

APPROVED  
 by the decision of the National  
 Agency for Higher Education  
 Quality Assurance  
 Protocol of 29 September 2019,  
 № 9

## SELF-ASSESSMENT REPORT OF THE EDUCATIONAL PROGRAMME

This report contains answer fields of two kinds for open questions: “short field” (maximum 1500 symbols including spaces) and “long field” (maximum 3000 symbols including spaces).

### General Information

Information about the higher education institution

Registration number of the higher education institution in the Unified State Education Database ( <i>Ukr. ЄДЕБО</i> )	227
Full name of the higher education institution	Simon Kuznets Kharkiv National University of Economics
Identification code of the higher education institution	02071211
Full name of the head of the higher education institution	Volodymyr Ponomarenko
Link to the official web-site of the higher education institution	<a href="https://www.hneu.edu.ua/">https://www.hneu.edu.ua/</a>
	<b>Branch office of the higher education institution</b>
<b>Full name of the branch office of the higher education institution</b>	
<b>Identification code of the branch office of the higher education institution</b>	
<b>Full name of the head of the branch office of the higher education institution</b>	
<b>Link to the official web-site of the branch office of the higher education institution</b>	

General information about the educational programme applied for accreditation

ID of the educational programme in the Unified State Education Database ( <i>Ukr. ЄДЕБО</i> )	24727
Name of the educational programme	Information systems and technologies
Requisite details about the decision to license the specialization at the appropriate degree level	Order of the Ministry of Education and Science of Ukraine dated July 18, 2017 No. 155-1 <a href="https://mon.gov.ua/ua/npa/pro-litsenzuvannya-osvitnoi-dilnosti-25">https://mon.gov.ua/ua/npa/pro-litsenzuvannya-osvitnoi-dilnosti-25</a>
Cycle (degree level)	Second Cycle (Master Degree)
Broad field, specialty and specialization (if appropriate)	12 Information technologies 126 Information systems and technologies
Structural subdivision that ensures the implementation of the educational programme	Department of Information Systems
Professional qualification conferred in accordance with the educational programme (if appropriate)	
Language (languages) of education	Ukrainian
Full name and position of the educational programme guarantor	Oleksii Besedovskyi, Ph.D., Associate professor of Information Systems Department

General information about the educational programme, history of its development and implementation

**Department teaches students from 1964 up to now by specialities:**

Mechanized Economic Data Processing, Informatics for Economics and Automated Control Systems, Information Systems in Management, Information Control Systems and Technologies, Computer Science and Information Technologies and Information Systems and Technologies.

Issues of development of information systems and technologies at enterprises are the key ones in the research of the department.

The joint French-Ukrainian master's degree programme MBA, "Business Informatics" (the compatible Ukrainian specialty "Information Systems and Technologies") was opened at the department.

Master's degree programme "Information Systems and Technologies" was opened at Simon Kuznets KhNUE according to the Order of the Ministry of Education and Science of Ukraine dated July 18, 2017 No. 155-1.

<https://www.hneu.edu.ua/wp-content/uploads/2019/11/Litsenziya-03.10.19.pdf>

**1. Projecting and Objectives of the Educational Programme**

What are the objectives of the educational programme? What are the peculiarities (uniqueness) of this programme?

*The objective of the educational programme is to educate a highly qualified specialist who can perform of the manager's functions at different levels of IT enterprises, IT enterprises departments, etc.*

*The objects of professional activity:*

*theoretical and methodological fundamentals and tools for the creation and use of information systems and technologies; evaluation criteria and methods for quality assurance, reliability, resilience, survivability of information systems and technologies, as well as models, methods and tools for optimization and decision-making in the creation and use of information systems and technologies.*

*The aims of training are to educate specialists capable of applying modeling, designing in the development and maintenance of information systems and technologies; of developing, implementing and maintaining information systems in organizational, technical, natural and socio-economic systems*

*The peculiarities (uniqueness) of the programme are that the students have the opportunity to develop the competencies in various technologies, methods and methodologies for analyzing and optimizing business processes of IT-enterprises and automated information systems of businesses and public administration.*

Using references to specific documents, demonstrate that the objectives of the educational programme comply with the mission and strategy of the higher education institution.

*The mission of the University (<https://www.hneu.edu.ua/wp-content/uploads/2018/11/Strategic-Plan-HNEU-2013-2020-years-1.pdf>) is defined as "to educate the creatively minded, fully developed personality, a real professional for scientific and practical work in the field of socio-economic activities in order to increase the level and quality of people's life and progressive development of the society".*

*The strategic purpose of the University is to improve the quality of specialists' training to the level that will provide them the opportunity to take a worthy place in the society and work successfully in their specialty to develop the society based on the global knowledge economy.*

*Conceptual principles of KhNUE's development (up to 2020) (<https://www.hneu.edu.ua/wp-content/uploads/2018/02/zasadu.pdf>.) are based on the concept of Ukraine's economic education development, conceptual provisions and conditions to perform the university function and its specific tasks in the main directions of KhNEU's activity.*

*The objectives of the "Information Systems and Technologies" educational program are fully in line with the mission and strategic goal of the University to train highly qualified specialists who will successfully work in their specialty to meet the requirements of the society and improve people's standards of living and quality of life.*

Describe how the interests and propositions of the following stakeholder groups were taken into account during the formulation of objectives and programme outcomes of study in the educational programme:

- students of higher education and alumni of the programme

*Vladyslav Gavrilov, a student, is a member of the programme development team. Other students can also give their comments, proposals and the like concerning the programme. In addition, the programme development team also asked two alumni of the compatible specialty to give their recommendations concerning the programme design and content. Oleksandr Gorbachenko and Oleg Gorbenko, whose positions require the professional qualification relevant to that of the alumni of the educational program "Information Systems and Technologies" recommended to focus the programme on the IT enterprise*

*management and its quality performance analysis to improve the training of project management specialists. After the discussion, the competencies were adjusted and the relevant programme outcomes of study and disciplines were imbedded into the curriculum.*

*- employers*

*Director of SoftPro LLC, Altii Zemlytskyi, is a member of the programme development team. In addition, the programme development team also asked employers to give their recommendations concerning the programme design and content. The programme has been improved in the frameworks of the Erasmus + project " Establishing Modern Master-level Studies in Information Systems (MASTIS)", at the regular meetings with representatives of Kharkiv IT companies (SoftPro, IC Rarus, NIX Solutions, EPAM, Softserve, Auchan Ukraine, etc.) and the management of the Kharkiv IT cluster.*

*To exemplify, the employers proposed to include in the education program the acquisition of competences in optimization of software applications, namely, SEO-optimization. The discussions were very helpful in developing the course on optimization of software applications that was embedded in the curriculum for the educational program "Information Systems and Technologies".*

*The survey on the qualification profile of graduates and their competences was conducted among the profile experts from about 90 companies in Ukraine (in the frameworks of the MASTIS project).*

*Courses (topics, learning outcomes and teaching methods) had been reviewed by representatives of companies and European partners. All recommendations were taken into consideration.*

*- academic community*

*The programme development team welcomed the staff who were interested in it to participate in the programme development team meetings. O. Plokha, G. Plekhanova, S. Znakhur systematically took part in the discussions of the programme development team.*

*Academic community proposed to include in the educational program the acquisition of competences related to mathematical methods of the enterprise business processes modeling. After the discussion, the recommendations were considered as not necessary, nevertheless, the curriculum courses on big data analytics, and analysis and optimization of enterprise business processes were embedded in the curriculum for the educational programme.*

*- other stakeholders*

*The programme development team meetings were attended by representatives of the Kharkov IT cluster. The members of the IT cluster are representatives of the IT business, therefore, their comments and recommendations are referred as employers' ones.*

*Thus, most of the recommendations were taken into account. The decision to consider the recommendations valid or not necessary was conditioned by the programme development team vision of the essence of the educational program, the practical relevance of the programme to achieve its objectives, the programme correspondence to the relevant specialty, and employers' requirements to the acquired future specialists' competences.*

*Demonstrate how the objectives and programme outcomes of study in the educational programme comply with the tendencies according to which the specialty field and labour market are developing*

*The Ukrainian labour market is developing quite rapidly. Consequently, it leads to jobs shortages in fast-growing IT industry. There were 3859 job openings for a project manager or an analyst in the Ukrainian labour market in 2018.*

*(<https://dou.ua/lenta/articles/jobs-and-trends-2018/?from=doufp>).*

*The programme analyzes the importance and the development of graduates' competences required by the employers within the specified time, using the available resources (<https://dou.ua/lenta/articles/project-manager-position/>. It also identifies the employers' requirements and finds the best solution to satisfy them (<https://dou.ua/lenta/articles/business-analyst-position/>).*

