MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

RIVNE STATE UNIVERSITY OF HUMANITIES

APPROVED
by the decision of academic council of
Rivne State University of Humanities

protocol № 7 with «31» August 2016
Chairman of academic council

_____ prof. Postolovskyi R.M.

EDUCATIONAL AND PROFESSIONAL PROGRAM

LEVEL OF HIGHER EDUCATION The first
(name of level of higher education)

DEGREE OF HIGHER EDUCATION Bachelor
(name of degree of higher education)

BRANCH OF KNOWLEDGES 12 Information technology
(code and name of area of knowledge)

IN SPECIALTY 122 Computer sciences and information technology
(code and name of specialty)

QUALIFICATIONS a bachelor of computer sciences and information technology

Rivne, 2016

I. Preamble

Educational professional program of bachelor in specialty 122 «Computer sciences and information technology» was developed for the introduction as the Standard of higher education at the appropriate level of higher education by the project group of the Rivne State University of Humanities composed of:

Project team leader(educational program guarantor):

Klimyuk Y. E., Ph.D. (Candidate of Technical Sciences), associate professor of the department of informatics and applied mathematics;

Project group members:

Bomba A. J., Ph.D. (Doctor of Technical Sciences), professor, Head of the department of informatics and applied mathematics;

Kashtan S. S., Ph.D. (Candidate of Technical Sciences), associate professor of the department of informatics and applied mathematics.

It is put in an operation by the order of chancellor of the Rivne State University of Humanities from August, "31" in 2016 № 144-01-01 as a temporal document to introduction as the Standard of higher education after the corresponding level of higher education after speciality 122 "Computer sciences and information technology".

II General description

1. Program of bachelor profile from speciality 122 "Computer sciences and information technology"	
Full name of higher educational institution and structural unit	Rivne State University of Humanities
The official name of the educational program	Computer Sciences and information technologies
Type of diploma and the volume of the educational program	Bachelor's degree. Unitary. 240 credits ECTS / 4 years
Accreditor organization	A national agency is from providing of quality of higher education
Cycle / Level	NQS of Ukraine – 6 level, FQ-EHEA – first cycle, EQF-LLL – 6 level
Prerequisites	Availability of full secondary education
Teaching language(s)	Ukrainian
Basic concepts and their determinations	The program uses the basic concepts and their definitions in accordance with the Law of Ukraine "On Higher Education" No. 1556-VII from 01.07.2014, "Methodological Recommendations for the Development of Higher Education Standards", approved by the order of the MES of 01.06.2016, number 600.
2 – The purpose of educational program	
	To provide preparation of highly skilled specialists on speciality 122 "Computer sciences and information technologies" of able to apply the modern methods of mathematical design in a technique, with application of informative and Internet- of technologies, algorithmic principles in a design, planning, development and accompaniment of the informative systems and technologies; to carry out development, introduction and accompaniment of the intellectual systems of analysis and processing of data in the organizational, technical, natural and socio-economic systems; developments of technical decisions are on the basis of software products and vehicle platforms of leading firms; developments and exploitations of computer information technologies of treatment of information and management are in different industries of activity.
3 – Characteristics of the educational program	
Description of the Subject area (branch of knowledge, specialty)	*The object of the study is:* • mathematical, informational, simulation models of real phenomena, objects, systems and processes; • data representation models and knowledge models; • models, methods and technologies for obtaining, storing, processing, transmitting and using information; • theory, analysis, development, evaluation of efficiency, implementation of algorithms; • methods and algorithms of operational multidimensional and intellectual data analysis and decision making; • high-performance computing, including parallel computing and large data; • system analysis of objects and processes of computerization; • models of subject areas and methods of constructing intelligent systems

	based on knowledge and decision-making technologies; • methods and algorithms for recognizing sensory signals, sounds, images and images; • mathematical provision of automated information and management systems, and information support of the life cycle of industrial products, software systems and complexes, decision support systems; • mathematical and software process automation project work, data visualization technology; • linguistic, informational and software systems for various purposes. *Learning objectives:* training of specialists capable of applying mathematical bases, algorithmic principles in modeling, designing, developing and maintaining information systems and technologies; To carry out development, implementation and support of intelligent systems of analysis and data processing in organizational, technical, natural and social and economic systems. Theoretical content of the subject area: modern models, methods, algorithms, technologies, processes and methods for receiving, representing, processing, analyzing, transmitting, storing data in information systems in order to systematize them and identify the necessary facts of information nature. Methods, methods and technologies: mathematical models, methods and algorithms for solving theoretical and applied problems that arise during the development of information systems; modern technologies and programming platforms; methods of collecting, analyzing and consolidating distributed information; technologies and methods of designing, developing and ensuring the quality of components of information systems; methods of computer graphics and data visualization technology; technology knowledge engineering. Tools and Hardware: CASE-technology for modeling and designing information systems; distributed computing systems; computer networks; cloud technologies, database management systems, operating systems.
Orientation of the educational program	Professional
The main focus of the educational program and specialization	General education in computer science and information technology. Key words: information, programming, digital networks, system analysis, information technologies.
Features and differences	The educational program is developed taking into account the experience of training computer science specialists at leading domestic and foreign universities and training of scientific personnel from related specialties in the system of institutes of the National Academy of Sciences of Ukraine and national research universities, as well as many years of experience in training specialists specializing in «Informatics».
4 – Eligibility of graduates for employment and further training	
Professional rights	Professional activity as a specialist in the development of mathematical, informational and software information systems, in the field of information technology, as well as the administrator of databases and systems. Graduates can work according to professions according to the National Classifier of Professions DK 003: 2010: 2131.2 Database Administrator 2131.2 Data Administrator 2131.2 Access Administrator 2131.2 System Administrator

