Accreditation Report

Bachelor's Programme

"Software Engineering and Business Analysis"

Kyiv School of Economics

Kyiv, Ukraine

Reference Number IP-1098-1

23rd Meeting of the ZEvA Commission on 11 March, 2025

Item 4.02

Study Programme	Degree	Programme Duration	Type of Programme	ECTS Credits
Software Engineering and Business Analysis	Bachelor	3 years, 10 months	Full-Time	240

Accreditation contract signed on: 04/06/2024

Date of site visit: 12/12/2024

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Hanover, 08/04/2025

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I. Final Vote of the Expert Panel and Decision of the ZEvA Commission

1. Decision of the ZEvA Commission (11 March, 2025)

The ZEvA Commission follows the experts' report and recommendations and acknowledges the university's response to the accreditation report from 03.03.2025.

The ZEvA Commission decides to accredit the Bachelor's programme Software Engineering and Business Analysis offered by Kyiv School of Economics without conditions for a period of six years.

This decision is based on the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), the Framework of Qualifications of the European Higher Education Area and the recommendations of the ECTS Users' Guide as referred to in the ZEvA Manual for the External Assessment of Study Programmes.

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2. Central Findings and Final Vote of the Expert Panel

2.1 Central Findings of the Experts: Executive Summary

The experts have gained a positive overall impression of Kyiv School of Economics (KSE). The Bachelor's programme *Software Engineering and Business Analysis* which was newly launched in 2021 fits in well with the strategy of KSE to provide future skills that are needed to meet the labour market needs because of the global digitalization in a number of processes in all economic sectors. The external stakeholders, who the experts had the chance to talk to at the digital site visit, support the implementation of this new programme.

The Bachelor's programme shows a consistent and plausible curricular structure. The experts are convinced that it provides a qualification at the desired level. Yet, they think that the quality of this academic programme would benefit from the implementation of a final examination and hence strongly recommend introducing a mandatory Bachelor's thesis and final disputation to this programme.

The experts find that the name of the study programme *Software Engineering and Business Analysis* gives the impression that both academic fields "Software Engineering" and "Business Analysis" are equally represented in this programme. With a view to the curriculum the experts recommend rephrasing the name of the programme to avoid misunderstandings. For instance, a title like "Software engineering for business application" would be more in line with the programme's qualification goals and content.

KSE should try to enhance the public visibility of this programme on its website by presenting the courses and their intended learning outcomes and the skill level in more detail.

The experts appreciate the university's plan to add professors to the teaching staff in the field of software engineering in order to secure the academic level of the programme in the future, especially since the number of students in this programme is increasing.

The expert panel can see that KSE's external contacts and networks as well as the funding of the programme work properly. In order to get the latest information about the labour market needs for this study programme the expert panel recommends formally implementing an external board that meets regularly and frequently. Also, the programme would benefit from the input of more practitioners. Therefore, the experts recommend developing a strategy for the recruitment of practitioners as lecturers.

The quality system and loops seem to work well, although it seemed to be less stringently managed. From the experts' point of view KSE would benefit from even clearer process patterns and structures to create evidence as a basis for its quality assurance in order to win even more process robustness.

Students are generally well-supported in all academic and non-academic matters and value the KSE campus as a safe space for studying, working and living.

The internal quality assurance system of the university is already well developed, as was demonstrated to the experts during the online talks but should be consistently further developed along with the prospective further growth of the university. The experts also see room for further optimization to enhance the transparency of the programme profiles, contents and requirements, both for the students and the general public.

2.2 Final Vote of the Experts

2.2.1 Recommendations:

- The experts strongly recommend reflecting once more on the adequacy of the programme title.
- KSE should try to enhance the public visibility of this programme on its website by presenting the courses and their intended learning outcomes and the skill level in more detail.
- The PLOs should be revised to be less fine-granular and less focused on specific modules. Instead, they should be formulated at a higher level, emphasizing broader competencies rather than listing detailed skills, methods, or tools. This will improve clarity, reduce redundancy, and ensure they reflect overarching program-level learning goals.
- The course syllabi are regarded as fully satisfactory in their current format, but the course catalogues should be extended to cover the final capstone projects, as well as all programme-specific electives (as outlined in the survey tables included in the self-report).
- The university should also take care to highlight the students' individual choice of minors in the Diploma Supplements for the Bachelor graduates.
- The experts are convinced that the quality of this academic programme would benefit from the implementation of a final examination and hence strongly recommend introducing a mandatory Bachelor's thesis and disputation to the programme.
- KSE should try to align formats/designs of the course descriptions to integrate these in a module handbook.
- KSE should consider replacing the two internships in the first two years of the programme by project work (mentored by practitioners at KSE) in order to then organize an external internship with a longer duration in the third year.
- KSE should inform students about evaluation results on a more standardized basis. The experts think that KSE would benefit from even clearer process patterns and structures to create evidence as a basis for its quality assurance in order to win even more process robustness.
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- KSE should develop a strategy for attracting more practitioners as lecturers in the programme.
- The experts recommend carefully monitoring the student workload induced by the numerous and continuous assessment events.

2.2.2 **Conditions:**

none

2.2.3 **Recommendation to the ZEvA Commission:**

The expert group recommends the accreditation of the Bachelor's programme in *Software Engineering and Business Analysis* for the duration of six years without any conditions.

II. Evaluation Report of the Expert Panel

1. Introduction: Purpose, Design and Context of the Accreditation Procedure

In June 2024, the Kyiv School of Economics (hereinafter called "KSE") commissioned the Central Evaluation and Accreditation Agency Hanover (ZEvA) with the external quality assessment and international accreditation of its newly launched undergraduate programme in *Software Engineering and Business Analysis*. For this purpose, the agency assembled a panel of four experts from inside and outside academia, including a student expert.