*The relevant analysis is carried out regularly before the development (updating) of the program for the next academic year.*

*Demonstrate how the field and regional context was taken into account during the formulation of the objectives and programme outcomes of study in the educational program While developing the programme, the recommendations of Kharkiv IT cluster were taken into account.*

*Information on the latest cluster research is provided on their website. The cluster recent research report is available at:*

*<https://www.slideshare.net/ITcluster/kharkivresearchreport-118970190>*

*Demonstrate how the experiences of analogous national and foreign programmes were taken into account during the formulation of the objectives and programme outcomes of study in the educational program*

*The standard "MSIS 2016: Global Competency Model for Graduate Degree Programs in Information Systems" was taken into account when developing the educational program (<https://www.acm.org/binaries/content/assets/education/msis2016.pdf>).*

*Indeed, the recommendations concerning the programme improvement were developed in the process of implementing the international project ERASMUS+ MASTIS (<https://mastis.pro/>) " Establishing Modern Master-level Studies in Information Systems ", launched in 2015. The universities of Ukraine (Simon Kuznets KhNUE, NTUU "KPI", LPNU, VNTU, KhSU, NTU "HPI") and Montenegro, together with the universities of France, Germany, Lithuania, Slovakia, Italy, Sweden, Luxembourg, majority of them are members of the association ERCIS (<https://www.ercis.org/>) – the European Research Center for Information Systems, participated in the project. The Department of Information Systems of KhNEU has been a member of the association ERCIS since 2015 (<https://www.ercis.org/about-us/associated-partners/simon-kuznets-kharkiv-national-university-economics>).*

*The achievements of the 15 years KhNUE's partnership with the University of Lyon2, France, within the frameworks of the joint French-Ukrainian master's degree program MBA, "Business Informatics" (the French comparable specialty "Information Systems and Technologies") were taken into account in the programme. The Joint program "Business Informatics" is accredited by the French Agency with the highest A + rating and is in the TOP 10 in France.*

*Thus, all the findings of partnership are were taken into account in the programme " Information Systems and Technologies", namely, in the development of the graduate's profile, competencies, disciplines, programme outcomes of study, requirements for the Master's thesis, methods and forms of training.*

*Demonstrate how the educational programme allows students to achieve the study outcomes determined by the higher education standard according to the specific specialty and degree level (if appropriate)*

*There is no higher education standard to the specialty 126 "Information Systems and Technologies" of the second (master's) level of higher education.*

If no higher education standard for the specialty and level of higher education exists, how were the programme outcomes of study in the educational program comply with the requirements of the National Qualification Framework (*Ukr. Національна рамка кваліфікації*) for the specific qualification level?

*Graduates of the Educational Program "Information Systems and Technologies" are able to solve complex specialized problems and practical problems in the field of information technologies, which involves the application of mathematical methods, methods of system analysis, etc., characterized by complexity and uncertainty of conditions. This applies to all disciplines delivered in the educational program.*

*To realize the tasks set before students, they also need to critically reflect on the theories, principles, methods, and concepts in the field of information technologies and choose the ones that are best for solving the set tasks.*

*Graduates of the programme can solve complex specialized tasks and practical problems in the field of information technology.*

*The programme gives students the possibility to improve their oral and writing communication skills in foreign languages at classes conducted for Master students. Students can practice how to communicate with specialists and non-specialists on professional issues; how to present information, ideas, problems, solutions, own experience and argumentation, etc., how to give a speech, make a presentation, and the like.*

*Development of managerial skills, such as management of complex technical or professional activities or projects, is provided for students within the scope of many programme disciplines.*

*Students possess good skills in long-life learning with the high level of autonomy while performing independent tasks, preparing internship reports, a Master's thesis.*

## 2. Structure and Contents of the Educational Programme

What is the workload of the educational programme (measured in ECTS credits)?	90 ECTS cr
What is the workload of educational components (measured in ECTS credits) aimed at the formation of competences defined by the higher education standard according to the corresponding specialty and degree level (if appropriate)? .	<i>There is no higher education standard to specialty 126 "Information Systems and Technologies" of the second (master's) level of higher education</i>
What workload (measured in ECTS credits) is devoted to elective disciplines?	45 ECTS cr
<p>Demonstrate that the contents of the educational programme corresponds to the subject area of the specialty claimed for it (specialties, if the educational programme is interdisciplinary)</p> <p><i>The disciplines provided by the curriculum address the following issues:</i></p> <ul style="list-style-type: none"> <li>- <i>information systems development strategy;</i></li> <li>- <i>development and implementation of information systems;</i></li> <li>- <i>information systems in management and data warehouses;</i></li> <li>- <i>enterprise architecture management;</i></li> <li>- <i>management of IT projects and their quality management;</i></li> <li>- <i>management of business processes of IT enterprises;</i></li> </ul>	

*- optimization of software applications*

*and other issues that are fully relevant to the subject area of specialty 126 "Information Systems and Technologies".*

*The delivery of the programme requires computer equipment that has the necessary software installed. The specialized laboratory is equipped with modern PCs purchased with the funds of the Erasmus + MASTIS project. This equipment is available at the university and is sufficient to achieve the programme objectives and tasks.*

*The programme is aimed at training experts in the areas of project management and business analysis. On the other hand, students of specialty 122 gain competencies in data processing systems, intelligent information systems, etc., i.e. areas that are more fundamental and relevant to the competencies of computer science professionals. Thus, the integration of the two above-mentioned educational programmes has been proved unjustified.*

How are students provided with opportunities to establish their own individual educational trajectories?

*Master's degree in Information Systems and Technologies comprises the following studies:*

*"Majors" - 25 ECTS credits;*

*"Minors" - 20 ECTS credits.*

*According to the curriculum, students of higher education establish their own individual educational trajectories based on the major/minor structure of the programme. Students choose minors from the university pool of general disciplines (the minor structure of the programme), and also make their choice of majors (the major structure of the programme).*

*In 2018 the students of the programme choose 20 minors offered by the university pool that provides both an individual and competence-oriented focus of the educational and professional Master's programme structure (Rector's Order dated March 12, 2018 No. 102 "On approval of the University Pool of Minors for the 2018-2019 academic year"). The minors chosen by the students of the programme included (2018-2019): International B2B Marketing, Brand Management, Communication in Professional Environment, Digital Photography and Image Processing, Business Career Management, Data Visualization and Visual Analytics, Starting-up and Developing Your Own Business: from registration to tax support, e-commerce, web design, corporate identity design, startup project management, and others.*

How can students realize their right to choose educational disciplines?

*According to "Methodological Approaches to the Elective Component Design of Educational Programmes at Simon Kuznets KhNUE" (Rector's Order dated December 31, 2016 No. 251) <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Metodychni-pidhody-do-formuvannya-variantyvnoyi-skladovoyi-osvitnih-prohram-1.pdf>, after enrollment in the programme, students choose 4 minors worth a maximum of 20 ECTS credits offered by the university pool via the University web-site <http://elect.hneu.edu.ua/site>. Information regarding these programme components is available both on the above mentioned site and on the KhNEU website <https://www.hneu.edu.ua/vybirkova-skladova-osvitno-profesijnyh-program-2019-2020-n-r/> The minor courses of the University pool of minors are designed by the university departments.*

*During the submission of documents, prospective students choose majors, specialized courses in the major disciplines of the master's programme that deepen training in a*

relevant specialty. Information on majors is available both at the Admission Commission's Office and on the university web-site <https://www.hneu.edu.ua/osvitni-programy-hneu-im-s-kuznetsya/>

Information on the university educational programmes descriptions that include the information on the corresponding to each programme majors is available at: <https://www.hneu.edu.ua/wp-content/uploads/2019/04/OPP-126-Informatsijni-systemy-ta-tehnologiyi-Magistr-2019.pdf>

Majors are developed by the department major development team which takes into account current trends of the Ukrainian labor market, recommendations and requirements of all stakeholders and resources available for a major delivery. The department major development team develops minimum 2 major courses annually.