	2131.2 Computer Software Engineer 2132.2 Software engineer 2132.2 Programmer (database) 2132.2 Programmer applied 2139.2 Computer Engineer 3121.2 IT Specialist 3121.2 Specialist in Software Development and Testing 3121.2 Specialist in the development of computer programs
Continuation of education (academic rights)	Continuation of studies for the receipt of higher education of the second level - educational degree master's
5 – Teaching and assessment	
Teaching and learning	Teaching is conducted in a kind: lectures, multimedia lectures, interactive lectures, seminars, practical employments, laboratory works, independent studies, private lessons, consultations, preparation of term and diploma papers.
Assessment	Verbal and writing exams, tests, defence of report on practice, defence of term papers, defence of diploma work, attestation.
6 – Program competencies	
Integral competence	Ability to decide the intricate specialized problems and practical problems in certain industry of professional activity or in the process of studies that envisages application of certain theories and methods of corresponding science and is characterized a complexity and vagueness of terms
General to the competence (GC)	1. Ability to think, analyze and synthesize abstract. 2. Ability to apply knowledge in practical situations. 3. Knowledge and understanding of the subject area and understanding of professional activity. 4. Ability to communicate in the state language both orally and in writing. 5. Ability to communicate in a foreign language. 6. Ability to learn and master modern knowledge. 7. Ability to search, process and analyze information from various sources. 8. Ability to be critical and self-critical. 9. Ability to generate new ideas (creativity). 10. Ability to make informed decisions. 11. Ability to work in a team. 12. Ability to design and manage projects. 13. Ability to assess and ensure the quality of work performed 14. Determination and persistence on the tasks and duties taken. 15. Ability to operate on the basis of ethic considerations.
Special (to the profession) to the competence (SC)	**Specialization:** the Informative managers of the system and technology 1. Capacity for the mathematical and logical thinking, formulation and research of mathematical models, in particular discrete mathematical models, ground of choice of methods and approaches for untiing of theoretical and applied tasks in industry of computer sciences, interpretation of the got results. 2. A capacity is for the exposure of conformities to law of the casual phenomena, application of methods of the statistical processing of data and evaluation of stochastic processes of the real world. 3. A capacity is for the construction of inferencings, use of formal languages and models of algorithmic calculations, planning, development and analysis of algorithms, evaluation of their efficiency and complication, abandon and unabandon of algorithmic problems for the adequate design of subject domains and creation of the programmatic and informative systems.

	4. Ability to capture modern technologies of mathematical design of objects, processes and phenomena, develop calculable models and algorithms of numeral decision of tasks of mathematical design taking into account the errors of close numeral decision of professional tasks. 5. Ability to carry out the formalized description of tasks of analysis of operations in the organizationally-technical and socio-economic systems of the different setting, to determine them optimal decisions, build the models of optimal choice of management taking into account the changes of parameters of economic situation, to optimize management processes in the systems of the different setting and level of hierarchy. 6. Capacity for the system thinking, application of methodology of analysis of the systems for research of thorny problems of different nature, methods of formalization and decision of system tasks, that have contradictory goals, vaguenesses and risks. 7. Ability to apply theoretical and practical bases of methodology and design technology, realize design algorithms for research of descriptions and behavior of difficult objects and systems, to conduct experiments on the program of design with treatment and analysis of results. 8. Ability to design and develop software with application of different paradigms of programming : structural, object-oriented, functional, logical, with corresponding models, methods and algorithms of calculations, structures of data and management mechanisms. 9. Ability to realize a multilevel calculable model on the basis of architecture client-server, including databases, depository of data and base of knowledge, for providing of calculable necessities of many users, TP, including on cloudy services. 10. Ability to apply methodologies, technologies and tools for the management of life cycle of the informative and programmatic systems, products and services of information technologies processes in accordance with the requirements of customer. 11. Capacity for the intellectual multidimensional analysis of data and their operative analytical treatment with visualization of results of analysis in the process of decision of the applied tasks in industry of computer sciences. 12. Ability to provide organization of calculable processes in the informative systems of the different setting taking into account architecture, configuration, indexes of effectiveness of functioning of the operating systems and system software. 13. A capacity is for development of network software, that functions on the basis of different topologies of the structured cable systems, uses the computer systems and networks of telecommunications and analyses quality of work of computer networks. 14. Ability to apply methods and backer-ups of informative safety, develop and exploit the special defence of informative resources of objects of critical informative infrastructure software. 15. Capacity for an analysis and functional design of business processes, construction and practical application of functional models of the organizationally-economic and production and technical systems, methods of evaluation of risks of planning ICS, to the synthesis of the difficult systems on principles of the use of her computer model. 16. Ability to realize high-performance calculations on the basis of cloudy services and technologies, parallel and up-diffused calculations at development and exploitation of the distributed systems of the

	simultaneous processing of information.
7 – **Programmatic results of studies**	
Knowledge (Kn)	**General to the competence:** 1. Knowledge of the basic forms and laws of abstract-logical thinking, the foundations of logic, the norms of the critical approach, the foundations of the methodology of scientific knowledge, the forms and methods of analysis and synthesis. 2. Knowledge of methods of teaching, organization and implementation, stimulation and motivation of educational and cognitive activity, understanding of the domain of computer science. (2.3 comp.) 3. Knowledge of lexical, grammatical, stylistic features of state and foreign vocabulary, terminology in the field of computer sciences, grammatical structures for the understanding and production of oral and written foreign texts in the professional field (4,5 comp.). 4. Knowledge of methods and methods of teaching, methods of self-education, bases of scientific and research activity, methods of search, collection, analysis and processing of information. 5. Knowledge of methods, methods and technologies for gathering information from various sources, content analysis of documents, analysis and data processing. 6. Knowledge of the main stages and stages of the creative process, the role of the correct formulation of the goals and objectives for their achievement in the field of computer sciences, human creative abilities, the mechanism of genesis and development of knowledge, methods of generating ideas, understanding creativity as a universal process of generating unusual ideas. 7. Knowledge of the principles of team work, team values, foundations of conflictology. Knowledge of IT project management methodology, SMVC standards, software toolkit for IT projects management (9-11 comp.) 8. Professional knowledge in the field of computer sciences, knowledge of methodical approaches to the procedures for the preparation and approval of organizational and managerial decisions, the order of behavior in non-standard situations 9. Knowledge of international standards for the evaluation of software quality, management and service of IT services, models for assessing the maturity of software development processes, methods for quality assurance of IT systems. 10. Ability to purposeful behavior in circumstances that prevent the achievement of the goal, the achievement of various obstacles. 11. Knowledge of the system of general norms of moral behavior of a person and group of people, ethical principles, understanding of the code of professional ethics. **Special competencies:** 1. Knowledge of theoretical and applied provisions of continuous and discrete analysis, including analysis of infinitesimal, integral calculus, linear algebra, analytic geometry, differential equations, functional analysis, combinatorics, graph theory, boolean algebra. 2. Knowledge of the laws of random phenomena, their properties and operations on them, theorems and laws of the distribution of random variables, probabilistic methods of studying complex systems, basic concepts of mathematical statistics, methods for processing empirical data,