The assessment was conducted according to the criteria laid out in the "ZEvA Manual for the External Assessment of Study Programmes". This assessment framework is fundamentally based on the "European Standards and Guidelines for Quality Assurance in Higher Education (ESG)" (ENQA 2015), the "Framework for Qualifications for the European Higher Education Area" (2005) and the "ECTS Users' Guide" (European Communities, 2015).

This report is based on the experts' desktop validation of the university's self-report and on the outcomes of the talks with faculty, staff and students of KSE on December 12, 2024. Due to the current traveling restrictions, the talks had to be conducted online. In order to give the experts an impression of the general facilities on the KSE campus in Kiew, the university produced a 15-minute guided video tour as a supplement to the self-report.

The accreditation report serves as a basis for the ZEvA Commission to decide on the accreditation of the study programme, and as a source of information for the Ukrainian authorities and the general public as regards the quality and the accreditation status of the programme.

2. Profile and Mission of the University

The University "Kyiv School of Economics" (KSE) is a private institution that has its roots in the establishment of a Master's programme in Economics, taught in English, in 1996. This program was launched by the Economic Education and Research Consortium (EERC) and the Eurasia Foundation at Kyiv-Mohyla Academy. EERC's mission was to enhance economic education and research capacity in post-socialist countries.

In 2006, the Master's program in Economics evolved further when EERC left Kyiv-Mohyla Academy and became an independent institution now known as the Kyiv School of Economics (KSE). Since then, KSE has expanded into a group of companies involved in educational, scientific, and analytical activities while actively contributing to Ukraine's higher education system and society.

Apart from the university, the Kyiv School of Economics now comprises the KSE Institute (a research institution and think tank), as well as the KSE Foundation which financially supports the university's educational endeavours by actively securing grants and donations which foster the development of the university's infrastructure and create new opportunities for students and faculty.

Initially positioned as a hub for economic education and research in Ukraine, the university's first programmes were focused on economics, specifically Economic Analysis and Business and Financial Economics. To complement these, a Master's program in "Public Policy and Governance" was also introduced.

Since 2021, KSE has launched a wide range of new study programmes, including the Bachelor's programme that is assessed herein, as well as further undergraduate programmes in Psychology, Law, Artificial Intelligence, Cybersecurity and Applied Mathematics.

As a response to the challenges faced by Ukraine and in order to prepare a strong workforce for post-war reconstruction, new Master's programmes in Memory Studies and Public History, Urban Development and Post-War Reconstruction and Social Psychology were also introduced. Additionally, in 2024, the University established an Engineering School and introduced two new Master's programmes in the field of technology and engineering. In 2024 the first Ph.D. programmes in Economics, History and Archaeology, Sociology, Political Science, Computer Science, Mathematics and Public Management and Administration at KSE were introduced.

All in all, KSE now counts approximately 600 undergraduate students and around 470 Master's students. The programmes show a strong international profile: all Bachelor's programmes are taught in English from the second year onwards, and some of the Master's programmes are taught in English only from the start. The university collaborates with various partner universities in Europe, Canada and the USA, particularly with the University of Houston.

KSE research activities focus strongly on the field of Economics, as well as Sociology and Political Science. Now that IT and software are becoming increasingly relevant in economic processes the creation of the new BA programme appears to be an organic step for KSE on the path of following its mission.

3. Assessment of the Study Programme

3.1 Brief Outline of the Study Programme

The study programme *Software Engineering and Business Analytics* is designed at level 6 of the National Qualifications Framework of Ukraine in the field of information technology.

The programme enrolled 18 students in 2021 (2 female students), 37 students in 2022 (10 female), 106 students in 2023 (49 female) and 125 students in 2024 (58 female). KSE expects to see the first graduates from this programme by the end of June 2025.

This study programme is one of several milestones to continue KSE's development and to follow the university's mission to become a "sustainable university", *recognized as a national and regional leader in education with a significant impact on Ukraine's development*.

3.2 Intended Learning Outcomes

The intended learning outcomes (ILOs) of the study programme are laid out in the introductory chapter to the course catalogue. It contains an outline of the central aims, goals and contents of the programme, as well as the most important methods of teaching and assessment applied.

In addition to that, the intended learning outcomes are listed in the Diploma Supplement that is issued upon graduation.

The KSE website does not describe the ILOs or the programme profile in detail, but provides a survey of the curriculum for more information about the programme contents.

The development of the study programme *Software Engineering and Business Analysis*, while determining its scope, results, and competencies acquired by a student with it KSE accounted for legislation requirements for higher education as well as the standard of higher education in the field of "Software Engineering" (2018). As required by the standards, the ILOs are closely aligned with the descriptors laid out in the Qualifications Framework for the European Higher Education Area.

The ILOs of the programme also focus on preparing students for professional practice in specific fields of "Software Engineering" for business application.

In detail, the programme's learning outcomes ("PLOs") are defined as follows:

PLO 1: *Analyze, purposefully search for, and select the necessary information resources and knowledge for solving professional tasks, considering modern scientific and technological achievements.*

PLO 2: *Know the professional code of ethics, understand the social significance and cultural aspects of software engineering, and adhere to them in professional activities.*

PLO 3: *Know the main processes, phases, and iterations of the software life cycle.*

PLO 4: *Know and apply professional standards and other regulatory documents in the field of software engineering.*

PLO 5: *Know and apply relevant mathematical concepts, domain, system, and object-oriented analysis methods, and mathematical modeling for software development.*

PLO 6: *Ability to select and use the appropriate software development methodology for the task.*

PLO 7: *Know and apply in practice the fundamental concepts, paradigms, and principles of operation of programming, tool, and computing means in software engineering.*