Describe how the educational programme and academic curriculum provide for practical preparation of students, allowing them to acquire the competences necessary for further professional activity

*The curriculum of the educational program includes: a research internship (at the end of the 1st semester), integrated training sessions (at the beginning of the 3rd semester), a professional internship (at the end of the 3rd semester).*

*The above mentioned arrangements provide for students possibilities to acquire competencies in accordance with the National Qualifications Framework for the Master's level of education.*

*During a research internship (2 ECTS credits), students get acquainted with the research activities conducted by the departments.*

*Integrated training sessions (2 ECTS credits) consist of competence development workshops that are aimed at deepening students' knowledge and improving their practical skills acquired during the studies.*

*The aim of the professional internship (2 ECTS credits) is to develop the students' professional skills required by employers. Students obtain practical experience at the IT-industry enterprises. The student discusses with the enterprise internship coordinator the aims and tasks of his/her professional internship. The student works as an employee and applies for the approval of the work as an internship. At the end of the professional internship, the student prepares an internship report including a job description and the student's own view of the content and importance of the internship. The student's report is submitted to the university internship coordinator.*

*The observations made from the Master's students' surveys demonstrate that 87,5% of students are satisfied with the quality the programme practical preparation.*

Demonstrate how the educational programme allows students to acquire soft skills during the study period in compliance with the objectives and outcomes of their study

*Master's students are able to take advantage of the offered disciplines and demonstrate teamwork skills, managerial skills, good personal communication skills, such as ability to defend their point of view, ability to report in a written form in foreign languages as well, and others.*

*A foreign language is considered a key language of communication in the field of IT, therefore, the programme is aimed at acquiring competence in one of foreign languages.*

*Moreover, every employee should possess good negotiation skills, to communicate*



*with customers, argument his/her point of view and the decisions made, so communication skills and presentation skills are important.*

*During the classes of project management, business process analysis, students work in teams and solve creative tasks, in particular, offered by companies, e.g., students solve cases of the Casers project (<https://casers.org/>) and took 1st place for solution of case offered by the Credit Agricole Bank.*

How does the contents of the educational programme take into account the requirements of the corresponding educational standard?

*There is no higher education standard to specialty 126 "Information Systems and Technologies" of the second (master's) level of higher education.*

*Since 2005 the department has been a member of IT professional association of Ukraine, since 2015 it has been a member of Kharkiv IT cluster.*

What approach does the higher education institution use to measure the relation between the volume of individual educational components (measured by the ECTS credits) and actual student workloads (including individual work)?

*According to the higher education standards, the curriculum for Master's degree programme comprises the following studies: internship period that comprises 25-75% of the workload of the relevant educational programme; elective studies that make up 25-75% and include minors providing for students acquisition of general competencies; major subject studies that provide for students acquisition of professional competencies in their specialty and provide complete specialization. Educational programs provide for students a free choice of disciplines. Each discipline workload is worth a minimum of 5 ECTS credits. The pool of disciplines is approved annually by the Academic Council and published on the official website of the University. Each specialty should be represented by at least two major subjects that improve students' professional training in a particular field of study. Depending on the specialty, the major workload can range from 20 to 30 ECTS credits.*

*Surveys are used to find out the real workload of students. The analysis of the survey results demonstrates that 91,7% respondents think the allocation of credit points to individual modules as overall correctly reflects their factual workload. Thus, students who attend classes regularly have sufficient time to perform their assignments and have average workload. In contrast, additional individual assignments and more independent work due to classes absenteeism lead to a high workload.*

*Among face-to-face classes, the workload for laboratory exercises prevails over that for lectures (the percentage of lecture workload is much less than that of a bachelor's degree) as laboratory classes are aimed at gaining competencies related to professional work.*

How are the structure of the educational programme and academic curriculum related to the tasks and peculiarities of dual (cooperative) education if higher education is provided according to this form?

*The University has developed the "Regulations on the procedure for organizing and conducting training of specialists in the dual form of higher education at Simon Kuznets KhNUE" (<https://www.hneu.edu.ua/wp-content/uploads/2019/09/Polozhennya-pro-dualnu-osvitu.pdf>).*

*The university does not provide training of specialists in the dual form of higher education.*

### **3. Access to the Educational Programme and Recognition of Studying Results**

Provide a link to the web-page containing information about admission rules and requirements for applicants of the educational programme

Explain how the admission rules and requirements for applicants take into account the peculiarities of the educational program?

*All prospective students must have a degree in the relevant field of study or in a closely related field which gives eligibility to Master's level of education. Eligible applicants are evaluated according to the following criteria: the university foreign language proficiency entrance test score; the score of the university entrance test in the basic subject of the student's future specialty; GPA (Grade Points Average) scored from the official transcript of records of a higher education degree provided by an applicant's diploma supplement. Each applicant's scores are added together to form the applicant's final admission score. The passing score is set at the national level. Applicants will be ranked according to the national passing score and their admission score, and the highest-scoring applicants, in accordance with and the number of study seats in the programme, will be admitted.*

*The university specialty entrance test comprises three sections: programming, database and modeling of business processes, which are the basic disciplines of bachelors' training and are used as prerequisites for some disciplines at Master's level of education of educational program "Information Systems and Technologies".*

*The score for each section of the university specialty entrance test is 70 points as these disciplines are equally weighted and considered important prerequisites for further learning.*

*An applicant's overall score is calculated by adding all of the individual scores together.*

*The admission rules have not changed during the reporting period. Changes are not yet planned as the programme development team considers all of these admission requirements necessary and important. The admission requirements have proved to be an effective way of forming a contingent of students. Indeed, for applicants of relevant specialties, these requirements are an indicator that they have acquired the necessary competencies. For applicants of other specialties, the admission requirements are the minimum requirements to competencies they need to have to successfully study at the programme.*

What document of the higher education institution regulates the question of recognition of study outcomes achieved in other higher education institutions? How are students provided with access to it?

*According to the "Regulations on the Implementation Procedure of Academic Mobility Right of Participants of the Educational Process at Simon Kuznets KhNUE" (Rector's Order dated 07/09/2016, № 150/1) <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Polozhennya-pro-poryadok-realizatsiyi-prava-na-akademichnu-mobilnist-uchasnykiv-osvitnoho-protsesu-u-HNEU.pdf>, which regulates the purpose, grounds, procedure and conditions of academic mobility for participants in the educational process of Simon Kuznets Kharkiv National University of Economics, sources of financing international academic mobility, rules for measuring students' workload in ECTS credits, and the procedure for crediting the study outcomes obtained by the students within the frameworks of academic mobility.*

Referring to specific examples, describe the practice of implementing the mentioned rules in

the relevant programme (if appropriate)

*To exemplify, the practice of implementing students' mobility in the educational process is used annually for students pursuing dual-degree at Lyon 2. Upon the mobility partnership agreement with the University Lumiere Lyon 2, students are guaranteed automatic recognition and transfer of 15 eligible credits (3 courses correspond to 5 credits each) earned at an accredited institution. This semester the students applied for credits, they submitted official transcripts, course descriptions, and supporting documentation allowing recognition and transfer of competency assessments of credits awarded at the University of Lyon-2. There were no problems in recognizing the students' earned credits and the competency assessments under academic mobility agreement.*

*Students of the department of information systems also participated in academic mobility to the universities of Lyon2, France and ISMA, Latvia.*

What document of the higher education institution regulates the question of recognition of study outcomes achieved in an informal way? How are the participants in the educational process provided with access to it?

*The University recognizes informal types of learning which fall into the category of experimental learning. All types are reviewed on a case-by-case basis for relevance to the degree programme.*

*To exemplify, course-to-course transfers based on course objectives or outcomes can be applied. According to the Order of the Rector No. 158 of September 2, 2016 "On Course Recognition within the Frame of Cooperation with the Public Organization "Prometheus", a Master's student has the right to take a course corresponding to the course of his/her personal study plan. The course should be in line with the curriculum for the educational programme "Information Systems and Technologies". Upon the course completion, the student must be certified and submits transcribed learning from a professional or nonacademic environment that is reviewed by the department, then the score of points for the course competency assessments are recognized and added to points in the relevant course.*

*This practice applies to other online courses as well. However, the pool of courses should be reviewed at the department meeting. If an online course is considered as an approved alternative, the student can take it. Upon successful completion of the course and obtaining the certificate, at the department meeting the lecturer calculates the earned score on the university scale and proposes the teaching staff to recognize and transfer the student's obtained points.*

*The 1st year students are informed of this opportunity during their training session "University Education". If teaching staff or students come to know about such courses or relevant ones, they inform each other before the university course delivery. Upon approval at the department meeting, a Master's student is informed that he/she is allowed to get informal education in the relevant course.*

Referring to specific examples, describe the practice of implementing the mentioned rules in the corresponding educational programme (if appropriate)

*There are no specific examples describing the practice of implementing the mentioned rules in the educational programme "Information systems and technologies".*

#### **4. Studying and Teaching on the Educational Programme**

Demonstrate how the forms and methods of learning and teaching in the educational

program provide for the achievement of programme study outcomes? Provide a link to the corresponding documents *short field*

*The teaching methods consist of lectures, classroom and laboratory exercises, supervised assignments (individual or team work), homework, projects, seminars and discussions. Nevertheless, the programme prioritizes laboratory exercises over other forms of teaching and learning, and laboratory classes as face-to face forms of teaching methods take up most of student's workload in the classroom.*

*The educational programme corresponds to the one of the master's level, consequently, most part of a Master's student's workload is devoted to independent work (almost 75% of the course workload).*

*The main teaching methods for Master's students of the educational program "Information Systems and Technologies" are the solution of creative problems, teamwork, design thinking, business and computer games (gamification). The following online tools are used: Mind Maps, Flashcards, Quizzes, Letmefeedback and more.*

*"Temporary Order of the Organization of the Educational Process at Simon Kuznets KhNUE"* <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf>.