	verification of statistical hypotheses based on sample data, elements of regression theory and correlation. 3. Knowledge of basic concepts of algorithm theory, formal algorithms, primitive recursive, general recursive and partially recursive functions, computational problems, solvability and insolubility of mass problems, concepts of time and space complexity of algorithms in solving computational problems. 4. Knowledge of numerical methods of linear and nonlinear algebra, approximation of functions, methods of numerical differentiation and integration of functions, solving ordinary differential and integral equations, solution of equations in partial derivatives, theoretical peculiarities of numerical methods and possibilities of their adaptation to engineering problems. 5. Knowledge of the concepts of operation, operating system, operation model, stages of development of operation model; the classification of economic and mathematical models and methods; principles of modeling of organizational and technical systems and operations; methods of solving linear, integer, nonlinear, stochastic, dynamic programming tasks; peculiarities of construction and solution of multicriteria tasks. 6. Knowledge of methodology of system analysis for systematic study of deterministic and stochastic models of objects and processes, design and operation of information systems, products, services of information technologies, other objects of professional activity. 7. Knowledge of models of mass service systems, Petri Networks; methodology of probabilistic and simulation modeling of objects, processes and systems; planning and conducting experiments with models, making decisions on the achievement of goals by modeling results. 8. Knowledge of data structures and fundamental algorithms, methodologies and tools of object-oriented analysis and design, features of different programming paradigms, principles, models, methods and technologies of designing and developing software products of various purposes. 9. Knowledge of principles, tools, web programming languages, database creation technologies, data warehouses and showcases, and knowledge bases for developing distributed applications with the integration of databases and data warehouses into the client-server architecture. 10. Knowledge of standards, methods, technologies and tools for managing the processes of the life cycle of information and software systems, products and services of information technologies. 11. Knowledge of methods and algorithms of operational analytical processing and intellectual data analysis for classification, forecasting, cluster analysis, and associative rules search with the use of software tools for supporting multidimensional data analysis. 12. Knowledge of computer architecture, functions of operating systems (OS), software interfaces for access of applications to OS, system programming languages and methods for developing programs interacting with components of computer systems. 13. Knowledge of network technologies, architecture of computer networks, technology of computer network administration and their software in the process of distributed computing. 14. Knowledge of the concept of information security, the principles of safe design of IP and IT, the methodology of secure programming, threats and attacks, security of computer networks, methods of cryptography.

	15. Knowledge of the methodology and technology of designing complex systems, CASE-system design systems, methods of structural analysis of systems, object-oriented design methodology, project documentation, methodology for evaluating the complexity of complex systems development. 16. Knowledge of architecture and software of high-performance parallel and distributed computing systems, numerical methods and algorithms for parallel structures.
Ability (Ab)	**<u>General competencies:</u>** 1. To obtain systematic knowledge in the field of computer sciences, to analyze problems from the point of view of modern scientific paradigms, to comprehend and make grounded conclusions from scientific and educational literature and the results of experiments. 2. Implement realized concepts, concepts, theories and methods in intellectual and practical activity in the field of computer sciences, comprehend the content and sequence of application of ways of carrying out actions, generalize and systematize the results of work. (2.3 comp.) 3. Professionally communicate in state and foreign languages, to develop documentation in systems of state and foreign languages on systems, products and services of information technologies, to read, understand and apply technical documentation in Ukrainian and foreign languages in professional activity. (4,5 comp.) 4. To evaluate the subject of educational activity, to determine the general purpose and specific tasks, to choose the adequate means of their solution for the achievement of the result, to carry out the necessary self-control, to use the reference literature and technical documentation, to develop and apply in the professional activity their creative abilities, to organize the workplace, to plan the worker time. 5. Use technology and tools for search engines, methods for analyzing data and texts, processing, interpreting and aggregating data. 6. Exercise curiosity, risk aversion, thinking skills, inspire new ideas, incarnate them, light them around, combine and experiment. 7. Build relationships and relationships with people, take into account the views of colleagues, understand other people, express confidence in the team, recognize their mistakes, avoid and prevent conflicts, restrain personal ambitions. To select and prepare information and tasks for the project team, set goals and formulate tasks for the implementation of projects and programs. (9-11 sets) 8. Analyze the strengths and weaknesses of the decision, weigh and analyze the opportunities and risks of the decisions, evaluate the effectiveness of the decisions taken. 9. Apply in the work of international standards for assessing the quality of software, management and maintenance of IT services, models for evaluating the maturity of software development processes. 10. To analyze problem situations, to set certain goals for solving professional problems and to deliberately pursue their implementation, to choose the way for future actions, to determine the means necessary to achieve the goal, to make decisions. 11. Realize the system of moral relations in professional activity. **<u>Special competencies:</u>**

