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"Licence, Master professionnels pour le développement, l'administration, la gestion, la protection des systèmes et réseaux informatiques dans les entreprises en Moldavie, au Kazakhstan, au Vietnam »

Accreditation file

Grade:	Bachelor	General Field of Study	061 Information and communication technologies
Mention:	of Information and communication technologies	Professional Training Field	0613 Software and applications development and analysis

University:	Alecu Russo Balti State University	Department	Mathematics and Computer Science
Date de conception:	February 2018		

Authors:	Plohotniuc Eugeniu, Negara Corina
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I. Context of the degree

General context. Ensuring the protection of information in information systems and databases, taking into account the active development of information technologies, the transition to multi-service infocommunication networks, a universal transition to distributed and cloud networks and systems, is a priority today. Graduates of the program receive comprehensive training in the field of database administration and information security, therefore they are in demand in the labor market. Students practice at the department and in various organizations that use technical means of processing, storing and transmitting confidential information: in government, banks, the media, telecommunications and communications companies, and software and database companies.

The mission of the study programme *Informatics* is to train highly qualified specialists with fundamental knowledge in theoretical computer science foundations, programming foundations, diverse advanced programming techniques and with abilities to apply the knowledge to solve problems from various domains.

The purpose of the study programme *Informatics* is to train specialists who can work in different types of organizations and scientific centres, covering the needs concerning different aspects of computer science technologies.

Awarded title is *Bachelor of Information and communication technologies*. Upon completion of the Bachelor's Degree Program, Cycle II, a Bachelor Diploma is Awarded, equivalent to 180 ECTS credits.

The admission to the faculty is based on the contest of diplomas of baccalaureate or an equivalent document of studies; Bachelor Diploma. The faculty assures training of the specialists according to the provisions of the Bologna Process with the application of the Transferable Academic Credits System, which ensures the recognition of international study papers and the academic mobility of students.

The qualification (*Bachelor of Information and communication technologies*) is offered to graduate students who have completed the program and have passed the assessment examinations (including the Bachelor's degree exams) at least with the grade "5". Upon completion of the training program, the graduate holds the following professional and transversal competencies:

- PC1. Operation with the scientific foundations of computer science and mathematics and use of these notions in professional communication.
- PC2. Development of models to describe real phenomena and processes.
- PC3. Design, elaboration and analysis of algorithms for problem solving.
- PC4. Programming, development and maintenance of computer applications in high level languages.
- PC5. Integration of information technologies in different areas of the national economy.
- PC6. Data processing, analysis and interpretation.
- TC1. Applying the rules of rigorous and efficient work, manifesting a responsible attitude towards the professional field, for the optimal and creative exploitation of its potential in specific situations, respecting the principles and norms of professional ethics.
- TC2. Identification of roles and responsibilities in a multi-specialized team, Decision making and assignment of tasks, with the application of effective networking and teamwork techniques.
- TC3. Identify the opportunities for continuous training and the efficient use of resources and learning techniques for their own development.

The graduates of the study programme Informatics, Specialization path Information Security can work as: responsible for the security of information systems, data protection officer.

The graduates of the programme have access to the doctoral schools and programmes.

II. General description of the curriculum

II.1. Description of the training outcomes:

Training outcomes	Description
Disciplinary knowledge	<ul style="list-style-type: none">• Comprehensive and complete vision of the information systems of the company, similar organizations.• Technical knowledge of system and network architecture concepts and techniques, operating procedures and data exchange standards employed, computer security procedures, operating systems and associated programming languages, databases.• Database administration and methods of database security.• Information security policies, procedures and regulations. Intrusion Prevention System (IPS) tools and applications.
Specific skills	<ul style="list-style-type: none">• PC1. Operation with the scientific foundations of computer science and mathematics and use of these notions in professional communication.• PC2. Development of models to describe real phenomena and processes.• PC3. Design, elaboration and analysis of algorithms for problem solving.• PC4. Programming, development and maintenance of computer applications in high level languages.• PC5. Integration of information technologies in different areas of the national economy.• PC6. Data processing, analysis and interpretation.
Transversal competences	<ul style="list-style-type: none">• TC1. Applying the rules of rigorous and efficient work, manifesting a responsible attitude towards the professional field, for the optimal and creative exploitation of its potential in specific situations, respecting the principles and norms of professional ethics.• TC2. Identification of roles and responsibilities in a multi-specialized team, Decision making and assignment of tasks, with the application of effective networking and teamwork techniques.• TC3. Identify the opportunities for continuous training and the efficient use of resources and learning techniques for their own development.