PLO 8: *Ability to develop human-machine interfaces.*

PLO 9: *Know and be able to use methods and tools for gathering, formulating, and analyzing software requirements.*

PLO 10: *Conduct pre-project analysis of the subject area and perform a system analysis of the design object.*

PLO 11: *Select input data for design, guided by formal methods of requirements description and modeling.*

PLO 12: *Apply effective approaches to software design in practice.*

PLO 13: *Know and apply methods of algorithm development, software construction, and data and knowledge structures.*

PLO 14: *Apply domain analysis, design, testing, visualization, measurement, and documentation tools in practice.*

PLO 15: *Justifiably select programming languages and development technologies to solve software creation and maintenance tasks.*

PLO 16: *Have team development skills, coordinate, document, and release all types of software documentation.*

PLO 17: *Ability to apply component-based software development methods.*

PLO 18: *Know and be able to apply information technologies for data processing, storage, and transmission.*

PLO 19: *Know and be able to apply software verification and validation methods.*

PLO 20: *Know approaches to software quality assessment and assurance.*

PLO 21: *Know, analyze, select, and skillfully apply information security (including cybersecurity) and data integrity tools in accordance with the applied tasks and developed software systems.*

PLO 22: *Know and be able to apply project management methods and tools.*

PLO 23: *Ability to document and present the results of software development.*

PLO 24: *Ability to calculate the economic efficiency of software systems.*

PLO 25: *Ability to work under uncertainty, understand the iterative nature of modern software development, and design systems in a way that simplifies future modifications.*

PLO 26: *Understand the physical foundations and principles of computer systems construction and the limitations they impose.*

PLO 27: *Use modern mathematical tools of continuous and discrete analysis, linear algebra, and analytic geometry in professional activities to solve theoretical and applied problems in the process of designing and implementing information systems.*

In addition to the list of ILOs, the goals and profile of the programme are described in more detail in the introductory chapter to the course catalogue (Appendix 16_1 to KSE's self-report).

According to this synopsis, the program aims to "*comprehensively prepare software engineering specialists, giving them a competitive advantage in the job market, both in the short and long term. Graduates of the program are expected to demonstrate technical competence, including a deep understanding of the theoretical foundations of computer science, core methodologies and practices in software development, as well as modern tools and frameworks. They should be capable of solving technical problems, possess algorithmic and analytical thinking, enabling them to develop complete and correct solutions to complex problems, choose the right set of tools for specific tasks, and evaluate the advantages and disadvantages of technologies and approaches*. […]

Therefore, in addition to technical skills, graduates should have systemic thinking, understand the connection between theory and practice, and be aware of the broader context of computer systems, including social, economic, business, and cultural aspects. The program offers students the opportunity to delve deeper into the study of economic and organizational fundamentals of digital business.

Recognizing the rapid development of the field, the program also aims to instill an understanding of the need for continuous learning throughout one's career, preparing graduates to continually adapt their skills and knowledge.

Overall, in the short term, the program will provide graduates with a broader range of options to start their careers at both local and global levels. […].

In the long term, the program will ensure that graduates have the confidence in their abilities and the capacity to adapt to changing technologies. They will be better prepared to face the challenges that arise in the rapidly evolving technological landscape. Graduates will possess the potential and necessary knowledge to advance in the technical field to the level of system architects and CTOs (thanks to technical courses), as well as in managing technical teams (as team leads) or starting their own businesses. Graduates can become leaders in the technology industry who understand global challenges, appreciate the broader context of computing systems, adhere to ethical standards, and demonstrate a high level of professionalism.

3.2.1 Experts' Appraisal

The experts conclude that the intended learning outcomes of the programme (ILO) are clearly and comprehensively described and are made transparent to the students. The rationale for launching the study programme and the general programme profile become sufficiently clear in the description of the aims and intended learning outcomes. The experts confirm that the descriptions of the ILOs are in

line with the Bachelor level as stipulated in the Framework of Qualifications for the European Higher Education Area and with Level 6 of the European Qualifications Framework. Academic qualifications, personal development, employability, democratic citizenship are recognisable elements of the ILOs.

The current list of Program Learning Outcomes (PLOs) appears rather fine-granular and closely aligned with course-level objectives rather than overarching program-level competencies. Effective PLOs should be more abstract, concise, and structured to reflect broad learning goals while avoiding redundancy.

To improve clarity, it is recommended to:

- Consolidate similar PLOs to reduce redundancy (e.g., multiple outcomes on software design, requirements analysis, and software quality).
- Increase abstraction, focusing on key competency areas rather than specific tools or methods.
- Align with established frameworks such as the Dublin Descriptors.
- A more structured and concise set of PLOs could cover:
- Fundamentals and mathematical foundations of Computer Science
- Software engineering & development
- Programming & computational thinking
- Data Science & AI
- Project management & teamwork
- Ethical & social aspects of computing

By refining the PLOs, the program can maintain flexibility while ensuring comprehensive coverage of essential competencies.

The fields of employment for graduates mentioned in the programme profile seem plausible to the experts and were supported in the talks with some external stakeholders of the study programme (partners/employers) during the site visit.

3.3 Concept and Structure of the Study Programme

3.3.1 Curricular Structure

The programme comprises 240 ECTS credits which are obtained within the period of three years and ten months. The calculated student workload for each academic year is 60 ECTS credits, with one credit equalling an average of 30 academic hours.

The individual course units comprise between one and a maximum of six ECTS credits each.

As KSE states in the self-report (page 50) in the course of the programme students acquire "*practical skills relevant for the labor market, particularly in the IT field, including the skills of developing strategies, making and justifying management decisions, and founding one's own business*. *The programme has close ties to the business and IT community, enriching internship and employment opportunities*". The programme enables practical application of the acquired knowledge through working with large datasets, using modern technologies and software.