*"Temporary Order of Evaluating Student Learning Outcomes on the Cumulative Scoring System Scale"* <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-Pro-poryadok-otsinyuvannya-rezultativ-navchannya-studentiv.pdf>

*"Provision on Scoring and Monitoring of Students' Learning Outcomes Supported with Simon Kuznets KhNUE Corporate Information Management Software"* <https://www.hneu.edu.ua/polozhennya-pro-el-zhurnal/>

Demonstrate how the forms and methods of learning and teaching comply with the requirements of a student-centered approach. What is the level of student's satisfaction with the methods of learning and teaching according to survey results?

*The university has strongly emphasized a student-oriented approach instead of a teacher-oriented one. The students are informed of studying forms and methods used during the course by the lecturer at the first lecture. The students also have access to the course technological schedule comprising a student's workload and credit points per semester, teaching methods, intended learning outcomes, course content, evaluation methods via the web-site of the KhNUE Learning Management System <https://pns.hneu.edu.ua/>.*

*The student-oriented approach and the content of educational components influence the teacher's choice of forms and methods of learning and teaching. They are aimed at students' acquisition of general and professional competencies; the achievement of the programme learning objectives and the attainment of study outcomes. The programme content demonstrates that the use of lectures has decreased, meanwhile, the use of the interactive forms and methods of learning and teaching is constantly increasing (pair work, team work, group work, project work, etc.).*

*95.0% respondents are satisfied with the quality of teaching at the educational program (variety of forms, methods, technologies of teaching)*

Demonstrate how the learning and teaching methods employed in the educational programme correspond to the principles of academic freedom

*Every lecturer is free to choose the forms and methods of teaching that he / she considers appropriate to ensure the acquisition of the students' competences defined by the course curriculum and that are in line with the objectives of the educational (§4.2. "Temporary*

*Order of the Organization of the Educational Process at Simon Kuznets KhNUE”*  
<https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf>.

*At the same time, the main task of the teacher is to select such forms and methods of teaching, which allow forming the students’ competences as effectively as possible. Thus, the tasks of the teacher are fully in line with the interests of higher education students.*

Describe how and within what time limits the participants in the educational process are provided with information about the objectives, contents, and expected outcomes of studies, the procedure and criteria for appraisal, including within the independent educational component

*At the beginning of the course studies of each discipline (educational component), the lecturer is obliged to provide the higher education students with comprehensive information regarding the competencies they will gain, the study outcomes, the course content and its components, forms and methods of teaching, assessment methods, the maximum number of credit points per semester for each component of the discipline. This usually happens at the first lecture. Also, the lecturer is obliged to put to the course technological schedule with the information on the course on the KhNUE Learning Management System (LMS) website. The KhNUE LMS website provides the detailed information on each course component, such as guidelines, tasks, etc. The information on the course components as well as the choice of didactic methods depends on the lecturers’ decision.*

*Thus, two channels of providing information for students are combined: the first one is a face-to-face interaction, the lecturer explains the course content peculiarities in the classroom and answers students’ questions; the second one is via the internet, the information is posted on the website, which allows students to refer to this information if necessary and plan their trajectory of course study pursuing their personal goals. The use of two information channels has proved its efficiency since the lack or inadequacy of information led to human errors or mistakes committed either by students or teaching staff 5-7 years ago. If the 1<sup>st</sup> year students require the information on the course, they can contact their academic group supervisors who monitor the undergraduates’ educational process and ask for the information support. Later undergraduates can themselves remind lecturers of providing them with the course information at the beginning of the semester. Master’s students do not experience such problems as they know how to get the necessary information about the course at any time convenient to them.*

Describe how studying is combined with research during the realization of the educational programme

*The programme comprises the following forms of research activities in the educational process:*

*During the research internship, students get acquainted with the research projects the department is involved in on national and international level. Students also discuss their individual research project assignments in their major subject that will be reflected in their Master’s theses with research advisors and write an individual introductory research project.*

*During discipline studies, Master’s students possess modern professional content, and ways for solving current research issues within the professional frame using the appropriate level of research, theory, approaches and available resources. They analyze the technologies, methods, tools, techniques that can be used for their further work on the chosen research issue.*

*When writing a Master's thesis, the student selects the necessary information, make generalizations, conclusions to solve a specific problem.*

*During professional internship, the student discusses with the enterprise internship coordinator possibilities to implement or apply his/her research project findings into the enterprise business process to solve a specific problem. Thus, students' research projects are in line with the current tendencies of the Ukrainian IT- industry. At the end of the professional internship, the student prepares a Master's thesis that demonstrates the student's knowledge of important issues within the professional frame and the ways to solve some of them, as well as outputs of individual research project implementation in the context of the enterprise.*

*Master's students also write conference abstracts and participate in scientific conferences, some write research papers (alone or with their research advisors).*

Providing a link to specific examples of how teachers improve the content of their educational components basing on research results and modern practices in the corresponding field

*The departments teaching staff constantly monitor the latest achievements in the IT industry. The members of the programme development team are members of the IT Cluster Education Committee; they jointly plan and hold meetings, conferences, workshops. They are actively involved in the ProfClub cluster project launched to share knowledge and technical experience with IT industry experts (<https://it-kharkiv.com/projects/profclub/>).*

*Thus, in parallel with the introduction of the BPMN methodology in IT companies, the IDEF methodology applied in the Business Process Analysis and Optimization course provided for master's students, has been changed for the BPMN methodology masters.*

*When the departments teaching staff were taking the professional development course at NIX Solutions, the teachers, together with the company employees discussed the use of this methodology in the learning process, in the company business process, etc.*

*Also, at the programme development team meetings, proposals for improving the discipline content are discussed and approved as well as recommendations for updating the programme content are provided.*

*The programme educational content is updated by the teaching staff without hindrance as the teaching staff are in constant search of free software products. They also find free software products upon the recommendations of IT companies personnel and alumni. If the teaching staff fail to do this, the university (if necessary) buys licenses for the required software products.*

*Various stakeholders, including higher education students (especially if they have working experience in the relevant specialty) may be the initiators of upgrading the content of the programme and its components. All proposals can be accepted by the course lecturer in person or discussed by the programme development team (if the lecturer rejects the proposal but the stakeholders insist on changes).*

*As a rule, the initiators of upgrading the content of the programme and its components are the teaching staff themselves.*

Describe how the studying, teaching and research within the educational programme are connected to the internationalization activity of the higher education institution

*ERCIS (<https://www.ercis.org/>) – the European Research Center for Information Systems, Department of Information Systems of KhNUE has been a member of the association ERCIS since 2015 (<https://www.ercis.org/about-us/associated-partners/simon-kuznets-kharkiv-national-university-economics>)*

*KhNUE has academic mobility agreements with*

*- Lyon University-2 (training and internship). Academic mobility is carried out in the 2nd year of studies. 15 ECTS credits are allocated for this purpose. During the first stages of the mobility implementation, there were problems with the transfer of credits awarded during mobility and, consequently, with the corresponding documentation. But this problem has already been resolved. Sometimes it's still problematic to meet the academic partners' deadlines of submitting or obtaining the required documentation.*

*- ISMA University (ISMA) (Riga, Latvia);*

*- University of Sibiu, Romania.*

*International projects:*

*Horizon 2020 EQUAL-IST – “Gender Equality Plans for Information Sciences and Technology Research Institutions” (2016-2019).*

*Erasmus+ FABLAB. “Development of a network infrastructure for youth innovation entrepreneurship support on fablab platforms” (2015-2019).*

*Erasmus+ DocHub. “Structuring cooperation in doctoral research, transferrable skills training, and academic writing instruction in Ukraine's regions / DocHub” (2016-2020).*