II.2. Decomposition of curricula in semesters

Year	Semester	Title of semestre	EU - Educational Units/modules
Year 1	S1	S1	EU1. Mathematics I EU2. Basics of programming I EU3. Discrete structures EU4. Designing WEB pages EU5. Generic applications EU6. Foreign Language I EU7. Physical education I
	S2	S2	EU8. Mathematics II EU9. Basics of programming II EU10. Information technology EU11. Structured programming language EU12. Principles of market economy OR Project management EU13. Foreign Language II EU14. Physical education II
Year 2	S3	S3	EU15. Computer architecture and organization EU16. Operating systems and computer security EU17. Object-oriented programming I EU18. Functional programming OR Logical programming EU19. Multimedia technologies OR Graphic editors OR Creating and viewing 3D objects OR Computer design EU20. Philosophy and philosophical problems of the field OR Philosophy and history of science
	S4	S4	EU21. Information management EU22. Web Programming I EU23. Object-oriented programming II OR Computer animation EU24. Security of computer systems EU25. Technical means of protection of information EU26. European Construction OR European civilization EU27. Annual thesis
Year 3	S5	S5	EU28. Cryptography EU29. Web Programming II EU30. Architecture, administration and management network security EU31. Professional practice
	S6	S6	EU32. Intelligent systems OR Programming Engineering OR Network programming EU33. Practice DBMS OR Human-computer interaction EU34. Computational Graphics OR Programming applications on mobile devices EU35. Ethics and professional culture EU36. Research practice EU37. Thesis

II.3 Description of Educational Units (EU)

EU Semester 1 (30 ECTS)

EU - Educational Units/Modules	ECTS	Course	Seminar	Laboratory	Individual work	Total
EU1. Mathematics I	5	30	45		75	150
EU2. Basics of programming I	6	44		46	90	180
EU3. Discrete structures	5	44	31		75	150
EU4. Designing WEB pages	5	30		45	75	150
EU5. Generic applications	4	14		61	75	150
EU6. Foreign Language I	5			60	60	120
EU7. Physical education I			30		30	60

EU Semester 2 (30 ECTS)

EU - Educational Units/Modules	ECTS	Course	Seminar	Laboratory	Individual work	Total
EU8. Mathematics II	5	30	45		75	150
EU9. Basics of programming II	6	44		46	90	180
EU10. Information technology	5	30	15	30	75	150
EU11. Structured programming language	6	30		60	90	180
EU12. Principles of market economy OR Project management	4	30	30		60	120
EU13. Foreign Language II	4			60	60	120
EU14. Physical education II			30		30	60

EU Semester 3 (30 ECTS)

EU - Educational Units/Modules	ECTS	Course	Seminar	Laboratory	Individual work	Total
EU15. Computer architecture and organization	6	44		46	90	180
EU16. Operating systems and computer security	4	30		30	60	120
EU17. Object-oriented programming I	6	30		60	90	180
EU18. Functional programming OR Logical programming	5	30		45	75	150
EU19. Multimedia technologies OR Graphic editors OR Creating and viewing 3D objects OR Computer design	5	30		45	75	150
EU20. Philosophy and philosophical problems	4	30	30		60	120

of the field OR Philosophy and history of science						
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EU Semester 4 (30 ECTS)

EU - Educational Units/Modules	ECTS	Course	Seminar	Laboratory	Individual work	Total
EU21. Information management	6	44		46	90	180
EU22. Web Programming I	5	30		45	75	150
EU23. Object-oriented programming II OR Computer animation	5	30		45	75	150
EU24. Security of computer systems	4	30		30	60	120
EU25. Technical means of protection of information	4	30		30	60	120
EU26. European Construction OR European civilization	4	30	30		60	120
EU27. Annual thesis	2				60	60

