I GENERAL DESCRIPTION

Level of higher education	Second (master's degree) level
Degree that is assigned	Master's degree
Area of knowledge	12 «Information technologies» according to List of areas of knowledge and specialities (the resolve № 266 of Cabinet of Ministers of Ukraine (CMU) dated 29.04.2015).
Specialty	122 «Computer sciences and information technologies» according to List of areas of knowledge and specialties (the resolve № 266 of CMU dated 29.04.2015).
Educational programs	- Project Management
Limitation is in relation to the forms of studies	none
Educational qualification	A master's degree of computer sciences and information technologies
Professional qualification (only for the managed professions)	**Educational program «Project Management»** 1238 Leader of projects and programs (after the National classifier of professions DK 003:2010). 2447 Professionals in the field of projects and programs management (after the National classifier of professions DK 003:2010).
Qualification in diploma	A master's degree of computer sciences and information technologies.
Description of subject domain	**Educational program « Project Management»** *Object(s) of study and/or activity :* - projects of development and implementation of information systems and technologies; - projects of development software systems; - commercial and business projects; - social, ecological and media projects. *Objectives of studies:* to Provide education in industry of information technologies and project management with wide access to employment, to prepare candidates for research, organizationally-administrative, analytical, project innovative, service-operating activities. Acquisition of fundamental and professionally-oriented knowledge, skills and ability to carry out professional activity successfully in the sphere of project management. *Theoretical contents of subject domain:* complex solution of next tasks: analysis and grounding of projects; forming and development of project teams; creating plans of projects realization and monitoring their implementation; providing of projects necessary resources and financing; collection, treatment and distribution of project informations; management the programs and brief-cases of projects; forming and development of the project-oriented management on the enterprises of various industries of economy, first of all in the field of IT. *Methods, methodologies and technologies:* models, methods and algorithms of solving of theoretical and applied tasks that rise up at development of projects; technologies and methods of planning, development and providing of quality are on all stages of life cycle of project. *Instruments and equipments:* the use of modern computer tools and software.

Academic rights for graduating students	Chance to continue of education after the third (educationally-scientific) level of higher education, receiving of the second education in higher educational establishment.
Employment of graduating students (for the managed professions - necessarily)	Workplaces in the field of information technologies, communications and management projects: IT-companies, financial companies, insurance companies, public institutions, advising.

II THE AMOUNT OF ECTS CREDITS NECESSARY TO OBTAIN A CERTAIN DEGREE HIGHER EDUCATION

The amount of the educational program of master's degree of specialty 122 «Computer sciences and information technologies» is 90 credits of ECTS.

Minimum the 50% of the amount of the educational program should be directed at providing of general and special (professional) competencies of specialty, defined by the standard of higher education.

III THE LIST OF COMPETENCIES FOR GRADUATING STUDENT

Integral competence	Ability to use deep theoretical and fundamental knowledge in industry of information technologies for the effective solution of the complex specialized problems and practical problems during professional activity, in particular in industry of management projects and programs, or in the process of studies, that foresees their application for development of complicated systems that is characterized by a complexity and uncertainty conditions.
General competencies	The list of general competencies correlates with description of corresponding qualifying level of National Qualifications Framework (NQF). General competencies correspond to the list of project **TUNING** : 1. Ability to think abstractly, analyze and synthesize. 2. Ability to apply knowledge for practical situations. 3. Knowledge and understanding of subject domain and understanding of professional activity. 4. Ability to communicate an official language both orally, and in writing. 5. Ability to communicate a foreign language. 6. Ability of realization of researches is at corresponding level. 7. Ability to study and acquire modern knowledge. 8. A capacity to search, treatment and analysis of information from different sources. 9. Ability generate new ideas (creativity). 10. Skills to discover, to put and resolve problems. 11. Ability to work in a command. 12. Ability to be critical and containing self-criticism. 13. Ability to create and manage projects. 14. Ability to find out initiative and adventurousness. 15. Ability to estimate and provide quality of work. 16. Definiteness and persistence are in relation to the put tasks and taken responsibilities.