*Erasmus+ MASTIS “Establishing Modern Master-level Studies in Information Systems” launched in 2015. The universities of Ukraine (KhNUE, NTUU "KPI", LPNU, VNTU, KhSU, NTU "HPI") and Montenegro, together with the universities of France, Germany, Lithuania, Slovakia, Italy, Sweden, Luxembourg, majority of them are members of the association ERCIS, participated in the project.*

*Erasmus+ C3QA “Promoting internationalization of research through establishment and operationalization of Cycle 3 Quality Assurance System in line with the European Integration (C3QA)” (2016-2019).*

*Erasmus+ EDUQAS “Implementation of Education Quality Assurance System via Cooperation of University- Business-Government in HEIs (EDUQAS)” (2017-2020).*

*Students have access to e-journals, including international journals, which are available.*

*Today, four centers successfully operate at the University, namely: The World Bank Innovative Knowledge Center, the European Union Information Center, Information Center of the Association of European Border Regions (AEBR), University Success Center, Start-up Center. Visitors to the centers receive all the necessary information and advisory services regarding the policies and studies of the respective organizations, have free access to resources, can use the electronic catalog, electronic publications, and statistics on various fields and activities. The Centers Information Fund is regularly updated.*

## **5. Evaluation Measures, Appraisal of Students, and Academic Integrity**

**Describe how the formats of evaluation measures within the disciplines of the educational program allow for the appraisal of achievements of programme study results**

*The programme foresees the use of multiple appraising methods to evaluate students' study outcomes. The choice of appraising methods consistent across the programme and disciplines and is influenced by the programme study outcomes and competencies the teaching staff are seeking to engender in the students.*

*Master's students usually receive feedback from their teachers both during the course*

and at the end of the semester. The programme formative assessment given to students during the course comprises competence-oriented tasks, locally developed tests, lab defenses, individual tasks, group work tasks, case studies, orals, presentations, peer assessments, self-assessments, etc.

The programme summative assessments sum up all student's achievements and lead towards awarding a formal grade at the end of the semester and can comprise the following assessments: presentations of a selected topic, portfolios with the individual tasks assigned, written tests, essays, exams, theses, etc.

For the programme courses where theoretical knowledge needs to be accompanied by some practical application, a lecturer incorporates several tasks in the final grade of the course as well as the student's grades of the programme formative assessments. The weighting of individual tasks and the grade points scored from the programme formative assessments can become a key issue for the student to get a complex grade.

How are the preciseness and clarity of evaluation formats and criteria for reviewing the study results of students of higher education provided for?

The programme study outcomes are student-centered, i.e., they signal clearly to students what they should be able to do upon completion of the discipline. The programme study outcomes and the appraisal tasks are closely aligned with each other. The study outcomes are measured in the assessment regime for the discipline. Sometimes one task can measure several outcomes, or one outcome is measured by a number of assessment tasks. The apportionment depends upon the relative importance in the overall discipline of the ability being measured. From the student's point of view, the relative importance of the study outcome will be evident from the weighting attached to it in the related assessment task. The criteria for assessments are clear, correspond with intended study outcomes and are not modified or changed during the semester.

An outline of the appraising scheme is provided to students by the lecturer on the day the course begins. The information is also specified by the course technological schedule posted on the KhNUE Learning Management System (LMS) website <https://pns.hneu.edu.ua/>.

How and within what time limits do students receive information about the formats of evaluation measures and criteria for appraisal?

Students are informed of the programme competences, study outcomes, forms and methods of studying, criteria for assessments, students' educational component grading by the lecturer on the day the course begins. This information is also specified by the discipline technological schedule posted on the KhNUE Learning Management System (LMS) website <https://pns.hneu.edu.ua/>. The students are also notified of the discipline components design, such as, the teaching materials and resources, methodological guides for performing assignments and self-assessment tests, online tests, etc. Each educational component is linked to the KhNUE LMS website. It is constantly reviewed, updated, and improved by the discipline lecturer for layout, content and ease of use for students. The educational component layout and content with the attached teaching materials and resources, methodological guides, assignments, etc. depend the lecturer's decision.

Thus, two channels of providing information for students are combined: the first one is a face-to-face interaction, the lecturer explains the course content peculiarities in the classroom and answers students' questions; the second one is via the Internet, the information is posted on the website, which allows students to refer to this information if necessary and plan their trajectory of discipline studies pursuing their personal goals.

This is regulated by §2.12. "Temporary Order of the Organization of the Educational Process at Simon Kuznets KhNUE" <https://www.hneu.edu.ua/wp->



[content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf](https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf)

*Before this technique was introduced, the students' surveys were conducted. The surveys monitored how and within what time limits students received information about the formats of evaluation measures and criteria for students' appraisal. The surveys provided the feedback necessary for the teacher staff to be taken into consideration for improvements.*

*Now the KhNUE LMS analyzes educational component layouts and contents and, if necessary, the teaching staff is notified to post the required information on the KhNUE LMS website.*

How do the formats of appraising students comply with the requirements of the higher education standard (if appropriate)?

*There is no higher education standard to specialty 126 "Information Systems and Technologies" of the second (master's) level of higher education.*

*Candidates for master's degrees are required to write and defend a thesis. The Master's student is evaluated by an academic committee convened for that purpose. The Master's student is appraised upon both the overall quality and significance of his or her written paper which is a formal research investigation on an approved topic, and the oral defense (presentation) of his or her findings.*

*The procedure of appraising students is governing by "Provisions on Appraisal of Graduate Students at Simon Kuznets KhNUE" <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Polozhennya-pro-atestatsiyu-vypusknykiv-HNEU.pdf>*

What documents of the higher education institution regulate the procedures for evaluation measures? How are the participants in the educational process provided with access to it?

*The procedures for evaluation measures are governed by the following documents at Simon Kuznets KhNUE:*

*"Temporary Order of the Organization of the Educational Process at Simon Kuznets KhNUE" <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf>*

*"Provision on Written Exams Procedures at Simon Kuznets Khmu": <https://www.hneu.edu.ua/wp-content/uploads/2018/11/POLOZHENNYA-pro-provedennya-pys-movyh-ekzameniv-u-HNEU.pdf>.*

*"Temporary Order of Evaluating Student Learning Outcomes on the Cumulative Scoring System Scale" <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-Pro-poryadok-otsinyvannya-rezultativ-navchannya-studentiv.pdf>*

*"Provision on Scoring and Monitoring of Students' Learning Outcomes Supported with Simon Kuznets KhNUE Corporate Information Management Software" <https://www.hneu.edu.ua/polozhennya-pro-el-zhurnal/>*

How do these procedures ensure the objectiveness of examiners? What are the procedures for preventing and resolving conflicts of interest? Give examples of how the appropriate procedures are implemented in the educational programme

*Examiners' objectivity is insured by the university written exams procedure. According to this procedure, the examinations must be anonymous. After each exam, the faculty committee convened for that purpose take off cover sheets (with students' surnames) and assign the student the examinee number to be used on all his or her exam answer sheets. The official result of a student's examinations is made available on the faculty's website. The Examinations Appeal Committee members are appointed by the Faculty Academic Council and are approved by the Rector's order. The members term of office run one year.*

*These procedures are also intended to prevent conflicts of interests.*

*To exemplify, “The Order on Formation of Appeals Committee at Faculty of Economic Informatics, № 946/IC dated 31.08.18”, “The Order on Formation of Examinations Appeal Committee at Faculty of Economic Informatics, № 1135C, dated 02.09.19.”*

*How do the procedures of the higher education institution regulate repeat evaluation? Give examples of implementing the appropriate rules in the educational programme*

*The University’s regulations below contain provisions for students who are dissatisfied with the assessment of their academic work or academic progress to request an Exam Formal Review or Appeal against those decisions:*

*Temporary Order of the Organization of the Educational Process at Simon Kuznets KhNUE” <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf>,*

*“Temporary Order of Evaluating Student Learning Outcomes on the Cumulative Scoring System Scale” <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-Pro-poryadok-otsinyuvannya-rezultativ-navchannya-studentiv.pdf>*

*“Provision on Written Exams Procedures at Simon Kuznets KhNUE”:  
<https://www.hneu.edu.ua/wp-content/uploads/2018/11/POLOZHENNYA-pro-provedennya-pys-movyh-ekzameniv-u-HNEU.pdf>.*

*The time limits of procedures relating to students' requests for review of alleged assessment irregularities in relation to exams grades or grades in the courses designated on the Pass/Fail basis are specified by the university academic calendar. The deadlines of the procedures of relating to students' repeat evaluation are specified by the university and are listed in the university academic calendar. The student affairs offices schedule resit/deferred exams within the time limits prescribed by the university academic calendar. Students on the courses designated on the Pass/Fail basis are allowed to re-earn a “Pass” course grade at a failed course, in accordance with the deadlines listed in the university academic calendar. The KhNUE academic calendar is available at:*