EU Semester 5 (30 ECTS)

EU - Educational Units/Modules	ECTS	Course	Seminar	Laboratory	Individual work	Total
EU28. Cryptography	5	30		45	75	150
EU29. Web Programming II	6	30		60	90	180
EU30. Architecture, administration and management network security	5	30		45	75	150
EU31. Professional practice	14				210	420

EU Semester 6 (30 ECTS)

EU - Educational Units/Modules	ECTS	Course	Seminar	Laboratory	Individual work	Total
EU32. Intelligent systems OR Programming Engineering OR Network programming	5	30		45	75	150
EU33. Practice DBMS OR Human-computer interaction	5	30		45	75	150
EU34. Computational Graphics OR Programming applications on mobile devices	4	30		30	60	120

EU35. Ethics and professional culture	2	14	16		30	60
EU36. Research practice	8				120	240
EU37. Thesis	6				90	180

II.3. Correlation matrix finality of the study programme with the course units/modules

Module/course	Number of ECTS credits	Finalties of study								
		C1	C2	C3	C4	C5	C6	TC1	TC2	TC3
EU1. Mathematics I	5	+	+	+	+			+		
EU2. Basics of programming I	6	+	+	+	+			+	+	+
EU3. Discrete structures	5	+	+	+	+			+		+
EU4. Designing WEB pages	5	+	+			+	+		+	
EU5. Generic applications	4		+	+		+	+		+	
EU6. Foreign Language I	5					+		+	+	+
EU8. Mathematics II	5	+	+	+	+			+		
EU9. Basics of programming II	6	+				+		+	+	+
EU10. Information technology	5	+	+	+	+			+	+	
EU11. Structured programming language	6		+	+	+			+	+	
EU12. Principles of market economy OR Project management	4		+	+				+	+	
EU13. Foreign Language II	4					+		+	+	+
EU15. Computer architecture and organization	6		+	+		+		+		+
EU16. Operating systems and computer security	4	+	+	+	+		+	+		
EU17. Object-oriented programming I	6	+	+	+	+			+		+
EU18. Functional programming OR Logical programming	5	+	+	+	+			+		+
EU19. Multimedia technologies OR Graphic editors OR Creating and viewing 3D objects OR Computer design	5		+	+	+	+		+		+
EU20. Philosophy and philosophical problems of the field OR Philosophy and history of science	4					+	+	+	+	

EU21. Information management	6	+	+	+	+		+	+	+	+
EU22. Web Programming I	5		+	+	+		+	+	+	
EU23. Object-oriented programming II OR Computer animation	5		+	+	+	+		+		+
EU24. Security of computer systems	4		+	+	+			+	+	
EU25. Technical means of protection of information	4		+	+		+	+		+	+
EU26. European Construction OR European civilization	4						+	+	+	+
EU28. Cryptography	5	+	+	+	+	+	+	+		
EU29. Web Programming II	6	+	+	+	+		+	+		
EU30. Architecture, administration and management network security	5			+	+			+	+	
EU32. Intelligent systems OR Programming Engineering OR Network programming	5		+	+	+	+		+		
EU33. Practice DBMS OR Human-computer interaction	5		+	+	+	+		+	+	
EU34. Computational Graphics OR Programming applications on mobile devices	4		+	+	+	+		+	+	
EU35. Ethics and professional culture	2						+		+	+

II.4. The final dissertation

The final dissertation project is a qualification project, which should deal with research-development-design aspects on a current topic in the field of computer systems. The student, in developing and supporting the thesis, must demonstrate that he has the necessary knowledge and skills and can apply them to solving specific professional problems.

The goals of a thesis vary and depending on the topic and field of research. The main objectives of each thesis are specified in the task of developing the thesis. The thesis requires the research of some current aspects, an original, unpublished and significant contribution to the field of cybersecurity, in any of its possible domains of application (industry, manufacturing, administration, public services, social services, baseline and fundamental technologies etc.). The thesis, is developed in line with the objectives formulated, the results obtained in the study should be sufficient to evaluate the appropriate level of theoretical and practical training of students in the field of computer systems security. For each student, the department appoints a tutor (responsible scientist) for the thesis. The scientific tutor will provide the student with scientific and methodological assistance in the development of the thesis. It will

contribute to the student's creative work in the search for project solutions, supporting the student's autonomy.

