REVIEW REPORT
on the Educational and Professional Programme
"Modeling of Information Processes in Computer Systems"
of the Second (Master's) Level of Higher Education
(Master's Degree, EQF Level 7)
in Specialty F3 "Computer Science",
Field of Study F "Information Technologies",
at Borys Grinchenko Kyiv Metropolitan University

1. Relevance of the Programme and International Orientation

The reviewed Master's program aims to train highly qualified specialists in "Information Technologies" who can solve complex problems and conduct independent research in computer science. Its focus on computer modeling, information systems, and data analysis aligns with ongoing digital transformation and the growing importance of information technologies across professional fields. The curriculum structure aligns with the Bologna Process and European Higher Education Area (EHEA). This provides a high potential for international recognition of the graduates' qualifications.

2. Structure, Scope and Content of the Curriculum

The program has a well-defined structure and a balanced academic workload. The curriculum consists of 90 ECTS credits over 1 year and 4 months. It includes mandatory courses, elective courses, internships, and a master's thesis. This combination supports academic learning and practical skill development.

Allocating 23 ECTS credits to electives allows students to pursue individual academic interests and enhance their core professional competencies.

Key strengths of the curriculum include courses such as Analysis and Processing of Big Data, Ensuring the Reliability and Quality of Information Systems Software, and Computer Systems of Urban Monitoring. These courses effectively connect theoretical foundations with the practical development and application of modern information systems.

The program further incorporates courses in IT Project Management and Designing Socio-Technical Systems, which address the organizational and human dimensions of technological projects.

3. Practical Training, Assessment and Academic Integrity

One of the program's main advantages is its practical training component, which includes industrial and pre-diploma internships. This gives students valuable opportunities to put their knowledge into practice, gain up-to-date professional skills, and prepare for real-world situations in development and research.

The final assessment is a public defense of the master's thesis, which gives students the opportunity to show they can investigate a complex problem in computer science and clearly present their methods, findings, and conclusions.

The program requires plagiarism checks and that the master's thesis be published in the university repository. These measures promote academic integrity and transparency as well as the development of responsible research practices.

4. Competencies and Learning Outcomes

The stated competencies and learning outcomes cover important areas of advanced computer science, including information modelling, data analysis, software development, system architecture, quality assurance and IT project management.

The programme also emphasises critical thinking, independent learning, communication and teamwork. These skills complement technical expertise and support graduates' ability to work in professional environments and continue their academic development.

The combination of the stated learning outcomes and course content provides a sound foundation for professional roles involving computer systems analysis, information systems design and software development.

5. Resources and Research Potential

The programme documentation outlines a supportive teaching and research environment combining academic staff expertise, practitioner involvement, and specialised technical resources. The participation of academic staff and practitioners creates a valuable link between theoretical knowledge and professional applications.

The facilities listed include laboratories for embedded systems, 3D modelling and computer networks, as well as a centre for modelling and programming. These resources suit the programme's practical focus and offer opportunities for students to develop and apply their technical skills.

The digital learning environment, including Moodle and access to electronic scientific databases, supports more independent learning and research and creates a strong foundation for the programme's academic and research purposes.

6. Discussion and Recommendations

The program provides a great foundation for advanced study and professional development in computer science. For future improvements, I would suggest the following:

1. Expand opportunities to use English in professional subjects, including selected lectures, project presentations, and discussions, conducted by guest lecturers from international partner universities.
2. Encourage students to participate more in international credit mobility programs, such as Erasmus+, and projects with partner institutions. These opportunities would improve students' professional experience and expand their intercultural communication skills.

These recommendations build on the program's existing international orientation and are intended to enrich the learning experience and support its continued development.

Conclusion

Based on the program description and curriculum provided, the Educational and Professional Program "Modeling of Information Processes in Computer Systems" offers a coherent and relevant combination of advanced theoretical knowledge, practical training and independent research at the Master's level.

Its strengths include integrating core computing subjects with applied areas such as data analysis and urban monitoring, offering practical experience through internships, and emphasizing independent investigation through the master's thesis. Together, these elements provide a sound foundation for graduates' professional development and further academic study.

The program is highly recommended for approval and implementation into the educational process.

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