*<http://www.teach.dep.ksue.edu.ua/index.php/grafik-uchebnogo-processa>*

*How do the procedures of the higher education institution regulate appeals against the results of evaluation measures? Give examples of implementing the appropriate rules in the educational programme*

*A student who considers that his or her grade or result for an exam does not reflect their level of achievement, may request that the grade or result be reviewed. Exam Formal Review must be lodged within 2 days of the result becoming available. Students can access these results by logging into their accounts on the KhNUE site. The procedure of Exam Formal Review is regulated in accordance with Provision on Written Exams Formal Reviews Procedures at Simon Kuznets KhNUE. The relevant decision of the student’s exam grade or result is made by the Examinations Appeal Committee appointed by the Faculty Academic Council and approved by Rector’s order.*

*The students of the programme “Information systems and Technologies” have not appealed to the Examinations Appeal Committee yet.*

*What documents of the higher education institution contain the policies, standards and procedures for observance of academic integrity?*

*The policies, standards and procedures underpinning the University's commitment to academic integrity set out the framework for promoting and assuring academic integrity in all aspects of learning, teaching and research at the University are articulated by the "University Academic Honour Code": <https://www.hneu.edu.ua/kodeks-akadem-dobrochesnosti/>*

Which technical measures are used in the educational programme as instruments against violations of academic integrity?

*The University Academic Honour Code procedures apply to any work performed by any current University student, regardless of the student's programme. The programme uses the uniform University mechanisms and instruments against violations of academic integrity in all aspects of teaching, learning and research.*

*The University Academic Honour Code prohibits plagiarism, cheating (e.g., obtaining a completed assignment with the intention of submitting it as your own work), fabrication and/or falsification (e.g., citing a source that does not exist), unauthorised collaboration or collusion (e.g., providing or receiving assistance in an exam), and other violations of academic integrity.*

*All observed violations are reported via the established University and faculty processes. Levels of offenses and penalties are determined by the faculty members, but can be modified by the appropriate faculty dean. The programme teaching staff have access to [etxt\\_antiplagiat](#) software to detect plagiarism in students' final course works and master's theses. An electronic copy of a student's final thesis is checked to detect plagiarism by his or her research advisor via the internet resources and Research Online Repository resources. After a Master's thesis defense, an electronic copy of a master's thesis should be lodged with the University Research Online Repository; the overview part of a master's thesis is posted on the University website: <http://www.repository.hneu.edu.ua/>*

*On the University level, some master's theses are chosen at random to be detected of research misconduct that does not align to the University Academic Honour Code via the [StrikePlagiarism.com](#) site (under the License Agreement on Awarding the Right to Use Anti-Plagiarism Software No. 218-52 of May 22, 2019 provided by the Limited Liability Company "Plagiat").*

How does the higher education institution popularize academic integrity among the students of the educational programme?

*Students are informed by the programme teaching staff of offense types (including plagiarism of a master's thesis) as well as course and institutional penalties, including academic dismissal from a program or possible suspension from the University. The programme students are responsible for abiding by all aspects of the educational programme.*

*Students of higher education are constantly asked to adhere to the University Academic Honour Code.*

*It is the responsibility of the programme guarantor to familiarize the students with the University Academic Honour Code contents at the beginning of the programme studies.*

How does the higher education institution react to violations of academic integrity? Give examples of any relevant situation referring to the students studying in the corresponding educational programme

*In accordance with the University Academic Honour Code, in cases of undisputed academic dishonesty, higher education students can be imposed on such potential penalties, as failure of the educational component and its repeat evaluation, or failure of the course and its*

*repeat evaluation.*

*The programme teaching staff make efforts to implement the University Academic Honour Code philosophy in disciplinary proceedings to evaluate every student fairly. Therefore, the reported cases of violation of this code included resubmission of work with penalty, failure of the course assignment (e.g., lab defenses, competence-oriented tasks, etc.) and repeat evaluation.*

*To raise the University academic community's awareness of academic integrity, the administrative staff has developed an Action Plan of implementing the University Academic Honour Code policy for 2019-2020 (URL to the plan is provided on the KhNUE site):*

*<https://www.hneu.edu.ua/wp-content/uploads/2019/10/Programa-rozvytku-AD-u-HNEU.pdf>*

*The results of the survey demonstrate that 78,9% of university academic community are satisfied with the University standards of academic honesty and integrity; 90,6% of respondents are certain that the Code policy is being implemented in disciplinary proceedings; only 61,2% of respondents believe that students' violations may result in course or institutional penalties.*

## **6. Human Resources**

How is the necessary level of professionalism of the teachers of the educational program ensured during their selection?

*Within its competitive framework, the university uses multiple criteria to select the most qualified candidates from the teacher pool. One of the criterion for teachers' hiring is conformity of the teacher's qualifications with the ones prescribed in the programme.*

*The faculty administrative staff also recruits teachers who have an appropriate qualification and professional experience in the relevant specialist area. However, when selecting teachers, there are problems that most HEIs currently face, namely, the lack of a sufficient number of qualified teachers to support the current size and scope of the programme. This is due to the low rates of typical salaries at HEIs. Salary rates set for the IT-industry significantly exceed them. Therefore, the faculty administrative staff recruits IT experts as the programme teachers.*

*Provisions on the competitive recruitment selection: <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Polozhennya-pro-poryadok-konkursnoho-vidboru-naukovo-pedahohichnykh-pratsivnykiv.pdf>*

Referring to specific examples, describe how the higher education institution encourages employers to take part in the organization and realization of the educational process

*The management of many IT companies realizes importance of experimental learning to students. Therefore, many companies organize conferences, workshops, excursions, consultations, practicums, etc. conducted by employers or their representatives to share their experience in IT field with students.*

*The faculty staff has a relationship with experts of IT companies who conduct external training and run workshops, training sessions on-site. Within the programme frameworks, employers or representatives of employers of IT companies are often invited to conduct lectures to share their knowledge and experience of a particular subject with students. For instance, on October 8, 2019, the representatives of Kharkiv IT cluster delivered a lecture on "Business Analytics" to the programme students. This type of training can also be done at external events or online. To exemplify, both teachers and students have an opportunity to participate in the annual events carried out by Kharkiv OpenIT2.0 IT cluster project team*

[\(https://it-kharkiv.com/projects/open-it-2-0/\)](https://it-kharkiv.com/projects/open-it-2-0/).

Referring to specific examples, describe how the higher education institution encourages professional practitioners, field experts, representatives of employers to participate in classes of the educational programme.

*In addition to the activities mentioned in the previous paragraph, the faculty recruits experts of IT companies for teaching the programme students. The professional practitioners work part time or on a sessional basis. For instance, among the programme teaching staff are representatives of IT-companies, namely, Denys Valeriiovych Hrynov (the EPAM company), Olena Borysivna Plokha (the EPAM company), Andrii Oleksandrovykh Poliakov (the EPAM company), Oleksii Mykolaiovych Besedovskyi (the AxiomSL company) and others.*

*Higher education students are quite pleased to be taught by IT-field experts. However, it's rather challenging to combine work in a company with teaching students at the HEI. Teachers who work for companies find it difficult to combine a full-time job with mixing teaching students at the HEI with documenting teaching and filling out all the required paperwork.*

Describe how the higher education institution provides for the professional development of teachers in the educational programme

*The University teaching staff continually 'up skill' or 're-skill' to ensure their qualifications don't become outdated or obsolete. Therefore, in order to meet the requirements prescribed by the educational programme, the University provides relevant learning opportunities for every teacher, through which he or she can acquire and develop the required competences.*

*The University Office for Correspondence Education, Distance Education and Continuing Professional Education offers a range of professional development courses for qualified professionals.*

*The teachers can choose a course among a cluster of short professional development courses conducted either internally (on-site, namely, at the University) or externally (off-site, namely, at IT companies, at home or foreign universities, or on-line).*

*To exemplify, upon completion of course in business analysis, the teachers, Hanna Plekhanova, Iryna Zolotaryova, Oleksii Besedovskyi, Serhii Znakhur, Olena Plokha, received certificates of completion from the Nix company.*

*In addition, the Information Systems faculty has a relationship with the Microsoft Ukraine (Microsoft IT-Academy) and IBM Ukraine IBM (IBM Innovative Knowledge Center, the only one in Ukraine). This cooperation provides opportunities for teachers to get access to information resources and to acquire knowledge and training in a specific competency via professional development certificate courses.*

