MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
RIVNE STATE UNIVERSITY OF HUMANITIES

EDUCATIONAL AND PROFESSIONAL PROGRAM
Secondary Education (Informatics)

Second (master) **higher education level**
Specialty 014 Secondary Education (Informatics)
Branch of knowledge 01 Education / Pedagogy
Qualification: master of secondary education, lecturer of informatics. Teacher of informatics.

APPROVED BY THE ACADEMIC COUNCI
Chairman of the Academic Counc

Professor R.M. Postolovskyi / _____
(protocol No. 10 dated August 31, 201

The educational program will come into effect from _____, 201

Rector Professor R.M. Postolovskyi / _____
(decree No. 158-01-01 dated August 31, 201

Rivne – 2017

INTRODUCTION

The Educational and Professional program of the Master in specialty 014 Secondary Education (Informatics) was developed for the implementation of the Standard of Higher Education at the appropriate level of higher education by the project team of the Rivne State University of Humanities:

Project Team Leader (Educational Program Guarantor):

Nataliia S. Pavlova, candidate of pedagogical science, associate professor, assistant professor of the Department of Information and Communication Technologies and Computer Science Teaching Methods;

Project team members:

Andrey Ya. Bomba, Doctor of Technical Sciences, Professor, Head of the Department of Informatics and Applied Mathematics;

Ganna O. Schlikhta, candidate of pedagogical science, associate professor, assistant professor of the department of information and communication technologies and methods of teaching informatics.

1. Educational Program Profile in specialty 014 Secondary Education (Informatics)

1 – General information	
Full name of higher educational institution and structural unit	Rivne State University of Humanities.
The degree of higher education and the name of the qualification in the language of the original	Другий рівень вищої освіти. Магістр середньої освіти, викладач інформатики. Вчитель інформатики. The second level of higher education. Master, Secondary Education (Informatics), Lecturer of Informatics. Teacher of Informatics.
The official name of the educational program	Educational and Professional program of specialty 014 Secondary education (Informatics)
Type of diploma and the volume of the educational program	Master's degree, unitary, 90 ECTS credits, term of study 1 year 5 months.
Availability of Accreditation	Certificate of Accreditation (series УД № 18001455) expires on 01.07.2023.
Cycle / Level	NQF Ukraine - 7th level, FQ-EHEA - second cycle, EQF-LLL - 7 level.
Prerequisites	Availability of a bachelor's degree, a specialist, a master's degree.
Language(s) of teaching	Ukrainian.
The duration of the educational program	Permanently.
Internet address of the permanent description of the educational program	http://fmi-rshu.org.ua/pages/informatyka-b7faf4b1-b886-472b-97e0-8f801020ee15.
2 – The purpose of the educational program	
Training of highly skilled specialists for educational institutions capable to organize the process of studying informatics and information and communication technologies in the conditions of reforming secondary and higher education, toeffectively and expediently use the latest information and communication technologies in the educational process and management of educational institutions, to develop and improve the program and information provision of educational appointments, ready for further self-development and professional growth.	
3 - Characteristics of the educational program	
Subject area (branch of knowledge, specialty, specialization (if any))	Branch of knowledge 01 Education / Pedagogy, specialty 014 Secondary education (Informatics)
Orientation of the educational program	Educational and Professional. The emphasis is on theoretical and practical training of pedagogical staff for performing professional activity in educational institutions of different levels of education, who possess modern methods and technologies of organization of the educational process, special (professional) and integral competencies prepared for scientifically grounded innovations in education.
The main focus of the educational program and specialization	General education in the field 01 Education / Pedagogy of specialty 014 Secondary education (Informatics). Key words: pedagogy of secondary and high school; programming; methodology of scientific research; multimedia systems; information and communication technologies; methodology of computer science education; modern pedagogical technologies.

Features of the program	Demands an individual approach in shaping the practical skills of using information and innovation technologies, modern technologies for the design and development of information systems.

4 – Ability graduates for employment and further education

Specialist ready to work in the fields of economy in ДК 009:2010

Code	Name	NACE (Rev. 1.1)	ISIC (Rev. 4)
85.31	Secondary education	80.21	8521
85.32	Vocational and technical education	63.22*	8522
		63.23*	8522
		80.22	8522
		80.42*	8522
85.42	Higher Education	80.30*	8530*
62.02	Advice on informatization	72.10	6202*
		72.22*	6202*
62.03	Activities in the management of computer equipment	72.30*	6202*
62.09	Other activities in the field of information technology and computer systems	30.02*	6209
		72.22*	6209
		72.60	6209
63.11	Processing data, placing information on web-sites and related activities	72.30*	6311
		72.40*	6311
63.12	Web portals	72.40*	6312

A specialist is able to perform the specified professional work in ДК 003:2010

Code	Name
2310.2	Assistant
2310.2	Teacher of higher educational institution
2320	Teacher vocational and technical educational institutions
2320	Teacher of secondary educational institution
2320	Methodologist of correspondence schools and departments
234	Teachers of specialized educational institutions
235	Other education professionals
2351	Professionals in the field of teaching methods
2351.1	Junior Researcher (teaching methods)
2351.1	Researcher (teaching methods)
2351.1	Researcher and consultant (teaching methods)
2351.2	Teacher (teaching methods)
2352	Inspectors schools
2359	Other education professionals
2359.1	Other research staff in the field of training
2359.2	Other education professionals
3121.2	Information Technology Specialist
3121.2	Specialist in software development and testing
3121.2	Specialist in computer software development

Further training	NQF – 9 level, FQ-EHEA – third cycle, EQF LLL – 8 level.