The theses are defended before the State Qualification Commission, formed by the USARB Rector's Order, based on the approval of the Ministry of Education, Culture and Research. The sessions of the Commission are held according to the approved timetable. The student is present the results in about 10-20 minutes. Following his presentation, ten minutes is devoted to questions and answers with the Commission. The Commission appreciates the presentation/ speech of the thesis, taking into account the actuality of the theme, the theoretical and practical importance of the results, the formating of the thesis, the answers to questions, appreciation of the scientific tutor, if exists, certifications of implementing of the results etc. The deliberation is done outside the presence of the student. In order to allow a possible harmonization of the juries, the notes are not communicated to him at the end of the defense.

The thesis is a tutored project and is the main objective of the Research Practice (semester 6 – 8 ECTS) and the student obtain 6 ECTS for its completion.

II.5. Internships

a) *The student has to participate in one internship:*

No.	Internships	Sem.	Number of weeks	Number of hours	Calendar	ECTS
1	Professional practice	V	6	420	Octomber-November	14
2	Research practice	VI	8	240	February - March	8
Total				660		22

b) *Types of host companies:* banking and financial institutions, production companies, IT companies, etc.
Jobs to occupy: Responsible for the Security of Information Systems, Data Protection Officer.

c) *Obligations of the coordinator from the University Department:*

- Analyzes and identifies the individual tasks of the trainee student;
- Monitors the practice in accordance with the plan calendar and student-trainee responsibilities at the base of practice;
- Provides consultations to the trainee student during practice;
- Monitors the basics of compliance practice the rules of practice;
- Analyzes and evaluates the practice assessment documentation conducted by the trainee student;
- Evaluates the performance of the trainee student within the base unit practice;
- Participates in the summit conference on the evaluation of the internship practice.

Obligations of the coordinator from the base unit of practice (company):

- Participates in the developing of the plan of practice;
- Informs the trainee student about the regulations at base of practice;

- Ensures the trainee student optimal working and development conditions;
- Orientation of student activity during practice;
- Participates in the development of practice assessment documentation by student trainee;
- Write for each trainee student the practice characteristic;
- Analyzes and proposes ways to improve the internship/practice.

Obligations of student:

- Fully fulfills the tasks provided in the practice program;
- Complies with the existing internal rules of procedure practice where he was assigned;
- Records the work done in the practice registers;
- Prepares and report to coordinators of the practice in line with the requirements and supports the report on practice within the deadline set by the profile department.

Control over the practice is done by the coordinator practice from the department of Mathematics and Computer Sciences. The assessment of the professional practice is carried out on the basis of the portfolio, that contained: practice agenda, the characteristic from the company/practice base, description and analysis of the company's infrastructure, description and analysis of company's informational system, analysis of information security, presentation of the portfolio, as well as presentation at the totalization conference of practice. The coordinator from the base unit of practice checks out how performs the program of practice, notes in the Practice Agenda information about practice in accordance with the compartments.

Criteria for the evaluation of the practice results by the coordinator of the part of the company:

1. Fulfilling the tasks set out in the practice program;
2. Frequency, responsibility and punctuality of trainee student assigned to practice;
3. Compliance with the existing internal regulations of the company.

Criteria for the evaluation of the practice results by the coordinator of the department:

1. The quality of the reporting of the reporting documentation relating to practicing the internship;
2. Degree of achievement and quality of final product development;
3. Presentation at the totalization conference of practice;
4. Competence to answer additional questions in the studied field.

The totalization conference of practice takes place at the Department of Mathematics and Computer Sciences, in the presence of a commission of 2-3 teachers, including the coordinator from the department. The trainee students present the results of the practice within the deadline set by the department.

II.6. International internship

The international internship is not mandatory.