The mandatory part of the programme consists of courses in different areas of *Mathematics, IT, Data Science, English for Professiona*l and *Study Purposes* as well as *Micro- and Macroeconomics*, complemented by English language classes, *Techniques of Propaganda and Counterpropaganda, Client- Server and Network Concept, Project Management* and some courses from other educational disciplines.

According to general national requirements, at least 25% of a Bachelor's programme have to consist of elective classes which give students a choice between several options. The curriculum is designed in line with this requirement, the electives making up 27% of the curriculum (or 64 ECTS credits).

Students can choose elective courses from the entire course pool of the university according to their individual interests. However, about 50% of the elective classes (at least 33 ECTS credits) need to be related to the core discipline of the programme. These elective classes are grouped into so-called "minors". At present, there are three minor tracks integrated into the curriculum: *Game Development, Enterprise Systems* and *Digital Business*.

Besides the mandatory and elective classes, the programme includes four practical internships (one per academic year) which are credited with either four or five ECTS credits each, as well as the final qualification work (capstone project) credited with a total of 15 ECTS credits. In the introduction to the course catalogue the university explains: "*This educational program addresses this challenge by integrating teamwork and project-based learning throughout the curriculum. From the first year, students will work in small teams (starting in pairs) and learn to use the necessary tools for collaborative development. Over time, the size of the teams will grow, and the complexity of the projects will evolve into comprehensive, interdisciplinary capstone projects.* […] *In their studies, students go through various methods, conduct experiments, and analyze the results, which contributes to the development of research skills. Students have the opportunity to participate in scientific projects conducted under the guidance of lecturers*." The capstone project may either be a classical research thesis or a practice-related project, depending on the students' preferences.

In order to be admitted to the programme, applicants need to have completed their general secondary education and achieve pre-defined minimum scores in the national university entrance exam ("National Multi-Subject Test"). The National Multi-subject Test for admission based on general secondary education is a mandatory state exam in Ukraine for all applicants, except for certain privileged categories of citizens defined by law. The application process is managed through a centralized procedure at national level, not at the level of the higher education institutions. In the self -report KSE writes: *"Universities, in turn, set admission rules and may introduce additional requirements for admission. For instance, at KSE, applicants are admitted to the competitive selection process and can be recommended for vacant spots for admission to the first (bachelor's) level if they have at least 150 points in mathematics (for the field of Psychology - 140 points). Whereas the national rules set a minimum score of 130 for any discipline. Such rules are intended to ensure that the student cohort align themselves as closely as possible with the need for specific knowledge necessary for the program as well as motivation for studying."*

3.3.2 Course Catalogue

KSE has submitted a course catalogue for the study programme as an appendix to the self-report. Apart from the introductory chapter already mentioned above, the course catalogue includes syllabi for all mandatory course units and for the internships. The syllabi of the elective courses are not included; neither are the elective options described in detail in the programme profile (minors in *Game Development, Enterprise Systems and Digital Business*).

Those syllabi that were disclosed to the experts include all information as recommended in the ECTS Users' Guide, as, for instance, detailed descriptions of contents, aims and intended learning outcomes, the student workload and number of credits awarded, course prerequisites, the learning activities and methods of teaching and assessment as well as lists of recommended reading.

The syllabi for the internships outline the basic requirements as regards the contents and focus of the internship, as well as the procedure of organizing an internship, which includes the conclusion of an agreement, the development of an individual internship plan and the appointment of a mentor at the internship base. By request of the experts KSE added a description of the development of the internships over the four years of studying as "guidelines for internships". KSE states that the finding of an internship position for students has become increasingly challenging in Ukraine due to the current economic climate, including layoffs and a shrinking IT employment market. To address these challenges, KSE has adopted hybrid approaches, including internal internships and mixed formats where students collaborate with KSE's industry partners on research and development or experimental projects rather than being directly involved in production tasks.

The evaluation procedure for the internship is also briefly summarized in the syllabi.

3.3.3 Internationalisation, Recognition and Mobility

Like all programmes of KSE, the programme in *Software Engineering and Business Analytics* shows a strong international profile, starting with the policy of teaching mainly in English from the second year onwards. Academic mobility is generally highly encouraged by the university, even though of course significantly impeded by the current conditions. The second and third year of the Bachelor's programme are regarded as the ideal time period for a study period abroad.

Internships may also be absolved at international companies or organizations, opening up another "mobility window" in the curriculum.

KSE offers various opportunities for student mobility by collaborating with partner universities abroad and by participating in exchange programmes like Erasmus+. In Appendix 14 to its self-report KSE lists partner universities with signed Cooperation Agreements: The University of Huston, The University of Bari Aldo Moro, The OHIO State University, Columbus, OHIO (USA), Bocconi University, Milano (Italy) and The University of Massachusetts Amherst (USA).

KSE has laid down its regulations for the recognition of learning outcomes in Part 4 of its general Educational Process Guidelines. KSE may recognize learning outcomes achieved in formal education or in non-formal settings.

The Academic Process Guidelines (see Appendix 5 to the self-report, 4.2. General rules of recognition) explicitly stipulate that the recognition procedure is based on the principles set out in the Lisbon Recognition Convention. If, during the review, the academic director finds that there are no learning outcomes that can be recognized, he/she draws up a reasoned conclusion on the refusal. In case an application for recognition is denied, the applicant has a right to appeal.

In principle, KSE provides a Diploma Supplement upon graduation which is based on the general standard template used in the European Higher Education Area. A Sample Diploma Supplements for the programme was disclosed to the experts as an appendix to KSE's self-report.

