____

Agreed
Software development and testing specialist at OMILIA NATURAL LANGUAGE SOLUTIONS UA LLC

_____ Natalia RALLYE
(signature) (name, surname)
_____ 20_____

Agreed
Deputy Director for Scientific Work of the Institute of Mathematics of the National Academy of Sciences of Ukraine, Doctor of Physical and Mathematical Sciences, Senior Researcher
_____ Vitaliy VASYLYK
(signature) (name, surname)
_____ 20_____

Agreed
Faculty/specialty RCC representative
_____ Diana VASYLCHENKO
тт (signature) (name, surname)
_____ 20_____