III Knowledge control procedures

The assessment of student knowledge on each discipline of the curriculum (Study plan) consists of the assessment of the student's current assessment and the final assessment (examination). The student's current assessment is an average for individual works and the assessments during the course. The number of assessments during the course is more or equal with the ECTS of course. These two notes (current assessment and final assessment) are represented by integers from 10 to 1. The student, whose individual grades are less than "5" is not admitted to the final assessment. The final mark is calculated from the current assessment that represents 60% of the final mark. The final exam mark represents 40% of the final mark. The student gets the ECTS only if the final mark is greater or equal to 5.

The student is promoted to the next year of study only in he obtained more than 40 ECTS from the mandatory 60 ECTS per year.

IV Composition of pedagogical team

a) Responsible for the program

Plohotniuc Eugeniu, chef of the Department of Mathematics and Computer Science, Alecu Russo Balti State University

b) Responsibles for teaching units

EU	Responsible	University
EU1. Mathematics I	Ciobanu I., phd., full prof.	USARB
EU2. Basics of programming I	Moglan D., phd., assoc. prof.	USARB
EU5. Generic applications	Gorea A., lector univ.	USARB
EU6. Foreign Language I	Gorbani S., lector univ.	USARB
EU8. Mathematics II	Ciobanu I., phd., full prof.	USARB
EU9. Basics of programming II	Moglan D., phd., assoc. prof.	USARB
EU10. Information technology	Skutnițki O., lector univ.	USARB
EU11. Structured programming language	Tîcău V., lector univ.	USARB
EU12. Principles of market economy OR Project management	Branașco N., phd., assoc. prof.	USARB
EU13. Foreign Language II	Varzari E., lector univ.	USARB
EU15. Computer architecture and organization	Plohotniuc E., phd., assoc. prof.	USARB
EU16. Operating systems and computer security	Cabac E., phd., assoc. prof.	USARB
EU17. Object-oriented programming I	Cabac E., phd., assoc. prof.	USARB
EU18. Functional programming OR Logical programming	Petic M., phd., assoc. prof.	USARB
EU19. Multimedia technologies OR Graphic editors OR Creating and viewing 3D objects OR Computer design	Stoian D., lector univ.	USARB
EU20. Philosophy and philosophical problems of the field OR Philosophy and history of science	Jacota-Dragan O., asis. univ.	USARB
EU21. Information management	Negara C., phd., assoc. prof.	USARB
EU23. Object-oriented programming II OR Computer animation	Petic M., phd., assoc. prof.	USARB
EU24. Security of computer systems	Cabac E., phd., assoc. prof.	USARB
EU25. Technical means of protection of information	Plohotniuc E., phd., assoc. prof.	USARB
EU26. European Construction OR European civilization	Pădureac L., phd., assoc. prof.	USARB
EU28. Cryptography	Gorea A., lector univ.	USARB
EU30. Architecture, administration and management network security	Galiț V., lector univ.	USARB
EU32. Intelligent systems OR Programming Engineering OR Network programming	Galiț V., lector univ.	USARB
EU33. Practice DBMS OR Human-computer interaction	Negara C., phd., assoc. prof.	USARB
EU34. Computational Graphics OR Programming	Gorea A., lector univ.	USARB

applications on mobile devices		
EU35. Ethics and professional culture	Popov L., lector univ.	USARB

d)
Profesio

nists participating in the teaching processus

Name Surname	Enterprise	Disciplines taught	Number of hours	UE
Dumbraveanu Radu	AmSoft	Discrete structures	75	Discrete structures
Chilat Sergiu	YMK-IT Management	Web Programming	75	Web Programming I
		Web Programming	90	Web Programming II
		Web Programming	75	Designing WEB pages

V Professional Insertion

Professional guidance for USARB students is provided by the Center for Guidelines in Career and Relationships with the Labor Market. This Guidance Center has a database of potential employers. USARB has signed agreements with IT Companies – who are involved in different activities carried out jointly with the university. Periodically at the university are organized IT Forum were IT Companies present the offers.

