ADVANCED INFORMATION SYSTEMS AND TECHNOLOGIES

1. Mission of the study program

The fundamental mission of the master's degree program in *Advanced Information Systems and Technologies* is the continuation of the specialized training of bachelor's degree graduates, based on the correspondence between learning/research outcomes and academic qualification.

The study program aims to train highly qualified specialists, to carry out scientific research activities and to continuously prepare graduates interested in concepts and solutions concerning the improvement and practical application of specific elements in the field of Informatics.

2. Objectives of the study program

- To familiarize students with modern models, methods and techniques applicable to the development of complex IT projects using advanced computing technologies and modern development platforms.
- To develop students' skills and attraction for scientific research.
- To promote a free, open and transparent exchange of ideas, knowledge and experience.
- To develop the ability of students to use modern tools for the analysis, design and implementation of secure distributed applications that exploit databases, possess machine learning features, provide assistance and decision support.
- To provide career placement conditions in the job market in any type of organization.
- To ensure connection with faculty values after completion of faculty training.

3. Study program premises and deliverables

The master's program in *Advanced Information Systems and Technologies* of the master's degree program in Computer Science belongs to the professional master's programs, being mainly oriented towards the training of graduates interested in concepts and solutions for the improvement and practical application of specific elements of computer science. The study program ensures the formation of cognitive, professional (instrumental) and attitudinal (interpersonal) competences in accordance with national and international standards.

The competences developed by the graduates of this study program qualify them for the following occupations, according to the Diploma Supplement and RNCIS registration: 2512.2 Software Analyst; 2512.4 Software Developer; 2512.5 User Interface Developer; 2521.1 Database Designer; 2513.3 User Interface Designer.

4. Teaching activity

Courses	324 hours
Seminars	-
Laboratories	432 hours
Projects	14 hours
Practical work	75 hours

5. Student assessment

Evaluation type	Number of assessments/years of study			
	Year 1	**Year 2**	**TOTAL**	**%**
Exams	9	9	18	90
Colloquiums	1	1	2	10
Other forms	-	-	-	-

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6. How to apply (access conditions). Conditions for enrolment in the following year of study. Conditions for passing one year of study.

Admission to the *Advanced Information Systems and Technologies* master's degree program is based exclusively on the candidate's academic skills and no discriminatory criteria are applied. Enrolment in the admission competition is based solely on a bachelor's degree or other equivalent academic qualifications. Admission is based on an oral test assessed pass/fail and the classification of candidates admitted to the oral test is based entirely on the mark obtained in the bachelor's degree examination. The admission regulations present the admission criteria as well as the tie-breaking rules for candidates with the same mark in the bachelor's degree examination.

Enrolment for the following year is conditional on meeting the promotion conditions set out in the Regulation on the professional activity of students.

7. Equal opportunities

The recruitment, admission, transfer and mobility of students to the *Advanced Information Systems and Technologies* program are carried out transparently in accordance with the legislation in force and the procedures approved by the ULBS Senate. Admission is based exclusively on the candidate's academic skills and does not apply any discriminatory criteria.

8. Program sustainability

From the perspective of environmental sustainability, the *Advanced Information Systems and Technologies* study program promotes an efficient use of resources through the following measures: configuring the study groups to minimize energy consumption related to the conduct of teaching activities but ensuring efficient professional training; encouraging the use of electronic format for homework, reports or projects; using electronic support materials.

Also, the waste resulting from applied activities is managed according to the rules in force and the waste collection system adopted by ULBS.

There is a great need for computer specialists today. With the rapid technological advancement and increasing dependence on technology in various fields, the demand for computer professionals has increased significantly.

Professional training through the *Advanced Information Systems and Technologies* master's program responds to the needs of society by conferring sustainability to social and economic development.

9. Making training flexible. Conditions.

The flexibility of the study program is ensured through optional and elective courses.

There are 6 optional courses, grouped in pairs into 3 packages, from which students will choose at least one. The optional courses are offered starting from the second semester. The large number of optional courses adds flexibility to the study program and allows students to acquire competences for various professional pathways.

10. Methodology for assessing competences at the end of studies

The conditions for taking the graduation examination are set out in the applicable Methodology for the Completion of Studies, approved by the University Senate. According to this methodology, the presentation to the graduation examination is conditional to the passing of all the courses foreseen in the curriculum.

GRADUATION EXAM
1. *Dissertation writing period: semesters 3-4.*
2. *Registration period for the graduation exam - during June.*
3. *Period for taking the dissertation examination: week 40 of year II*
4. *Number of credits for the dissertation examination: 10 credits.*

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11. Preparation for a teaching post by admission exam

In order to fill a teaching position (secondary, high school or higher education in the undergraduate field), the graduate must have a Certificate of Graduation from a study program for psycho-pedagogical training (which allows the exercise of the teaching profession) coordinated by the Department for the Preparation of Teachers at ULBS (or at another university).

The psycho-pedagogical training for obtaining the Graduation Certificate is done following the completion of two modules:

(1) Module I (30 credits) - which is carried out additionally, in parallel with the undergraduate studies or as a postgraduate program, at the end of which the Graduation Certificate (Module I) is obtained.

(2) Module II (30 credits) - to be taken after the bachelor's degree, in parallel with the master's degree or postgraduate studies. It is finalized with a Certificate of Completion (in-depth level).

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