3.3.4 Experts' Appraisal

The experts have come to the overall conclusion that the study programme shows a consistent and plausible curricular structure. The programme offers many mathematics courses that provide a solid basis for achieving the ILOs, as well as courses in the fields of software engineering and business analytics. The foreign language classes of semester 1 to 3 prepare the students well for the courses taught in English from the second year of their studies. By interviewing the students of the programme in English, the experts could convince themselves of their very good command of the language.

All in all, the experts find that there is a good balance between theory and professional practice in this study programme. Yet, as was reported during the online talks, the university is struggling with the decreasing number of opportunities for external internships. KSE tries to solve this matter by providing internal internships and allowing mixed formats where students collaborate with KSE's industry partners on research and development or experimental projects, rather than being directly involved in production tasks. The experts acknowledge this approach. When talking to the external stakeholders they got the impression that the industry partners would prefer offering internship placements to students that already have solid theoretical knowledge in the field. KSE may therefore consider replacing the two internships in the first two years of the programme by project work (mentored by practitioners at KSE) in order to then organize an external internship with a longer duration in the third year.

The Bachelor's programme shows a consistent and plausible curricular structure. The experts are convinced that it provides a qualification at the desired level. As outlined above the programme will have to be continuously adjusted to modern standards in order to provide future skills. The experts suggest making the course structure a bit more flexible by using more generic "frame modules" whose contents could – if necessary – be more easily adapted without having to change the basic modular structure of the curriculum all the time.

The experts are convinced that the quality of this academic programme would benefit from the implementation of a final examination and hence strongly recommend introducing a mandatory Bachelor's thesis and disputation to this programme.

The experts find that the name of the study programme *Software Engineering and Business Analysis* gives the impression that both academic fields "Software Engineering" and "Business Analysis" are equally represented in the curriculum. With a view to the current design of the programme the experts recommend rephrasing the title of the programme to avoid misunderstandings. For instance, a title like "Software engineering for business application" could be more in line with the programme's qualification goals and profile.

Because of the strong international orientation of the programme the students have sufficient opportunities for gaining international experience in the context of study periods or internships abroad. In proportion to the number of students the option of internship placements abroad does not seem to be taken by too many students, which may be due to the present situation in Ukraine.

The course syllabi are regarded as fully satisfactory in their current format, but the course catalogues should be extended to cover the final capstone projects, as well as all programme-specific electives (as outlined in the survey tables included in the self-report).

The university should also take care to highlight the students' individual choice of minors in the Diploma Supplements for the Bachelor graduates.

Students can choose from elective courses that can lead to a minor in *Game Development, Enterprise Systems and Digital Business*. Although the electives make up 27% of the curriculum (64 ECTS credits) the students articulated the wish for some further elective topics that they would be especially interested in.

KSE should try to align the formats /designs of the course descriptions to integrate these in a module handbook.

KSE has had a strong international focus from the beginning, and internationalization is an important part of its current development strategy. A main element of this strategy is to ensure international standards by external quality assessment and international accreditation. The experts encourage KSE to enlarge the number of international partner universities for this programme.

The experts find that the rules for recognition and mobility are in line with the Lisbon Convention and the general European standards.

3.4 Teaching Faculty

KSE has provided comprehensive information on the teaching faculty involved in the study programme, including the CVs of the core teaching staff.

Additional information was given on KSE's policy for staff recruitment, staff development and growth plan. According to this additional information the faculty development plan focuses on two primary areas: advancing research capabilities and enhancing teaching techniques. The university outlines in its self-report that "*in 2025, KSE plans to hire 16 new faculty members, including 5-7 lecturers and 3–5 research faculty, with 1–2 specializing in Computer Science. … The Vice-Dean for Faculty will assist the Academic Director in analyzing student feedback on teaching quality and promote the adoption of*

modern technologies and evidence-based teaching methods."

Also, the experts got the opportunity to talk to the Academic Director of the programme and many other members of faculty in the course of the online talks.

In addition to its faculty and staff, KSE invites experienced practitioners and professors from foreign universities (particularly in the US) as lecturers on a regular basis.

The university continuously encourages the teaching staff to engage in international exchange programmes, internships, and research projects.

For the onboarding of new teaching faculty, the university has established an introductory course on the basics of teaching at KSE. During this course, lecturers understand the approaches to creating a course syllabus, get acquainted with different teaching methods, explore communication styles and interaction patterns with different departments, managers, coordinators, and students at KSE.

KSE's faculty hiring policy is grounded in principles of openness, transparency, equality and impartiality to attract the most qualified and motivated staff. The recruitment process also involves a trial lecture to get an impression of the applicants' teaching skills.

All faculty members receive information about available professional development programmes, research projects, internships, and academic exchanges they can participate in.

As a general rule, KSE offers as much in-class teaching as possible, distance learning and online lectures still being the exception rather than the rule.

By the experts' request KSE provided additional information about the composition of the teaching faculty for the programme. All in all, there are 12 faculty members, 7 part-time (guest) lecturers, and 5 teaching assistants working within the SE&BA program. Teaching assistants have a full-time workload.

3.4.1 Experts' Appraisal

The experts can see that the management team of KSE is agile, strong, and committed to the university and its programmes. They are convinced that KSE has appointed qualified teaching faculty for the programme. All lecturers hold appropriate academic qualifications as well as the necessary level of English that is required for this programme. The onboarding course for new lecturers is very good practice.

The experts commend KSE on its staff recruiting plans for 2025. They are convinced that the programme would additionally benefit from taking in more impulses from external partners. Hence, KSE should develop a recruitment strategy for attracting more practitioners as lecturers.

In spite of the sufficient number of permanent employees that reduces the risk of fluctuation and thus contributes to a consistent quality of teaching, students explicitly wished for a higher level of continuity in teaching ("not another lecturer each week"). However, this problem of staff shortage seems to be a general problem for Ukrainian universities because of the country's present situation.