5 – Teaching and Assessment

Teaching and learning	Teaching on the basis of student-centered and problem-oriented learning with the use of multimedia lectures, practical and laboratory classes, passing of practices, with the involvement of self-education. During the last year, more than half of the time is devoted to the writing of the thesis, which is presented and defended before the commission of scholars.
Assessment	Oral and written examinations, credits, defense of practice reports, certification, defense of thesis.

6 – Program competencies

Integral competence	The ability to solve different types of problems and challenges in training and educational activities, which are characterized by complexity and uncertainty of conditions, providing research, innovation, using software developed educational purposes.
General competence (GC)	1. Ability to abstract and critical thinking, the use of methods of mental activity. 2. Ability to apply knowledge in practical situations. 3. Knowledge of lexical, grammatical, stylistic features of state and foreign vocabulary, terminology in the field of information technologies, grammatical structures for the understanding and production of oral and written foreign texts in the professional field.. 4. Skills in the use of information and communication technologies. 5. Ability to plan and manage time. 6. Ability to learn and master modern knowledge. 7. Ability to generate new ideas (creativity), make informed decisions, be proactive. 8. Ability to identify and shape problems in professional activities and solve them at a professional level. 9. Ability to communicate with representatives of other professional groups of different levels (with experts from other fields of knowledge / types of economic activity). 10. Ability to develop and manage pedagogical projects; evaluate and ensure the quality of work performed. 11. Ability to understand the importance of information in modern society, to carry out information processes, to deal responsibly with information security issues. 12. Knowledge of the system of general norms of moral behavior of a person and group of people, principles of team work, readiness to interact with participants in the educational process and social partners, tolerant perception of social, ethnoconfessional and cultural differences, adhering to regulatory legal acts and international standards for the implementation of labor protection policy of the state.
Professional competence of the specialty (PC)	1. 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 in pedagogical activity. 2. Knowledge of theoretical positions of psychology and pedagogy of higher education. 3. Knowledge of mathematical bases and basic algorithms of system, functional possibilities of their application in solving applied problems of software development of educational information system. 4. Knowledge of methodological approaches, principles and general scientific and special methods of scientific and pedagogical researches, identification of research problems and formulation of own research directions. 5. Knowledge of the principles of object-oriented and generalized programming. 6. Knowledge of the principles of effective choice of personal computer configurations and operation of operating systems. 7. Knowledge of the concepts of specialized schools; aspects of in-depth study of computer science; prospects for the

	development of educational robotics; components of the methodical system of teaching computer science; innovative pedagogical technologies of computer science education; basics of working with gifted children. 8. Knowledge of functions and models of distance learning, normative and legal basis of distance learning system, technology of designing distance education courses. 9. Knowledge of theoretical bases and regulatory requirements for educational information systems of educational institutions of different levels, methodologies and technologies for their design, development and implementation in the educational process. 10. Knowledge of theoretical bases of test control of knowledge of students and students, rules of software selection for testing of educational achievements. 11. Acquire and use fundamental knowledge in the fields of pedagogy and informatics taking into account interdisciplinary connections. 12. Use technologies and tools of search engines, methods of intellectual analysis of data and texts, to carry out their processing, interpretation and generalization. 13. To develop educational and scientific projects, to demonstrate their realization in practice and to summarize them in scientific articles and scientific and technical reports. 14. Perform a full cycle of algorithmic analysis and task solution synthesis. 15. Apply statistical methods for solving the tasks of the experimental part of pedagogical research and assessing the quality of education. 16. Use modern web-development technologies to create information resources and web-services, to implement innovative information technologies in the educational process, including models of distance and mixed learning. 17. Design and develop advanced software. 18. Plan, develop and implement specialized and advanced courses in informatics taking into account the latest learning technologies. 19. Design, organize and conduct research and development of pupils and students; develop individual educational routes talented youth. 20. Analyze, give a comparative characteristic of hardware and software; install, diagnose and troubleshoot the operating system; to carry out the modification of computer equipment and to ensure its effective functioning. 21. Solve scalability issues, support remote components, and interact with different software platforms in distributed corporate education information systems. 22. Provide conceptual design of the basic elements of educational information systems educational institution in accordance with the requirements of educational standards. Argued adopt and use the software to create educational information system of the institution. 23. Clear and unequivocal reports of professional experience and knowledge and explanations that justify them to people who