	1. Effectively use modern mathematical apparatus in professional activity to solve theoretical and applied problems in the process of analysis, synthesis and design of information systems by industry. 2. Solve typical problems using the basic theorems of probability theory; to build the laws of the distribution of random variables and to calculate their numerical characteristics; to build models of random processes and to carry out their analysis; apply probabilistic-statistical methods for the estimation of stochastic processes; use modern environments for solving problems of statistical processing of experimental data. 3. To use formal models of algorithms and computational functions, to establish solvability, partial solvability and insolubility of algorithmic problems, to design, develop and analyze algorithms, estimation of their efficiency and complexity. 4. Use mathematical packages and develop programs for implementing numerical methods; it is reasonable to choose numerical methods for solving engineering problems in the process of designing and modeling information and software systems and technologies, and to evaluate the efficiency of numerical methods, in particular, convergence, stability and complexity of implementation. 5. To formulate the purpose of management of organizational and technical and economic systems, to form a system of criteria of management quality, to construct a mathematical model of the problem, to select and apply an appropriate method of solving the problem of optimization, to find its optimal solution, to correct the model and solution on the basis of new knowledge gained. about the task and operation, to make a managerial decision on the investigated operation and to execute this decision, to apply software tools for finding optimal solutions to organizational and economic problems chnoho management. 6. Describe the subject, area, apply the principles of a systematic approach to modeling and designing systems and objects of information, carry out system analysis of business processes of management systems, reveal uncertainties and analyze multifactorial risks; find solutions to poorly structured problems. 7. To define the components of structural and parametric identification of models of real systems, to apply methods of modeling complex objects and systems with the use of appropriate software, to assess the degree of completeness, adequacy, truth and realization of real systems models 8. To develop software modeling of subject environments, to choose the programming paradigm from the point of view of convenience and quality of application for implementation of methods and algorithms for solving problems in the field of computer sciences, to create reliable and efficient software. 9. Use methods, technologies and tools for designing and developing client-server applications, designing conceptual, logical and physical databases, developing and optimizing queries for them, creating distributed databases, storage and display windows, knowledge bases, including cloud services. 10. Use the methodologies, technologies and tools of life cycle management of information systems, software, products and services of information technologies in accordance with the requirements and restrictions of the customer, the ability to prepare project documentation (feasibility study, specifications, business plan, creative brief, agreement, contract, contract,

	etc.). 11. Use OLAP, DataMining, TextMining, WebMining technologies in the process of intelligent multidimensional data analysis; to solve professional problems using methods of classification, forecasting, cluster analysis, search of associative rules. 12. Solve issues of administration, effective use, security, diagnostics, restoration, monitoring and optimization of computers, operating systems and system resources of computer systems. 13. Own methods and means of work with computer networks; choose the configuration, type and structure of the computer network; exploit computer networks in the process of distributed computing. 14. Maintain confidentiality, integrity and availability of information, provide authenticity, traceability and reliability of information in conditions of incompleteness and uncertainty of source data, multicriteria of professional tasks. 15. Use the technology of designing complex systems, choose CASE-tools; to formulate technical and economic requirements, to develop information and program systems using templates and automated design tools. 16. Perform parallel and distributed computing, apply numerical methods and algorithms for parallel structures, parallel programming languages in the development and operation of parallel and distributed software.
Communication (Com)	**<u>General competencies:</u>** 1. Implementation of social communications in the process of communicating with specialists and non-specialists in the field of computer sciences, ensuring the exchange of logical arguments in order to achieve mutual understanding and agreement. 2. Ability to communicate, emotional tiredness, endurance, tact, defending his point of view, understandable expression of his thoughts. (2.3 comp.) 3. Owning and using professional lexico-syntactic models typical for professional communication; building communication in oral and written form in state and foreign languages, based on the purposes and the situation of communication. 4. Use of communicative competence for effective interaction in various spheres of communication; Selection and systematization of informational materials for the purpose of communication in the professional sphere, use of mass media for receiving, processing and creating relevant information in the form of documents, abstracts, reports, articles, interviews; improvement of personal communication competence on the basis of skills and abilities of interpersonal communication. 5. Use of document and information communication system to meet informational needs in the field of computer science and information technologies. 6. Implementation of professional communication contacts, understanding of interlocutors, psychological influence in the process of communication, adequate understanding of verbal and nonverbal communicative signals, ability to overcome communicative barriers. 7. Planning of communications in a team and with customers, observance of correct behavior, tolerance, order, recognition of someone else's thought and correct discussion, overcoming selfish views, principles of self-criticism, dissemination of information on the progress of work. (9-11 comp.) 8. Conducting business negotiations for the transmission of information, using

	situation analysis, argumentation and counterargumenting. 9. Development of communication plans in the project; to prepare and conduct meetings; detection of problems and diagnostics of conflicts when performing work. 10. Ability to develop communication in a team, to find an understanding in the process of performing individual tasks and performing their duties. 11. Ability to plan and implement interpersonal communication on the basis of human-defined moral principles. **Special competencies:** 1. The ability to effectively formulate a communication strategy through the accuracy of argumentation in mathematical statements. 2. Ability to substantiate their own point of view regarding application of methods of statistical data processing and estimation of stochastic processes of the real world in the process of communicating with colleagues, clients, partners, to formulate analytical reports, report in writing and to present the results of their own work at meetings, conferences, etc. 3. Ability to communicate with colleagues, clients, partners on specific issues of designing and modeling information and software systems, compiling analytical reports, writing reports and presenting the results of their work at meetings, conferences, etc. 4. Ability to substantiate their own point of view on the problem solved, communicate with colleagues, clients, partners on specific issues of design and modeling of information and software systems and technologies, compile analytical reports, report in writing and present their own work at meetings, conferences, etc. 5. Ability to substantiate their own point of view on the solved task, communicate with colleagues, clients, partners on specific issues of the company's activity, institutions, organizations, compile analytical reports, report in writing and present their work results at meetings, conferences, etc. 6. Ability to substantiate its own point of view on the systematic analysis of complex objects and processes, methods of formalizing system tasks in the design of complex systems, communicate with colleagues, clients, partners on specific issues of designing information and software systems, compile analytical reports, report in writing and speak with the results of their own work at meetings, conferences, etc. 7. Ability to substantiate their own point of view on models of systems and methodologies of modeling objects and processes, communicate with colleagues, clients, partners on specific questions of methodology and technology of modeling objects and systems, compile analytical reports, report in writing and present their own results. work at meetings, conferences, etc. 8. Ability to effectively formulate a communication strategy in the process of team development of software and decision making on paradigms of programming, methods and algorithms of computing, data structures and management mechanisms. 9. Ability to substantiate its own point of view on the architecture and technologies of developing client-server applications, including databases and data warehouses, requests for them, to formulate a communication strategy with colleagues, clients, partners on specific issues of client-server application development, to formulate analytical reports, reports in writing