In the course of the online talks, the experts have also gained the impression that the programme benefits from a highly motivated team in the administration and organisation departments, thereby supporting the smooth functioning of the programme. The seemingly open communication between students and KSE staff adds to the positive overall impression of the experts.

3.5 Infrastructure, Resources and Student Support

3.5.1 General Infrastructure on Campus

KSE moved to a new campus in Kyiv in 2021 in order to create a modern learning environment for a growing number of students. The university has described the facilities on campus in its self-report and has provided a guided video tour specifically for the expert panel.

The university campus features modern classrooms equipped with multimedia tools, laptops, and video cameras for various educational purposes. There are several study rooms for independent learning, including one with freely accessible computer equipment, all of which are available to students at any time. In order to provide maximum safety for students, several classrooms were set up in underground shelters. The campus also features recreational spaces for students, as well as meeting spaces for student clubs and self-government activities.

To support the educational process and virtual communication with students, the University has established a corporate messenger, the Moodle platform and personal student accounts.

On the Moodle platform, students can access information about each course, including syllabi, lecture notes, electronic learning materials, and video recordings of classes. These resources, created by faculty members, are available for independent study, evaluation, and feedback. Students also have free access to virtual resources such as Rapido, JSTOR, Research4life, and Project Syndicate through Moodle. Additionally, students can use the Coursera educational platform to enrol in additional courses at no cost, and Microsoft applications are provided free of charge. A library in the conventional sense does not exist on the KSE campus.

During the site visit one student showed the cafeteria where she was sitting and the experts could see a modern, friendly and bright place.

3.5.2 Student Advice and Support Services

The KSE students are offered a wide spectrum of support and advisory services. In all non-academic matters, they may turn to the central Study Support Office (SSO). The SSO is responsible for coordinating core processes throughout the student life cycle (student enrolment, assessment, graduation and recognition). Also, the SSO takes care of central organizational processes like the scheduling of classes or the moderation of the Moodle learning platform.

The International Affairs Manager provides consultative and coordinating support to students on matters of international academic mobility, formulates proposals for academic exchange programs and supports the selection process of candidates for participation in these programmes and the preparation of relevant documents.

The staff of the Student Development and Alumni Relations Office support students in matters of integration, social and psychological well-being and professional development. This includes assisting students in obtaining academic grants and in finding accommodation.

There are no graduates from the programme yet. However, in other study programmes the team is responsible for maintaining constant contact with alumni, for monitoring their career development and involving them in various initiatives that contribute to the university's further development. Therefore it is to be expected that KSE will establish similar processes for this new study programme.

The *Student Development and Alumni Relations office* can monitor students' needs for professional development and organizes events to enhance their career opportunities.

KSE offers confidential psychological counselling to all students free of charge.

In all questions concerning their academic studies, students can turn to their lecturers or to the Academic Directors of their programmes. There are also supporting tutorials offered by student tutors for certain fundamental subjects like Mathematics and English.

3.5.3 Equal Opportunities

KSE has developed and published a *Gender Equality Plan* which was disclosed to the experts as part of the self-report (appendix 7). This strategic document covers a wide spectrum of thematic areas relevant for creating gender equality, as e.g. creating flexible working conditions for staff, incorporating gender perspectives into decision-making processes, staff recruitment and staff development, as well as accounting for aspects of gender in research and the design of curricula. As part of the policy KSE also commits itself to collecting relevant data and to generating regular progress reports in order to monitor the university's progress in achieving its gender equality goals.

KSE is committed to providing equal learning and development opportunities for students with special needs by creating an inclusive environment and offering personalized study plans to support their specific requirements.

As formally stipulated in the university's Academic Process Guidelines, students with special educational needs who require adjustments to the educational process can submit a request to the Study Support Office. The request is then decided upon by the First Vice-Rector, together with the dean of the faculty and the Academic Director.

A special childcare room is available on the KSE campus. Students taking care of small children or other family members can be granted temporary academic leave.

3.5.4 Experts' Appraisal

Based on the video material and the additional information provided, and on their impressions during the online site visit, the experts conclude that KSE provides excellent conditions for studying, working and living on its modern campus. This was also confirmed by the lecturers and students during the online talks.

In-class teaching is kept up as best as possible while warranting maximum safety for students, even though the limited number of shelters significantly impedes an efficient scheduling and organization of classes across all study programmes. As outlined on the KSE website students can study the program either remotely or by attending classes on campus in Kyiv. The building has comfortable classrooms with shelters and generators, so regardless of circumstances, students will be able to continue learning.

Students are generally enabled and supported very well by their lecturers and by the administrative staff of KSE. The experts noticed that some lecturers and students were in close communication with each other during the site visit.

Learning groups seem to be relatively small, which makes it easier for lecturers to tend to individual students' needs. Students are further supported in their academic progress by means of additional tutorials and mentoring.

The experts appreciate that KSE has committed itself to a policy of ensuring diversity and equal opportunities at all levels. This also includes tending to student's special needs during the teaching process.

The number of students has increased a lot since the programme started in 2021. KSE should ensure that the benefit students gain from small learning groups and the possibility of individual support is maintained in spite of the higher number of students.

3.6 Student Learning and Assessment

The didactic approach taken by KSE is described in detail in the university's self-report. The study courses are organized in a student-centred way that ensures a consistent competence-based approach from basic to more complex knowledge. The focus is on the formation and development of specific theoretical and practical competences and skills that are necessary for professional activities in the field of software engineering. Also, KSE emphasizes that students get support on the formation of stable ethical views.