	are trained specialists and non-specialists. 24. Decision-making in complex and unpredictable conditions requiring new approaches and forecasting. 25. Responsibility for the development of professional knowledge and practice, assessment of team strategic development, ability to further education, including self-education.
7 – Program learning results	
	1. To form an educational environment, use modern methods and technologies for the organization of educational and cognitive activity, diagnostics and assessment of the quality of education in different educational programs. 2. Apply the knowledge of the fundamental and adjacent applied sections of special disciplines of the master's program taking into account the general methodological approaches. 3. Use modern methods and technologies of scientific communication in Ukrainian and foreign languages. 4. Use modern computer technology for system, functional, design, technological design and development of educational information systems for purposes. 5. Participate in the creation, maintenance and development of e-learning resources, educational portals and distance learning organizations. 6. Participate in creating conditions for the disclosure of the creative potential of trainees, taking into account interests, requests and abilities, including through the appropriate selection of educational content. 7. Use the results of scientific research in their own professional and scientific activities, using modern information technologies. 8. Organize the research activities of trainees, using their own professional experience and present their findings in the form of reports, articles, etc. 9. Organize teams (educational, methodical, etc.) and coordinate their various activities. 10. Develop mechanisms for effective management of schools and support their practical implementation.
8 – Resource support for the implementation of the program	
Personnel support	Lectures on disciplines of scientific and pedagogical staff of the relevant specialty who have a scientific degree and / or affiliation, and are the main place of work is more than 50% of the curriculum specified number of hours; having academic degree or doctorate title of professor - over 25%.
Material and technical support	Material and technical support meets the licensing requirements for providing educational services in the field of higher education and is sufficient to ensure the quality of the educational process.
Information and teaching and methodological support	Information and teaching and methodological support of the educational program for the training of specialists in the specialty 014 Secondary education (Informatics) corresponds to the licensing requirements. The virtual learning environment of the Rivne State University of Humanities is used and author's development of the teaching staff.
9 – Academic mobility	
National Credit Mobility	On the basis of bilateral agreements between Rivne State University of Humanities and higher educational establishments and scientific

	institutions of Ukraine.
International Credit Mobility	On the basis of bilateral agreements between Rivne State University of Humanities and foreign educational institutions.
Studying foreign students	Possible.

3. The certification form of the applicants for Higher Education

The certification of graduates of the educational program by the specialty 014 Secondary Education (Informatics) held in the form of defense of thesis or preparation of complex examination on specialty and completion of the issuance of the diploma of the established sample about awarding him a master's degree with qualification: Master of Secondary Education, lecturer of Informatics. Teacher of Informatics. Expert in computer science.

The certification is carried out openly and publicly.

The certification forms of the applicants for Higher Education	Certification of graduates of the educational-professional program "Secondary Education (Informatics)" in the specialty 014 Secondary education (Informatics) is carried out in the form of: - public defense of the thesis; - qualification examination.
Requirements of thesis and its public defense	The thesis is a scientific-research work of the applicants for Higher Education which performed on the final stage of master's qualification in secondary education, lecturer of Informatics, teacher of Informatics for matching of general and special competencies (learning results) which obtained by applicants of higher education
Requirements of attestation exam (exams)	The specialty qualification examination is conducted in writing. The specialty qualification examination is conducted like complex verification of knowledge of the applicants for Higher Education professionally-oriented theoretical preparation for papers folded in full accordance with state certification programs. The tickets content of specialty qualification examination covers the material of profile disciplines within their programs. Paper set approved and signed by the Head of the Department.

6. The system of internal quality assurance in Higher Education

The system of quality assurance in educational activity and quality of Higher Education (the system of internal quality assurance) by higher education institution functions at Rivne State University of Humanities, which provides for the implementation of such procedures and measures:

1) an identified principles and procedures of quality assurance in Higher Education;

2) monitoring and periodical preview of educational programs;

3) the annual assessment of applicants for Higher Education, scientific and pedagogical and pedagogical employees of the institution of Higher Education and regular publication of the results of such assessments on the official website of the Higher Educational institution, on information stands and in any other way;

4) ensuring the certification training of pedagogical, scientific and scientific and pedagogical employees;

5) ensuring the availability of the necessary resources for the organization educational process, including the independent work of applicants for Higher Education for each educational program;

6) ensuring the availability of the information systems for effective management of the educational process;

7) ensuring publicity of information about educational programs, degrees of Higher Education and qualifications;

8) ensuring an effective system of preventing and detecting academic plagiarism in the scientific works of Higher Education and applicants for Higher Education;

9) other procedures and measures.

The system of quality assurance in educational activity and quality of Higher Education (the system of internal quality assurance) by Higher Education institution can be evaluated by the National Agency for the Quality Assurance of Higher Education or independent institutions of assessment and quality assurance of Higher Education accredited by it on submission by the Rivne State University of Humanities for its compliance with the requirements to the system of quality assurance in Higher Education, which is approved by the National Agency for the Quality Assurance of Higher Education, and international standards and recommendations for the Quality Assurance of Higher Education.

Educational program guarantor,
Project team leader N. S. Pavlova

In addition, there is a list of components of the EP and their structural and logical scheme. And also an explanatory note to the EP.