*Overall, 75.7% of scientific and pedagogical staff are satisfied with the conditions for the professional and pedagogical development of teachers. At the same time, 91.4% of respondents are pleased to take professional development courses on-site. But only 69.1% of academic staff are satisfied with the range of courses or their subjects.*

Demonstrate that the higher education institution stimulates the development of teaching skills

*The University stimulates the professional development of teachers by offering a mix of requirements and internal or external stimuli.*

*For instance, continuing professional development is considered a professional duty for teachers in Ukraine. The University Office for Correspondence Education, Distance Education and Continuing Professional Education is responsible for monitoring the*

*professional development of teachers. Therefore, the Office assumes the responsibility of implementing a University Plan for Continuing Professional Development of the Academic Staff. Every course taken with the Office counts towards the teacher's professional development. Upon completion of the course, the teacher receives a certified Diploma from the awarding body relating to the course.*

*The University has developed the academic staff performance appraisal rating system based on the teacher competence model. The formative and summative tools and techniques deployed in the assessment system are articulated by "Provisions on Techniques used for Quantitative Assessment of Academic Staff's and Departments' Scientific-Pedagogical Performance at Simon Kuznets KhNUE": <https://www.hneu.edu.ua/wp-content/uploads/2019/08/Kolektyvnyj-dogovir-2019-2020.pdf>; "Provisions on Appraisal Rating System Based on Academic Staff's, Departments' and Faculties' Performance at Simon Kuznets KhNUE": <https://www.hneu.edu.ua/polozhennya-pro-reytynh-npp/>.*

*The University system of incentives is regulated by the Collective Agreement (with annexes, including the Provisions on Scheme of Awarding of Scientific-Pedagogical, Scientific, Administrative, Educational-Assisting and Support Staff at Simon Kuznets KhNUE.*

## **7. Educational Environment and Material Resources**

Demonstrate how the financial and technical resources (library, other infrastructure, equipment, etc.) as well as methodological groundwork for the educational programme provide for the achievement of objectives and programme study outcomes defined by the educational programme

*Decisions regarding the allocation of funds for the needs of the University's development strategy are provided by the annual Rector's reports: <https://www.hneu.edu.ua/wp-content/uploads/2019/01/Zvit-rektora-HNEU-2018.pdf>*

*Technical resources:*

*the library resources in the specialty meets the License conditions;*

*many online resources in the specialty are available at the university;*

*free software, trial versions, or licensed software that is legally sound are used in the educational process*

*Information on technical resources is available at: <https://www.hneu.edu.ua/wp-content/uploads/2019/11/Materialno-tehnichne-zabezpechennya-zgidno-z-Litsenzijnymy-umovamy.pdf>*

*This document contains the description of the areas and calculations accordingly to License Terms, as well as the description of opportunities for low-mobility groups (people with impaired functionality), etc.*

*The main tool for providing students with the information on the course is the University MLS website <https://pns.hneu.edu.ua/>. Each teacher places a course program and a course technological schedule. Additionally, each course topic and educational component is attached by an electronic version of updated list of resources, useful articles and analytical materials from the Ukrainian and international IT communities, tasks for lab classes, practicums, tasks for formative assessments and the like.*

*Usually the completed by students tasks are also uploaded to the MLS website.*

Demonstrate how the educational environment created in the higher education institution allows for the satisfaction of demands and interests of students studying in the educational

programme. What measurements does the higher education institution conduct to reveal and take these demands and interests into account?

*1. Institutional environment and physical resources available at the HEI:*

*equipment of classrooms, laboratories, centers (Microsoft center, IBM center, Fablab center, Startup center) dormitories, libraries, etc.); cultural events to satisfy students' demands for his or her educational trajectory choice; MLS online platform, Fablab, and social network sites, such as, FB, Instagram, Telegram for information and engagement.*

*2. Collaboration with IT companies and vendors (Microsoft, IBM), job fairs, alumni meetings).*

*3. Students' and teachers' surveys.*

*The educational environment created in the HEI is aimed at satisfying the needs and interests of educational programme students due to the modern physical resources.*

*Thus, according to the university educational-assisting staff survey, 84.9% of respondents are generally satisfied with the university technical resources. In particular, 85.6% of respondents are pleased with the convenience of the premises, 81.3% of respondents are satisfied with the necessary equipment.*

*100,0% of higher education students are satisfied with the University technical resources.*

*According to the survey results, the following physical resources were rated excellent or good by the university graduates: information support - 82,0%, library resources – 81,3%, access to scientometric databases - 82.7%, LMS site - 92.1%, university repository - 79.9%, electronic journal - 67.6%, electronic timetable - 95.7%, information support - 83.3% of university graduates.*

Describe how the higher education institution provides for the safety to life and health of students of the educational programme (including mental health)

*1. Strict adherence by scientific-pedagogical staff and higher education students to good health and safety practices and compliance with applicable health and safety, including adherence to safety practices while working with computer-equipment.*

*2. The University health-care unit that provides medical services for full-time students, e.g., first aid; students' annual preventive examination; doctor's home visits to sick students who live in dormitories.*

*3. Psychological assistance is constantly available.*

*75.3% of students are satisfied with socio-psychological conditions at the University. According to the survey results, 58.3% of higher education students are satisfied with psychological assistance, 91.7% of respondents are satisfied with comfortable and safe conditions for studies.*

Describe the mechanisms for educational, organizational, informational, advisory and social support of students. What is the satisfaction level of students regarding this support according to survey results?

*Nowadays, the University has educational support (quality management, education office, programme guarantor, etc.), organizational support (education office, office of career development and business relationships, office of teaching and learning and teaching documentation, etc.), information support (websites of the HEI, faculty, departments, the KhNUE MLS, etc.), assistance support (office of career development and business relationships, psychological assistance, etc.), social support (office for youth policy and social development, etc.).*

*According to the survey, 78.3% of university graduates are satisfied with academic services support.*

*The university is also implementing gender equality policy and non-discrimination policy.*

*The University has developed and is implementing a University Gender Equality Plan <https://www.hneu.edu.ua/plan-gendernoyi-rivnosti-hneu-im-s-kuznetsya/> as a result of having participated in the EQUAL-IST HORIZON2020 Project “Gender Equality Plans for Information Sciences and Technology Research Institutions”. <https://www.hneu.edu.ua/proekt-goryzont-2020-equal-ist/>*

How does the higher education institution create enough conditions for realizing the right to education of persons that have special educational needs? Give specific examples of how such conditions are created in the educational programme (if appropriate)

*The University gives such persons the opportunity to fully socialize and to study successfully. In particular, in some buildings elevators and ramps have been adapted for the needs of current and prospective higher education graduates.*

*The University also provides psychological assistance to such persons.*

*The online MLS platform.*

How does the higher education institution define the policies and procedures for regulation of conflicts (including those which are connected to sexual harassment, discrimination and corruption)? How are the participants in the educational process provided with access to the regulatory policies and procedures? What is the practice of their implementation during the realization of the educational programme? *long field*

*The policies and procedures for regulation of conflicts (including those which are connected to sexual harassment, discrimination and corruption) are governed by the following documentation:*

*Temporary Order of the Organization of the Educational Process at Simon Kuznets KhNUE” <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf>,*

*“Temporary Order of Evaluating Student Learning Outcomes on the Cumulative Scoring System Scale” <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-Pro-poryadok-otsinyuvannya-rezultativ-navchannya-studentiv.pdf>*

*“Provision on Written Exams Procedures at Simon Kuznets KhNUE”:  
<https://www.hneu.edu.ua/wp-content/uploads/2018/11/POLOZHENNYA-pro-provedennya-pys-movyh-ekzameniv-u-HNEU.pdf>.*

*Such conflicts have not been observed during the implementation of the educational programme.*

## **8. Internal Quality Assurance of the Educational Programme**

Which document of the higher education institution regulates procedures for the development, approval, monitoring and periodical review of the educational programme? Provide a link to this document which is promulgated in open access on the Internet.