KSE takes care to apply active learning methods, "*which on the one hand are aimed at developing soft skills in students, in particular analytical and critical thinking, communication skills, group work and leadership, and on the other hand, contribute to the strengthening of professional competencies and practical skills. Study courses involve the use of various interactive methods, in particular, interactive discussions, case studies, group projects, problem analysis, simulations and games, debates, competitions, quizzes, etc.".* KSE considers that an important feature of the programme are many practical classes and the use of reverse learning principles. After having received and studied the educational materials students then focus on discussing the material in the class and learn to solve practical problems by interacting with the other participants.

In order to follow the students' educational achievements, the students have continuous assessments and get feedback for their intermediate results.

Summative assessment at the end of the course usually involves a written exam or a final project

presentation. Projects may be worked on individually or in groups and may focus either on research tasks.

Internships are usually assessed by means of self-reports in which students reflect on their professional development and the knowledge and skills they acquired in the course of the internship.

KSE makes use of educational technologies like online classes/remote teaching, electronic learning resources and interactive platforms. In-class teaching is still the preferred approach but is frequently amended by hybrid formats in order to best meet students' needs and ensure maximum safety.

3.6.1 Experts' Appraisal

The experts commend KSE on the large variety of teaching and assessment methods and the didactic concept for a student-centred teaching and learning in this programme which they consider well in line with the intended learning outcomes.

Although the students were not complaining during the site visit the experts got the impression that the workload induced by the numerous and continuous assessment events appears to be hard to manage. The experts recommend KSE to check whether the workload could maybe be too high and whether that could be the reason for the problematically high retention rate.

3.7 Quality Assurance

KSE has established an internal quality assurance system as a set of principles, procedures and measures which ensure the effectiveness of educational and administrative processes that directly affect the quality of study programmes and the achievement of student learning outcomes. The university's quality assurance procedures are formally regulated in a policy which was included in the self-report, along with sample questionnaires for course evaluation and other regular surveys.

The experts received an introduction to the online dashboard used by KSE for the processing, evaluation and interpretation of quality-relevant data.

The quality of teaching and learning at KSE is monitored by means of several instruments:

- Moodle-based anonymous surveys for course evaluation (end-of-class evaluation for each course, partly complemented by mid-term evaluation),
- continuous analysis of data on student success and achievement,
- annual surveys focusing on the students' overall satisfaction with their programme,
- regular surveys to monitor students' satisfaction with their learning environment, resources and infrastructure as well as services provided by KSE,
- alumni surveys,
- oral or written feedback from employers and partner organizations.

For each study programme, KSE appoints an Academic Director who bears the main responsibility for the quality assurance and enhancement of the programme. The outcomes of course evaluation and alumni surveys as well as indicators of student performance are made accessible to the Academic

Directors, who analyse the data and decide upon measures for improvement if necessary. This may include updating the curriculum, adjusting the distribution of student workload or modifying teaching and assessment methods.

The Academic Directors are also responsible for ensuring the programme's staff resources, for evaluating the performance of the teaching staff and for generating the course syllabi. Furthermore, they exchange with students in the context of oral feedback sessions and focus group meetings.

The outcomes of surveys that relate to university-wide issues beyond the programme level are analysed by the KSE leadership board and the heads of the relevant administrative departments.

Strict adherence to the principle of academic integrity is an important part of KSE's quality assurance policy, resulting in a number of measures as e.g. compulsory instruction of students on academic integrity issues or plagiarism checks. KSE has also set up a separate policy on Academic Integrity and includes explicit references to this topic in all course syllabi.

3.7.1 Experts' Appraisal

The university takes a professional and comprehensive approach to quality assurance, supported by state-of-the art monitoring tools which allow for in-depth analyses. The experts are impressed by the internal quality assurance system implemented at KSE. The regular satisfaction surveys conducted by the university address the perspectives of all relevant stakeholders and cover a wide spectrum of aspects impacting the quality of teaching and learning.

The quality system and loops seem to work well. The online talks with students and teaching staff confirmed that improvement measures are taken in response to stakeholder feedback or low student performance, leading to closed PDCA cycles. However, KSE should inform students about evaluation results on a more standardized basis. The experts consider that KSE would benefit from even clearer process patterns and structures to create evidence as a basis for its quality assurance in order to win even more process robustness.

3.8 Transparency and Public Information

KSE offers course catalogues for all its study programmes, each containing detailed course syllabi and an introductory summary of the programme profile. All course catalogues are available to the students via the Moodle platform.

The KSE website contains basic information in Ukrainian and (partly) in English on all Bachelor and Master programmes offered by the university. The profile and thematic focus of the programme is outlined in a few sentences, and a survey of the curriculum is available in Ukrainian for download.

Faculty and students can refer to the Academic Process Guidelines for all university-wide regulations regarding the educational process, student assessment, graduation and recognition issues.

3.8.1 Experts' Appraisal

The experts commend that KSE has a Learning Management System (LMS) for their staff, lecturers and students. The talks with different groups at KSE show that they are well informed and that communication in general works well.

The experts recommend that KSE should try to enhance a wider public visibility of this programme on its website by presenting the courses and their intended learning outcomes and the skill level in more detail. This would even help students for means of their mobility.

Appendix

1. Statement of the University in Response to the Expert Report

The Kyiv School of Economics (KSE) is grateful for the comprehensive evaluation and valuable recommendations provided in the accreditation report. In the following response, we briefly describe our plans to address these recommendations.

1. Rename programme for clarity (Chapters 2.2.1 and 3.3.4.)

KSE agrees with the experts' recommendation to review the name of the "Software Engineering and Business Analysis" program. KSE will carefully evaluate the program title during the next review cycle to ensure it corresponds to its content and goals. Titles that may be more appropriate will be considered, taking into account new requirements of national legislation regarding the title of study programmes.