Special (professional) competencies	1) Possessing methods and skills of planning and prognostication of scientific activity is in industry of projects; 2) Ability to collect, process, systematize and summarize information on research of project sphere; 3) Ability to use methodical tools of research of project sphere, study and implement advanced technologies, conduct researches in the areas of project management 4) Ability to manage, create and implement projects using computer simulation; 5) Ability to prepare oral presentation and write article about results of research, and also about modern conceptions of project management; 6) Ability to formulate (doing presentations or submitting reports) new hypotheses and scientific tasks in area of computer sciences and project management, to choose the proper directions and corresponding methods for their solution; 7) Ability to perceive the newly obtained knowledge in area of computer sciences, information technologies and project management, to integrate them with existing knowledge; 8) Ability to study and critically estimate new methodologies of management projects, using professional scientific literary sources. 9) Ability to determine essence and economic content of intellectual capital; to classify the types of intellectual capital; to analyze non-material assets. 10) Ability to manage informative threads in project activity, to analyze and classify information and knowledge from different sources. 11) Ability to find project decisions, estimate their conditions and consequences; skills to use computer tools and mathematical methods and models for the making effective project decisions 12) Ability to design in the environment of internet things, using the corresponding executive devices, built into physical objects and constrained inter se through wire and wireless networks, and also using software and connection protocols. 13) Ability to determine new possibilities and advantages of planning of business-idea realization on the basis of projects, to conduct the complex planning of project performance indicators and on their basis to make decision for achieving the goal, for rationale organizational forms of management according to the scale of project. **Educational program «Project Management»** 1) Ability to determine phases and life cycle of project, type, composition and structure of project after researches, to form of project conception, to create project structure, to set relations between works (tasks) and interdependence of works in a project, to determine the criteria of efficiency of implementation of project, to use methods and tools of management projects, estimate the results of project activity and use the methods of analysis of project implementation. 2) Ability to ground the choice of principles and methods of staff management, to understand and determine maintenance and tasks of strategy of project staff management, to organize and control the processes of selection, adaptation, development, evaluation, release staff; ability to manage activity of team. 3) Ability to identify risks, find the factors of project risks and develop the complex of measures for a management risks, to analyze quantitatively influence of risks on all stages of project life cycle. 4) Ability to provide monitoring all processes of project execution, to reveal a deviation and prove the necessity of correcting actions, estimate the results of project activity and ability to use the methods of analysis of project

| | implementation to determine the prognostic cost and term of project realization, generate reports and documents on the evaluation of project execution, document about experience of project realization and archive. |
| | 5) Ability to choose necessary conceptions and strategies of quality management, adhere to principles of quality management, provide the effective process of quality management, provide the observance of standards of quality management, determine the aspects of quality management on the standards of project management, to apply basic methods and instruments of management of quality. |

IV THE NORMATIVE CONTENT OF THE PREPARATION APPLICANTS OF HIGHER EDUCATION, FORMULATED IN TERMS OF LEARNING OUTCOMES

Knowledge	**Educational program «Project Management»** 1) Ability to formulate and improve an important research task, for its solution to collect necessary information and formulate conclusions that can be protected in a scientific context. 2) Ability to use experience and normatively-methodical positions for organization of beginning of project activity, forming project alternatives, planning of processes of management of project scope, information relations and risk, acceptance of project decisions. 3) Ability to use the information, software and technical support and also modern approaches and standards of automation of enterprise and norm of certain application area for a project management. 4) Ability to form the structure of group of leaders of project activity, formulate determination and parameters of project. 5) Ability to formulate a working problem, determine the potential factors of influence of external surroundings, make decision about list of requirements, recommendations to quality of results of projects. 6) Ability to conduct a project analysis and formulate requirements, develop the models of requirements to the projects, to develop the projects of the information systems and software, to provide methodical and working programs for provide of certification and licensing of project results. 7) Ability to develop the plan of project management, formulate and correct requirements to the project, to develop the plan of management terms, by quality, cost, able to determine requirements to communications and develop the plan of management of project communications. 8) Ability to formulate a list and determine descriptions each of potential risks of project, to determine sources, symptoms and events of potential risks, carry out the quantitative estimation of possible consequences of risks for a project, to develop the plan of management risks. 9) Ability to manage development of the software systems, to use software tools and technologies for a management projects. 10) Ability to estimate adequacy and efficiency of the information systems and technologies, using methodology of the object-oriented analysis and planning, and also tools of support of software life cycle. 11) Ability to build the models of informative threads, design depositories and spaces of data, base of knowledge, using a diagram technique and standards of development of the information systems.
Ability	**Educational program «Project Management»** 1) Ability to use methodologies of description and design of business processes, tools of design of business processes, models and algorithms of prognostication of complex socio-economic processes for planning of the new information systems using the specialized packages of software. 2) Ability to use sufficient knowledge of mathematical models and methods of business-analysis, software tools for implementation of practical tasks. 3) Ability to use different instruments and strategies for diagnostics and analysis of different types of complicated administrative problems. Ability to use effectively theoretical conceptions of scientific management and business administration in practice. 4) Ability to conduct research with a necessary information retrieval.
Communication	1) Ability to effective communication and to presentation of difficult complex