*“Temporary Order of the Organization of the Educational Process at Simon Kuznets KhNUE” <https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf>.*

Describe how and how often the educational programme review is carried out. What was changed in the educational programme according to results of the latest review, how was it substantiated? *long field*

*The educational programme is reviewed systematically once a year at a programme development team meeting.*



*The programme was opened a year and four months ago, it has no graduates yet. According to the results of the first review, it was recommended to increase the use of simulations, case studies based on IT enterprises business practices in the educational process.*

Referring to specific examples, demonstrate how students are involved in the process of periodic review of the educational programme and other procedures for its quality assurance, and how their position is taken into account during the educational programme review *short field*

*Vladyslav Gavrilov, a student of higher education, is a member of the programme development team. Other students can also give their comments, proposals and the like concerning the programme. In addition, the programme development team also asked two alumni of the compatible specialty to give their recommendations concerning the programme design and content. Oleksandr Gorbachenko and Oleg Gorbenko, whose positions require the professional qualification relevant to that of the alumni of the educational program "Information Systems and Technologies», recommended to focus the programme on the IT enterprise management and its quality performance analysis to improve the training of project management specialists. After the discussion, the competencies were adjusted and the relevant programme outcomes of study and disciplines were imbedded into the curriculum.*

*Higher education students are involved in the process of periodic review of the educational programme and other procedures for its quality assurance through:*

*providing information and giving feedback in the formats of entrance/exit interviews, course evaluation surveys, reflective student essays;*

*improving subject teaching and learning, for instance, master's students can propose experimental learning instead of traditional one and take a course offered by IT company; cooperation between teachers and students, e. g., scientific conferences, events, excursions.*

How does student government participate in the procedures for internal quality assurance of the educational programme?

*Representatives of student government are treated as partners and experts who participate in the programme development and can identify and propose what should be changed or improved in the programme. Students can submit their recommendations to the programme development team or they can take part in a meeting of the team. The expertise of students is valued and utilised.*

Referring to specific examples, demonstrate how employers are directly or through their associations involved in the process of periodic review of the educational programme and other procedures for its quality assurance *short field*

*Director of SoftPro LLC, Altii Zemlytskyi, is a member of the programme development team. In addition, the programme development team also asked employers to give their recommendations concerning the programme design and content. The programme has been improved in the frameworks of the Erasmus + project "Establishing Modern Master-level Studies in Information Systems (MASTIS)", at the regular meetings with representatives of Kharkiv IT companies (SoftPro, IC Rarus, NIX Solutions, EPAM, Softserve, Auchan Ukraine, etc.) and the management of the Kharkiv IT cluster.*

*To exemplify, the employers proposed to include in the education program the acquisition of competences in optimization of software applications, namely, SEO-optimization. The discussions were very helpful in developing the course on optimization of software applications that was embedded in the curriculum for the educational program "Information Systems and Technologies".*

*The survey on the qualification profile of graduates and their competences was conducted among the profile experts from about 90 companies in Ukraine (in the frameworks of the MASTIS project).*

*Courses (topics, learning outcomes and teaching methods) were reviewed by representatives of companies and European partners. The related recommendations were taken into consideration.*

Describe the practice of collection and inclusion of information about career prospects and employment trajectories of graduates of the educational programme *short field*

*1. The faculty student affairs office, the office of career development and business relationships, the guarantor of the educational program together with specialty department members are responsible for conducting surveys, interviews with students, employers and representatives of Kharkiv IT companies to identify IT specialists' competencies deficit. These surveys and interviews address such issues as the occupational positions of graduates, levels of (un)employment for recent graduates, longer-term occupational trajectories, variations in employment destinations. The surveys and interviews give a realistic picture of the level of the programme quality as they provide feedback on the quality of the educational process as well as generate insights into the programme quality improvements concerning academic experiences (quality of teachers and departments), duplication of courses contents, practical relevance of the educational components, etc.*

*2. There is a LinkedIn group for alumni of the Franco-Ukrainian Master's program.*

*This practice will be used with graduates of educational programme on Information Systems and Technologies in the future.*

What drawbacks of the educational programme and/or educational activity related to the educational programme were revealed during the implementation of procedures for internal quality assurance within the time limits of its realization? How did the higher education institution's system of quality assurance react to these drawbacks? *long field*

*No drawbacks of the educational programme and/or educational activity related to the educational programme were revealed during the implementation of procedures for internal quality assurance.*

*As results of practices of other educational programmes demonstrated, it necessary to enforce feedback with alumni of the programme and use the practice of collection information through the social networks, such as a group on LinkedIn and others. It is also recommended to increase alumni involvement in teaching, through workshops and roundtables on business requirements for the programme graduates.*

Demonstrate that the results of the external higher education quality assurance are taken into account during educational programme improvement. How were the concerns and propositions on the last accreditation and accreditations of other educational programs taken into account during the improvement of this educational programme? *long field*

*No results of the external higher education quality assurance were taken into account during educational programme improvement as this accreditation is the first one.*

Describe how the members of the academic community are meaningfully involved in the procedure of internal quality assurance of the educational programme *short field*

*The programme development team welcomed the academic staff to participate in the programme development team meetings and some teachers, O. Plokha, G. Plekhanova, S. Znakhur, systematically took part in the discussions of the programme development team.*

*The academic community proposed to include in the educational programme the acquisition of competences related to mathematical methods of the enterprise business processes modeling. After the discussion, the recommendations were considered as not necessary;*

*nevertheless, the curriculum courses on big data analytics, and analysis and optimization of enterprise business processes were developed.*

Describe the division of responsibility between the different structural subdivisions of the higher education institution with respect to the implementation of processes and procedures for internal education quality assurance *short field*

*Responsibility for the implementation of processes and procedures for internal education quality assurance is divided between the following structural subdivisions of the University:*

- The Office for Education Quality Assurance and Innovative Development is responsible for quality assurance policy, quality assurance activities, the introduction of innovative technologies and so on.*
  - The Office of Teaching and Learning and Teaching Documentation is responsible for maintaining high standards of academic integrity, organizing the documentation of teaching and learning, coordinating accreditation procedures, etc.*
  - The Office of Education and Competencies organizes the educational process, outlines activities to assess students' competences during the academic year, etc.*
  - The eLearning Office is responsible for developing eLearning resources for supporting the educational process, etc.*
  - The Marketing and Corporate Communications Office is responsible for building external communication strategies and organizing access to public information.*
  - The Office of Career Development and Business Relationships is responsible for promoting graduates employment, for conducting the demand and supply analysis of labour markets.*
- For more information on the division of functional responsibilities, powers and rights of these University subdivisions, refer to the KhNUE website at the following link:  
<https://www.hneu.edu.ua/rozpodil-vidpovidalnosti-mizh-strukturnymy-pidrozdilamy/>*

## **9. Transparency and Publicity**

What documents of the higher education institution regulate the rights and responsibilities of all participants in the educational process? How is their access to the participants of the educational process assured? *short field*

*The rights and responsibilities of all participants in the educational process are governed by*

*“Temporary Order of the Organization of the Educational Process at Simon Kuznets KhNUE” (<https://www.hneu.edu.ua/wp-content/uploads/2018/11/Tymchasove-polozhennya-pro-orhanizatsiyu-osvitnoho-protsesu-v-HNEU.pdf>).*

*Their availability is ensured by posting on the HEI website.*

Provide a link to the web-page that contains information about promulgation of the relevant form on the official web-site of the higher education institution designed to receive concerns and propositions from stakeholders.

*Web-page address of the educational programme on the University website:  
<https://www.hneu.edu.ua/wp-content/uploads/2019/04/OPP-126-Informatsijni-systemy-ta-tehnologiyi-Magistr-2019.pdf>*

Provide a link to information about the educational program published in open access on the Internet (including its objectives, expected outcomes of studying and components)

*Web-page address of the educational programme on the University website:  
<https://www.hneu.edu.ua/wp-content/uploads/2019/04/OPP-126-Informatsijni-systemy-ta-tehnologiyi-Magistr-2019.pdf>*

## 10. Prospects for Further Development of the Educational Programme

What are the educational programme's strengths and weaknesses in general? *long field*

*The strengths of the educational programme are:*

*involvement of representatives of employers and/or employees of IT enterprises in the programme;*

*the department participation in international projects aimed at improving the quality of the master's programme in "Information systems and technologies" and implementation of their results in the educational process;*

*enhanced learning of English;*

*the French-Ukrainian programme within the frameworks of the programme;*

*utilization of the expertise of graduates, employers, higher education students in development and delivery of the educational programme.*

*The weakness of the educational programme is the difficulty of involving highly qualified teachers in the programme.*

What are the prospects for development of the educational programme for the next 3 years? What concrete measures does the higher education institution plan to take to realise these prospects? *long field*

*The University plans measures to involve highly qualified teachers in the programme.*

*The University participates in the international project on improving the quality of the educational programme and will integrate its results into the educational process. In particular, the piloting of the project results will take place at the educational programme "Information Systems and Technologies".*

### **Assurance**

We assure that all information provided in the report and documents attached to it is reliable.

We guarantee that the higher education institution will provide any documents and additional information referring to the educational programme and/or educational activity on this educational programme.

We give consent to the processing and promulgation of information about the self-appraisal and all documents in full and in the public domain attached to it.

**Head of the higher education institution**

**Guarantor of the educational programme**