	form and speak with the results of their work at meetings, conferences, etc. 10. Ability to carry out and develop communication with Ukrainian and foreign partners, current interaction and joint processing of decisions and initiatives on development of cooperation: conducting business negotiations on the development of information and software systems. 11. Creative interaction with colleagues and partners in the process of intelligent multidimensional data analysis and their operational analytical processing Ability to persuade partners about the need to apply certain methods and technologies of intellectual multi-dimensional analysis. 12. Ability to effectively formulate communication strategies in the field of computing processes in information systems of different purposes. 13. Ability to implement communication strategies using computer networks and distributed software. 14. Ability to effectively formulate communication strategies in the process of forming the concept of information exchange, coding and selecting a channel of communication, the transmission of messages and documents through the channel, storage and acquisition of documents, implementation of feedback. 15. Ability to effectively formulate communication strategies in the field of team work in the design and development of information and software systems. 16. Ability to effectively formulate communication strategies for parallel and distributed computing.
Autonomy and responsibility (AR)	**<u>General competencies:</u>** 1. Responsibility for the assignment, autonomy in decision-making in solving computer science tasks. 2. Organization of the work to achieve the result, the implementation of mental and practical actions, techniques and operations, awareness of responsibility for the results of its activities, self-control and self-esteem. (2.3 comp.) 3. Responsibility for accuracy and correctness of statements in state and foreign languages. (4,5 comp.) 4. Responsible for professional duties and work performed, to demonstrate autonomy in the implementation of independent generalizations, to make independent decisions and to carry out independent actions in the process of overcoming educational difficulties, based on their own experience of creative solution of the problems. 5. Independence in the processing, interpretation and synthesis of data, responsibility for the efficiency, accuracy and reliability of information. 6. Independence and responsibility for generating new ideas and decisions in the field of computer sciences in the process of developing methods, models, algorithms and their implementation. 7. Free expression of your thoughts when working in a team, responsible for the results of the team, leader's responsibility to the team. 8. To be responsible for the decisions made, including in non-standard situations, to defend their decisions. 9. Be responsible for the quality of the work performed, ensuring the fulfillment of obligations under the contract. 10. Ability to independently carry out task preparation and develop design decisions taking into account uncertainty, develop appropriate methodological and regulatory documents, as well as proposals and

	measures for the implementation of developed projects and programs. 11. Responsibility to colleagues and society for the result of work, the ability to support the reputation of their social group, the moral ideal of the professional. **Special competencies:** 1. Ability to independently solve professional problems, using modern mathematical apparatus and be responsible for the received solutions. 2. Ability to independently solve professional problems using the modern mathematical apparatus of probability theory and mathematical statistics and be responsible for the received solutions. 3. Ability to substantiate its own point of view regarding the design, development and analysis of algorithms and computational functions in the design of subject areas 4. The ability to independently determine the formulation of a problem, to choose a numerical method for its solution, to guarantee the given accuracy of the performed calculations and to answer for the received solutions. 5. Ability to independently solve problems of professional activity with the use of modern methods, technical and scientific literature, using modern software; execution of separate functions of organizational and technical management, related to the processing of information, construction of models of situation analysis, preparation of decisions on optimization of activity, functioning of information systems of the organization. 6. The ability to independently assess and form the research apparatus, independently determine the feasibility and the possibility of disclosing the existing uncertainty for the formalization of the task, to bear responsibility for the mistakes made in relation to the logical organization, properties and behavior of the complex systems being designed. 7. Ability to independently determine the task statement, build an information model, choose a method or simulation environment, simulate an object or system, be responsible for decisions on achieving the goal by the results of simulation. 8. Ability to independently carry out task preparation and develop design decisions taking into account the uncertainty factor, develop appropriate methodological and regulatory documents, as well as proposals and measures for the implementation of developed projects and programs. 9. The ability of the team to implement a multilevel client-server application, independently integrate databases and data warehouses, in the process of developing distributed software, to be responsible for the decisions made on the logical organization, properties and performance of client-server software. 10. Ability in a team to implement life cycle models in modern methodologies for developing information and software systems, independently make decisions to increase the effectiveness of the project and change the business processes of the organization. 11. Independent choice and decision making on methods and algorithms for operational analytical processing and data mining for applied research in the field of computer science. 12. To independently carry out planning and dispatching tasks, manage memory, files, processes, devices of input-output; handle interrupts using different operating systems and system software.

	13. Choose the configuration, the type and structure of the computer network independently and responsibly; exploit computer networks in the process of distributed computing. 14. Manage messages and documents independently, be responsible for the content of information resources that require information protection. 15. Independent choice and decision making on methods of analysis and functional modeling of business processes, construction and practical application of functional models of organizational, economic and industrial-technical systems. 16. Independent choice, decision-making and responsibility for numerical methods and algorithms for parallel structures, such as parallel programming in the design and operation of parallel and distributed software.
8 – Resource providing of realization of the program	
Specific descriptions of the skilled providing	Realization of lectures on educational disciplines by the scientifically-pedagogical workers of corresponding speciality, that have a scientific degree та/або scientific rank, and work on basic job, presents an over 50 % percent of certain the curriculum of amount of hours.
Specific descriptions of logistical support	The use of modern software is in the chosen speciality.
Specific descriptions of the informatively-methodical providing	Use of virtual educational environment of the Rivne state humanitarian university and authorial developments of faculty advisors.
9 – Basic components of the educational program	
List of educational components (disciplines, practices, term and qualifying papers)	Matrix of accordance of programmatic компетентностей to educational disciplines and the structure of on-line tutorial is driven to Additions
10 – Academic mobility (regulated by Resolution of КМУ № 579 "About claim of Statute about the order of realization of right on academic mobility" from August, 12, 2015)	
National credit mobility	On the basis of bilateral agreements between Rivne State University of Humanitaries and higher educational establishments and scientific institutions of Ukraine..
International Credit Mobility	On the basis of bilateral agreements between Rivne State Humanities University and foreign educational institutions.
Training of foreign applicants for higher education	Possible.