2. Improve transparency and public visibility (Chapters 2.2.1 and 3.8.1)

KSE acknowledges the need for greater transparency in program descriptions and commits to enhancing the clarity of website materials and documentation within the following academic year. Our website will provide more detailed information on the program content, structure and intended learning outcomes, as well as additional opportunities offered by the KSE for the personal and professional development of students.

3. Revise Program Learning Outcomes (PLOs) for clarity (Chapters 2.2.1 and 3.2.1.)

KSE concurs with the experts' recommendation to review the program learning outcomes. We understand the advisability of wording them more generalized. Currently, discussions on the focus and wording of PLOs for the "Software Engineering and Business Analysis" program are already taking place among the faculty members. In the following review, we plan to adjust the PLO formulations so they are not overly detailed but based on a competency approach at the program level.

4. Extend course catalogues (Chapters 2.2.1 and 3.3.4.). Create a module handbook (2.2.1. and 3.3.4)

KSE recognizes the need to expand the course catalogue, make the program more visible through the module handbook and increase the transparency of information about the program's courses. In response to this recommendation, we would like to highlight that the process of reviewing and updating the course catalog is already underway. The course catalog will include all mandatory and elective courses of this study program. The updated course catalogue description will provide information on the total course amount in ECTS credits, weekly student workload, clearly defined prerequisites and subsequent courses, course content structured by topics, and expected learning outcomes for each course. This course catalog format will be the basis for the module handbook. Such visualization of the study program will enhance its clarity and transparency for students, providing them access to the necessary information for forming an individual learning path.

5. Minors in the Diploma Supplements for Bachelor graduates (Chapters 2.2.1 and 3.3.4)

KSE endorses this recommendation and will highlight the students' choice of minors in the diploma supplements starting the following graduation.

6. Introduce mandatory Bachelor's thesis and disputation (Chapters 2.2.1 and 3.3.4.)

KSE notes that each bachelor is due to complete a bachelor's thesis and present its results in the form of a disputation. Currently, our curriculum already incorporates a rigorous capstone project that involves independent research, a detailed written paper, and a public disputation. This approach was designed to meet national qualification standards for Software Engineering by emphasizing practical, engineering-oriented projects. However, we recognize the importance of enhancing the academic rigor and ensuring our graduates are fully prepared for postgraduate studies and broader research challenges.

In light of your recommendations, we are planning to further strengthen the scientific component of our programme by introducing scientific capstones that more closely resemble a traditional Bachelor's thesis, complete with a formal disputation. This planned enhancement will allow us to maintain our strong engineering foundation while aligning more closely with European higher education standards and demonstrating our commitment to academic excellence.

7. Replace early internships with project work (Chapters 2.2.1 and 3.3.4.)

KSE agrees with the experts' recommendation to review the start of internships for students in this study program. In this context, a review of the curriculum structure is also planned. Specifically, the internship opportunity in the 2nd year will be provided to students only at their choice. Beginning in the 3rd year of study, an internship will be included in the program as a compulsory course.

8. Standardize informing students about evaluation results (Chapters 2.2.1 and 3.7.1.)

KSE understands the importance of transparency and consistency in quality assurance processes. It increases student trust and continuously contributes to improving teaching and learning quality. Therefore, KSE will ensure that students receive information about the results of course evaluations to demonstrate how their feedback affects the improvement of educational content and the educational process.

9. Develop a strategy for attracting more practitioners as lecturers into the teaching process (Chapters 2.2.1 and 3.4.1.)

KSE recognizes the need to involve practitioners from the software and business sectors as lecturers and will maximize opportunities for cooperation with industry practitioners in the educational process of this study program.

10. Monitor student workload from continuous assessments (Chapters 2.2.1 and 3.6.1.)

KSE appreciates the experts' attention to the issue of student workload. We agree with the importance of a balanced approach that prevents student overload. However, we want to explain our current approach to determining the study load. Currently, in the Ukrainian education system, due to external

factors of influence (online learning has prevailed for 5 years), there is a tendency for students to lose their ability to engage in a learning process. In these conditions, we also deal with a multi-level student cohort, a significant part of which demonstrates insufficient independent learning and self-organization ability. Therefore, in the first years of study in the program, there is an increased amount of relatively small assignments to develop student involvement in the educational process. In response to the experts' recommendation, KSE will continue to monitor and evaluate the possibility of ensuring an optimal balance of student workload.

11. Ensure structured quality assurance processes (Chapters 2.2.1 and 3.7.1.)

KSE is grateful to the experts both for their high evaluation of its quality assurance system and for their recommendations for its continued enhancement. We plan to publish annual structured reports that will provide a summary of main QA insights, highlight key program changes, explain their underlying rationale, and outline the anticipated outcomes.

12. Expand international university partnerships (Chapters 2.2.1 and 3.3.4)

KSE is constantly searching for and expanding the circle of international partner universities. Therefore, KSE entirely agrees with the experts' recommendation and will facilitate the expansion of the circle of partner universities for this study program.

13. Maintain small learning groups despite growth (Chapters 2.2.1 and 3.5.4.)

KSE organizes students into small groups, as this approach ensures that each student receives adequate attention from instructors and facilitates the elimination of educational gaps. Therefore, KSE will continue to implement this practice.

14. More generic “frame modules” (Chapters 2.2.1 and 3.3.4)

In response to experts' suggestions, we are re-organizing our approximately 30 mandatory courses into larger, thematic blocks that align with ACM and IEEE recommendations. This approach will allow us to update and adjust content more fluidly without overhauling the entire curriculum structure.

We will also make learning outcomes for each block readily accessible to students, providing clear guidance on the competencies they will develop. By shifting to these adaptable frame modules, we aim to preserve the rigor and consistency of our programme while ensuring it remains responsive to evolving educational and professional standards.

Best regards,

Tymofii Brik, PhD

Rector of the Kyiv School of Economics