VI The diploma supplement

REPUBLICA MOLDOVA REPUBLIC OF MOLDOVA



MINISTERUL EDUCAȚIEI, CULTURII ȘI
CERCETĂRII
*MINISTRY OF EDUCATION, CULTURE AND
RESEARCH*



UNIVERSITATEA DE STAT „ALECU RUSSO”
DIN BĂLȚI

1. ALECU RUSSO BALTI STATE UNIVERSITY

SUPLIMENT LA DIPLOMĂ

DIPLOMA SUPPLEMENT

eliberat pentru Diploma/ seria
is issued for Diploma/ series

nr.
no.

numărul de înregistrare
registration number

Acet Supliment la Diplomă urmează modelul elaborat de către Comisia Europeană, Consiliul Europei și UNESCO/CEPES. Scopul Suplimentului este de a furniza suficiente date personale despre titular, precum și de a spori gradul de transparență internațională și recunoaștere academică și profesională a calificărilor. Suplimentul are menirea de a oferi o descriere a nivelului, contextului, conținutului și statutului studiilor următe și finalizate cu succes de către deținătorul acestuia. Suplimentul la Diplomă nu conține comentarii și judecăți de valoare, declarații privind gradul de echivalență cu alte Suplimente la Diplomă sau sugestii privind recunoașterea lui. Toate cele opt compartimente vor fi completate cu informația corespunzătoare. În cazul în care la un comportament nu se furnizează informații, se va explica motivul.

This Diploma Supplement sample was developed by the European Commission, the Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international ‘transparency’ and fair academic and professional recognition of qualifications. It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Where information is not provided, an explanation should give the reason why.

1. DATE DE IDENTIFICARE A TITULARULUI DIPLOMEI *INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION*

1.1. Nume

Last name(s)

1.2. Prenume

First name(s)

1.3. Data nașterii (ziua, luna, anul)

1.4. Codul personal al titularului Diplomei

<p><i>Date of birth (day/month/year)</i></p> <div style="border: 1px solid black; height: 40px;"></div>	<p><i>Personal code of the Diploma holder</i></p> <div style="border: 1px solid black; height: 40px;"></div>
<p>2. INFORMAȚII PRIVIND CALIFICAREA INFORMATION IDENTIFYING THE QUALIFICATION</p>	
<p>2.1. Calificarea / titlul conferit <i>Qualification / Degree conferred</i></p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"> <p>Diplomă de studii superioare de licență <i>Bachelor's degree</i></p> </div>	<p>2.2. Domeniul general de studiu, domeniul de formare profesională și programul de studii <i>General field of study, professional training field and the study programme</i></p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"></div>
<p>2.3. Denumirea și statutul instituției care acordă calificarea <i>Name and status of awarding institution (in original language)</i></p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"> <p>Universitatea de Stat „Alecu Russo” din Bălți Instituție de învățământ superior, fondată ca Institut Învățătoresc prin H.G. 470 din 14 martie 1945, reorganizat în Institutul Pedagogic din Bălți prin Hotărârea Consiliului de Miniștri 846 din 13 august 1953, reorganizat în Universitatea de Stat „Alecu Russo” din Bălți prin H.G. 330 din 21 mai 1992. Acreditată, certificat nr. 000007, Hotărârea Colegiului Ministerului Educației și Tineretului nr. 321 din 27 martie 2008.</p> <p><i>Alecu Russo Balti State University</i> <i>Institution higher education, founded as a Teacher Training Institute by Government Decision no. 470 (March 14, 1945), reorganized into Balti Pedagogical Institute by Decision no. 846 of the Council of Ministers (August 13, 1953), reorganized into Alecu Russo Balti State University by Government decision no.330 (May 21, 1992). The University was accredited by Decision no. 321 of the Ministry of Education and Youth (March 27, 2008), certificate no. 000007.</i></p> </div>	
<p>2.4. Denumirea și statutul instituției (dacă diferă de 2.3) care administrează studiile <i>Name and status of the institution (if different from 2.3) administering studies (in original languages)</i></p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"> <p>vezi 2.3 mai sus <i>see 2.3 above</i></p> </div>	
<p>2.5. Limba (limbile) de studii <i>Language(s) of instruction</i></p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"></div>	
<p>3. INFORMAȚII PRIVIND DURATA ȘI NIVELUL DE CALIFICARE INFORMATION ON THE LEVEL AND DURATION OF THE QUALIFICATION</p>	
<p>3.1. Nivelul calificării <i>Level of qualification</i></p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"> <p>Ciclul I – studii superioare de licență, nivelul 6 CNCRM / QF-EHEA / nivelul 6 EQF <i>Cycle I – Bachelor's degree, level 6 NQFRM / QF-EHEA / level 6 EQF</i></p> </div>	
<p>3.2. Durata oficială a programului de studii: în credite de studii transferabile ECTS și ani de studii <i>Official length of programme in ECTS credits and years</i></p> <div style="border: 1px solid black; padding: 10px; min-height: 100px;"></div>	