III. Розподіл змісту освітньої програми за групами компонент та циклами підготовки

№ з/п	Цикл підготовки	Обсяг навчального навантаження здобувача вищої освіти (кредитів / %)		
		Нормативні компоненти освітньо-професійної програми	Вибіркові компоненти освітньо-професійної програми	Всього за весь термін навчання
1.	Цикл загальної	77,5 / 32,3	15/ 6,3	92,5/ 38,6

	підготовки			
2.	Цикл професійної підготовки	61/ 25,4	68,5 / 28,5	154,5/ 53,9
3.	Практична підготовка	4,5 / 1,9	0 / 0	4,5 / 1,9
4.	Підготовка та захист дипломної роботи	13,5 / 5,6	0 / 0	13,5 / 5,6
Всього за весь термін навчання		156,5/ 65,2	83,5/ 34,8	240/ 100

IV. Перелік компонент освітньої програми

Код дисципліни	Семестр	Компонент освітньої програми (навчальні дисципліни, практики, дипломна робота)	Число кредитів	Форма підсумкового контролю
1. Цикл загальної підготовки (92,5 кредити)				
1.1. Обов'язкові навчальні дисципліни (77,5 кредитів)				
О31	1	Історія України	3,0	екзамен
О32	3	Історія української культури	3,0	екзамен
О33	4	Українська мова (за професійним спрямуванням)	3,0	екзамен
О34	5	Філософія	3,0	екзамен
О35	1,2,3	Математичний аналіз	11,5	екзамени
О36	1,2	Алгебра та геометрія	8,0	екзамени
О37	1(ек) 2(д.з.)	Дискретна математика	9,0	екзамен залік (2 д.з.)
О38	1,2	Програмування	9,0	екзамени
О39	3	Фізика та основи електроніки	5,5	екзамен
О310	3	Диференціальні рівняння	3,5	екзамен
О311	3	Комп'ютерна графіка	3,5	залік
О312	4	Теорія ймовірності, ймовірнісні процеси та математична статистика	4,0	екзамен
О313	4	Чисельні методи	3,5	залік
О314	5	Математичні методи дослідження операцій	4,0	екзамен
О315	5	Системний аналіз	4,0	екзамен
1.2. Дисципліни за вибором (15 кредитів)				
В31	7(ек), 2(д.з.)	Безпека життєдіяльності з основами охорони праці	3	екзамен залік (д.з.)
В32	2	Іноземна мова (за професійним спрямуванням)	6	екзамен
В33	6	Економіка і бізнес / Екологія	3	залік
В34	7	Політологія / Правознавство	3	залік
2. Цикл професійної підготовки (147,5 кредитів)				
2.1. Обов'язкові навчальні дисципліни (74,5 кредитів)				
ОП1	1	Архітектура обчислювальних систем	5,0	залік
ОП2	3	Об'єктно-орієнтоване програмування	4,0	екзамен
ОП3	3 (з) 4 (ек)	Операційні системи та системне програмування	8,0	залік екзамен
ОП4	4	Веб-технології та веб-дизайн	4,0	екзамен
ОП5	4	Комп'ютерні мережі	4,0	екзамен
ОП6	4	Інтелектуальний аналіз даних	4,0	залік
ОП7	5	Організація баз даних та знань	4,0	екзамен
ОП8	6	Методи та системи штучного інтелекту	4,0	екзамен

ОП9	6	Моделювання систем	4,0	екзамен
ОП10	6	Проектування інформаційних систем	4,0	екзамен
ОП11	7	Теорія прийняття рішень	4,0	екзамен
ОП12	7	Технології захисту інформації	4,0	екзамен
ОП13	7	Технології розподілених систем та паралельних обчислень	4,0	екзамен
ОП14	8	Управління ІТ-проектами	4,0	екзамен
ОП15		Переддипломна практика/спецкурс	7,5	*
ОП16		Дипломне проектування/спецкурс	6,0	*
2.2. Дисципліни за вибором (73 кредити)				
ВП1	2 (з) 3 (ек)	Математична логіка та теорія алгоритмів		залік екзамен
ВП2	2	Алгоритми і структури даних		екзамен
ВП3	4	Програмування на базі технології .net		залік
ВП4	5	Логічне програмування		екзамен
ВП5	5	Методи та засоби комп'ютерних інформаційних технологій		залік
ВП6	6	Сховища та простори даних		залік
ВП7	8	Технології хмарних обчислень		екзамен
Спеціалізація: Інформаційні управляючі системи і технології (35,5 кредитів)				
ВП8	5	Стохастичні моделі в інформаційних технологіях	3,5	залік
ВП9	5	Крос-платформне програмування	3,5	залік
ВП10	6	Основи теорії надійності	4,0	екзамен
ВП11	6	Методи багатокритеріальної оптимізації	3,5	залік
ВП12	6	Програмування мобільних пристроїв	3,5	залік
ВП13	7	Теоретичні основи управління	4,0	екзамен
ВП14	7	Основи цифрової обробки сигналів	4,0	залік
ВП15	7	Курсова робота	1,5	залік
ВП16	8	Математичне моделювання в системному проектуванні	4,0	екзамен
ВП17	8	Технології комп'ютерного проектування складних об'єктів і систем	4,0	залік
Спеціалізація: Системи штучного інтелекту (35,5 кредитів)				
ВП8	5	Нечітка логіка та нечіткі множини	3,5	залік
ВП9	5	Експертні системи	3,5	залік
ВП10	6	Класифікація та розпізнавання образів	4,0	екзамен
ВП11	6	Системи із самоорганізацією і самонавчанням	3,5	залік
ВП12	6	Комп'ютерна лінгвістика	3,5	залік
ВП13	7	Нейронні мережі	4,0	екзамен
ВП14	7	Інженерія знань	4,0	залік
ВП15	7	Курсова робота	1,5	залік
ВП16	8	Моделі поширення знань	4,0	екзамен
ВП17	8	Нейронне моделювання складних систем	4,0	залік
ПП1	7	Проектно-технологічна практика	4,5	залік