	information in shot form, oral and in writing, using information and communicative technologies and corresponding terms; 2) Ability to organize and coordinate work in the process of planning and executive of projects; 3) Ability to explain difficult ideas and arguments with the purpose of to give professional advices (including non-specialists) for making decision; 4) Ability to present clearly general and difficult information using report; 5) A capacity to generalize of information and ability to present it with accents on the critical estimation of diferent variants; 6) Ability to use modern communication and media-technologies for adjusting of effective communication in a team.
Autonomy and responsibility	1) Ability to adapt oneself to the new situations and accept decisions. 2) Ability to realize the necessity of studies during all life with the aim of deepening old and acquiring new professional knowledge. 3) Ability to behave responsible to work, independently make decisions, reach the aim with the observance of requirements of professional ethics. 4) Ability to demonstrate understanding of basic ecological principles, labor protection, life safety and use them. 5) Ability to accept reasonable and self-weighted decisions, estimating them possible influences on workers and environment; 6) To have abilities to delegate a mandate and responsibility with the aim of successful implementation of projects; 7) Ability to self study and use the obtained knowledge for forming of political culture, civil society and democratic values.

V THE FORMS OF CERTIFICATION FOR HIGHER EDUCATION APPLICANTS

Forms of attestation of applicants of the higher education	Final attestation of person that study in higher educational establishments after specialty 122 «Computer sciences and information technologies» is conducted on the basis of analysis of success of studies, evaluation of quality of decision of higher education tasks activity, that is foreseen by this document and level of formed of competencies, marked in a division 4. Final state attestation includes defense of master's degree work.
Requirements to qualifying work	Requirements to content, volume and structure of master's degree work are determined by higher educational establishment. Master's degree work after specialty 122 «Computer sciences and information technologies» must be unique and pass checking for academic good works (plagiarism).
Requirements to attestation/ only state qualification to examination (examinations) (at presence of)	It is not foreseen
Requirements to public defense (demonstrations) (at presence of)	A graduated student must show the ability to prepare and publicly defense his work for an actual theme after specialty 122 «Computer sciences and information technologies», showing ability to work with literature, analyze and summarize, logically to lay out material, argue, to do conclusions and give suggestions, present material in form of report, and ready to protect it on public. Illustrative material (charts, tables, pictures, diagrams etc.) is provided as computer presentations.

VI THE REQUIREMENTS TO THE SYSTEM OF THE INTERNAL PROVIDING OF QUALITY OF HIGHER EDUCATION

Principles and procedures of providing quality of education	Determined by Document about the system of the internal providing quality of education in Ternopil National Economical University (TNEU)
Monitoring and periodic revision of the educational programs	Determined by Document about organization of educational process in TNEU
Annual evaluation of higher education applicants	Determined by Document about an evaluation in TNEU
Advanced qualification of pedagogical and scientific workers	It is determined by Document about the pedagogical and scientific advanced qualification and the internship of pedagogical and scientific workers of higher educational establishments, approved by the order Ministry of Education, Youth and Sports of Ukraine № 567 dated 24.01.2013
A presence of necessary resources for organization of educational process	It is determined by requirements to logistical support of specialty
A presence of information systems for effective educational process control	It is determined by Document about organization of educational process in TNEU
Publicity of information about educational programs, degrees of higher education and qualifications	Information is placing on a website TNEU in open access
Prevention and detection of academic plagiarism	Checking for plagiarism

The system of providing of quality of educational activity by higher educational establishment and quality of higher education (system of the internal providing of quality) after the giving of institution of higher learning is estimated by the National agency to providing of quality of higher education or independent establishments of evaluation and providing of quality of higher education which is accredited by National agency for the purpose accordance with requirements to the system of the providing of quality of higher education (National agency approves those requirements) and accordance with international standards and recommendations to providing of quality of higher education.