V. Матриця відповідності програмних компетентностей компонентам освітньої програми

	номер компетентності в списку *загальних компетентностей* профілю програми															номер компетентності в списку *спеціальних компетентностей* профілю програми															
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
О301	•	•	•	•	•	•	•			•					•																
О302	•	•	•	•	•	•	•			•					•																
О303	•	•	•	•	•	•	•			•					•																
О304	•	•	•	•	•	•	•			•					•																
О305	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•									
О306	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•									
О307	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•									
О308	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
О309	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•									
О310	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•									
О311	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•				
О312	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•									
О313	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•	•			•	•
О314	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•					•				•	
О315	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•					•				•	
В301	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																	
В302	•	•	•	•	•	•	•			•					•																	
В303	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					•				•	
В304	•	•	•	•	•	•	•			•					•																	
ОП01	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП02	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП03	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП04	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП05	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП06	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП07	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП08	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП09	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП10	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП11	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП12	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП13	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП14	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

5																														
ОП16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП01	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•								
ВП02	•	•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•							
ВП03	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•		
ВП04	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•			•	•			
ВП05	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП06	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП07	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Спеціалізація 1: Інформаційні управляючі системи і технології																														
ВП08	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•					•			•	
ВП09	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•	•		•		•
ВП10	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•		•			•	•	•	•	•
ВП11	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•				•			•	•	
ВП12	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•		•		•	•
ВП13	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•				•	
ВП14	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•		•			
ВП15	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП16	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП17	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Спеціалізація 2: Системи штучного інтелекту																														
ВП08	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•			•				•	
ВП09	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	•	•	•
ВП10	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•				•				•	•
ВП11	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	•	•	•
ВП12	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•				•				•	•
ВП13	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•		•	•	•		•	•	•
ВП14	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•		•	•	•		•	•	•
ВП15	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

6																															
ВП17	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
НП01	к	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

мпетентність, яка набувається;

$ОЗ_j$ – обов'язкові навчальні дисципліни циклу загальної підготовки навчального плану спеціальності;

$ОП_j$ – обов'язкові дисципліни циклу професійної підготовки навчального плану спеціальності;

$ВП_j$ – дисципліни за вибором з циклу професійної підготовки навчального плану спеціальності;

$ПП_j$ – практична підготовка;

$ЗК_i$ – номер компетентності в списку загальних компетентностей профілю програми;

$СК_i$ – номер компетентності в списку спеціальних компетентностей профілю програми.

VI. Матриця забезпечення програмних результатів навчання відповідними компонентами освітньої програми

	Зн																Вм														Ком$_i$		A_iB_i		
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	01	02	01	02	03
О301	•	•															•	•															•	•	•	•	•
О302	•	•															•	•															•	•	•	•	•
О303	•	•															•	•															•	•	•	•	•
О304	•	•															•	•															•	•	•	•	•
О305	•																•																•	•	•	•	•
О306	•																•																•	•	•	•	•
О307	•		•														•		•														•	•	•	•	•
О308	•	•	•	•	•			•	•			•	•	•	•	•			•	•				•	•	•	•	•	•	•	•	•	•	•	•	•	•
О309	•	•		•													•	•		•													•	•	•	•	•
О310	•			•													•			•													•	•	•	•	•
О311	•			•													•			•													•	•	•	•	•
О312	•	•			•	•	•										•	•		•		•											•	•	•	•	•
О313	•		•	•												•	•		•	•												•	•	•	•	•	•
О314	•	•			•	•	•										•	•			•	•	•										•	•	•	•	•
О315	•	•	•	•	•	•	•	•			•						•	•	•	•	•	•	•	•									•	•	•	•	•
В301	•	•															•	•															•	•	•	•	•
В302	•	•															•	•															•	•	•	•	•
В303	•	•		•	•		•										•	•		•	•	•	•										•	•	•	•	•
В304	•	•															•	•															•	•	•	•	•
ОП01												•	•	•		•												•	•			•	•	•	•	•	•
ОП02			•					•							•	•			•	•				•	•								•	•	•	•	•
ОП03								•	•	•	•	•	•	•	•	•								•	•	•		•	•			•	•	•	•	•	•
ОП04								•	•			•												•	•	•							•	•	•	•	•
ОП05								•	•	•		•	•	•										•	•	•		•	•				•	•	•	•	•
ОП06	•	•		•	•	•	•				•											•					•			•			•	•	•	•	•
ОП0						•		•	•	•	•	•			•										•		•			•			•	•	•	•	•

7																																			
ОП08	•	•		•	•	•	•				•					•					•	•	•	•	•		•					•	•	•	•	•	•
ОП09	•	•	•	•	•	•	•	•							•						•	•	•				•						•	•	•	•	•
ОП10					•	•	•	•	•	•	•	•	•	•	•	•								•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП11	•	•	•	•	•	•	•				•										•	•	•		•		•						•	•	•	•	•
ОП12								•	•	•	•	•	•	•	•	•									•	•		•	•	•	•		•	•	•	•	•
ОП13				•	•	•	•		•		•	•	•	•	•	•				•				•	•				•			•	•	•	•	•	•
ОП14					•	•	•	•	•	•	•	•	•	•	•	•								•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП15	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ОП16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП01	•		•														•		•												•	•	•	•	•
ВП02			•					•											•					•								•	•	•	•	•
ВП03								•	•	•		•	•	•	•	•								•	•	•		•	•	•	•	•	•	•	•	•	•
ВП04	•		•					•									•		•					•								•	•	•	•	•
ВП05						•	•	•	•	•	•	•	•	•	•	•								•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП06								•	•						•	•								•	•				•	•	•	•	•	•	•	•	•
ВП07				•				•	•				•			•				•				•	•							•	•	•	•	•	•
Спеціалізація 1: Інформаційні управляючі системи і технології																																				
ВП08	•	•		•	•	•	•										•	•		•	•	•	•									•	•	•	•	•
ВП09								•	•	•	•	•	•	•		•								•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП10	•	•	•	•	•	•	•							•							•	•	•						•			•	•	•	•	•
ВП11		•		•	•	•	•										•	•	•	•	•	•	•									•	•	•	•	•
ВП12								•	•	•	•	•	•	•										•	•	•		•	•	•		•	•	•	•	•
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ВП15	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
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ВП17					•	•	•	•	•	•	•	•	•	•	•	•					•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•
Спеціалізація 2: Системи штучного інтелекту																																				
ВП0	•	•	•		•	•	•										•	•	•		•	•	•				•					•	•	•	•	•

8																																		
ВП09	•	•		•	•	•	•	•			•						•	•		•	•	•	•	•	•		•		•	•			•	•	•	•
ВП10	•	•		•	•	•	•	•			•						•	•			•	•	•	•			•						•	•	•	•
ВП11	•	•		•	•	•	•	•	•		•		•			•	•	•		•	•	•	•	•	•		•		•			•	•	•	•	•
ВП12	•	•			•	•	•	•			•						•	•		•	•	•	•	•			•						•	•	•	•
ВП13	•	•		•	•	•	•	•			•						•	•		•	•	•	•	•	•		•		•			•	•	•	•	•
ВП14	•	•		•	•	•	•	•			•		•			•	•	•	•	•	•	•	•	•	•		•			•		•	•	•	•	•
ВП15	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ВП16	•	•		•	•	•	•	•			•		•			•	•	•			•	•	•		•		•			•			•	•	•	•
ВП17	•	•		•	•	•	•	•			•		•			•	•	•		•	•	•	•	•	•		•						•	•	•	•	•
ПП01	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

$ОЗ_j$ – обов'язкові навчальні дисципліни циклу загальної підготовки навчального плану спеціальності;
$ОП_j$ – обов'язкові дисципліни циклу професійної підготовки навчального плану спеціальності;
$ВП_j$ – дисципліни за вибором з циклу професійної підготовки навчального плану спеціальності;
$ПП_j$ – практична підготовка;
$Зн_i$ – порядковий номер категорії «знання» у списку програмних результатів навчання у профілю програми;
$Вм_i$ – порядковий номер категорії «уміння» у списку програмних результатів навчання у профілю програми;
$Ком_i$ – порядковий номер категорії «комунікація» у списку програмних результатів навчання у профілю програми;
$А_iВ_i$ – порядковий номер категорії «автономність і відповідальність» у списку програмних результатів навчання у профілі програми.

Інше (у разі потреби) _____

VII. Attestation

Attestation of student comes true by an examination commission on completion of studies at educational level for establishment of actual accordance of level of preparation to the requirements of the educational program. A student will be certified in obedience to the system of programmatic results of studies, that is certain in the educational program of preparation of specialist. Form of attestation: defence of diploma work of bachelor or state examination.

Diploma work provides for realization of analysis and theoretical development (design and research of processes and objects) of pressing questions, problems in the corresponding field of knowledge. List of themes of diploma works from speciality determined by a випусковою department at the beginning of school year. The subjects of diploma works must be direct-coupled with the generalized object of activity of specialist of corresponding educational level. The list of themes becomes firmly established the order of chancellor to beginning of переддипломної practice. Students have a right to offer the own theme of diploma work for consideration.

A task on diploma work must represent all productive functions and typical tasks of activity of specialist and must be in good time well-proven to the student (to beginning of переддипломної practice). The leaders of diploma works can be professors, associate professors, senior teachers of випускової department, and also leading specialists of productive sphere of corresponding industry.

Attestation of bread-winners of higher education of baccalaureate comes true by an examination commission in the complement of that the representatives of employers and their associations can be included, in accordance with the position about an examination commission, ratified by Scientific advice RSHU.

VIII. The system of the internal quality assuarance in higher education

The system of providing quality of educational activity and higher education (the system of internal providing activity) by the higher educational establishment functions in Rivne State University of Humanities and it foresees the realization of such procedures and measures:

1) determination of principles and procedures of providing quality of higher education;

2) realization of monitoring and periodic revision of the educational programs;

3) an annual assessment of graduates scientific and pedagogical employees of higher educational establishment and regular promulgation of results of such assessments are on the official web site of the higher educational establishment, on informative stands and in any another way;

4) providing certification training of pedagogical, research and scientific and pedagogical employees;

5) providing presence of necessary resources for organization of educational process, including individual work of graduates on every educational program;

6) providing presence of the informative systems for effective educational process control;

7) providing publicity of information about the educational programs, degrees of higher education and qualification;

8) providing the effective system of prevention and exposure of academic plagiarism in scientific works of graduates educational establishments and employees;

9) other procedures and measures.

System of providing quality of educational activity and quality of higher education by higher educational establishment (system of the internal providing quality) can after presentation of the Rivne State University of Humanities be assessed by the National agency in providing quality of higher education or independent establishments of assessment and providing quality of higher education accredited by it in the accordance with the system requirements providing qualities of higher education, wich are approved by the National agency in providing quality of higher education, and with the international standards and recommendations for providing quality of higher education.

Guarantor of the educational program,
the project group leader associate professor. Klimyuk Yu.E.