- 3.3. Condiții de acces
Access requirements(s)

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4. INFORMAȚII PRIVIND PROGRAMUL DE STUDII ȘI REZULTATELE OBȚINUTE

INFORMATION ON THE PROGRAMME COMPLETED AND THE RESULTS OBTAINED

- 4.1. Forma de învățământ
Mode of study

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- 4.2. Rezultatele învățării / finalitățile de studiu

Programme learning outcomes

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- 4.3. Detalii privind programul de studii (unități de curs / discipline / module), numărul total de ore, calificativele / notele, creditele obținute (conform *Planului de învățământ și registrului de evidență a reușitei studenților universității*)
Programme details (course units, subjects, modules), total number of hours, grades, credits, obtained (according to the curriculum)

Denumirea unității de curs / disciplinei / modulului <i>Name of course / subject / module</i>	Numărul total de ore <i>Total number of hours</i>	Nota <i>Grade</i>	Nota ECTS <i>ECTS Grade</i>	Nr. de credite ECTS <i>No. of ECTS credits</i>
Anul 1 de studii / 1st year of study				
<u>Media de promovare a anului I de studii</u> Grade point average for the first year of study				
Anul 2 de studii / 2nd year of study				
<u>Media de promovare a anului II de studii</u> Grade point average for the second year of study				
Anul 3 de studii / 3rd year of study				
<u>Media de promovare a anului III de studii</u> Grade point average for the third year of study				
*Media de promovare a ultimului an de studii se calculează fără a ține cont de nota de la examenul de licență <i>*The grade point average of the last year of study is calculated without considering the grade from the final examination</i>				
<u>Media generală pe anii de studii</u> Grade point average for all the years of				

4.3.1. Stagii de practică

Internships

Stagii de practică Internships	Semestrul Semester	Numărul total de ore <i>Total number of hours</i>	Nota Grade	Nota ECTS <i>ECTS Grade</i>	Nr. de credite ECTS <i>No. of ECTS credits</i>

4.3.2. Evaluarea finală: Teza de licență

Final examination: Bachelor's thesis

Teza de licență
Bachelor's thesis

cu nota
with the grade

Media generală de licență
General grade point average

4.4. Sistemul de notare, și, dacă sunt disponibile, informații privind distribuția statistică a notelor

Grading system and, if available, grade distribution table

Evaluarea rezultatelor învățării în Republica Moldova se face cu note de la „10” la „1” și, după caz, cu calificativele „excellent”, „foarte bine”, „bene”, „satisfăcător”, „nesatisfăcător”, „admis”, „respins”.

În învățământul superior, pe lângă sistemul național de notare, se aplică și scara de notare cu calificative recomandate în Sistemul european de credite transferabile (A, B, C, D, E, FX, F).

Echivalarea cu scara națională de notare se face după cum urmează: A: 9,01-10,00; B: 8,01-9,00; C: 7,01-8,00; D: 6,01-7,00; E: 5,0-6,00; FX: 3,01-4,99; F: 1,0-3,00.

The assessment of the learning outcomes in the Republic of Moldova is made with marks from “10” to “1” and, if appropriate, with the qualifications “excellent”, “very good”, “good”, “satisfactory”, “unsatisfactory”, “passed”, “fail”.

In the higher education along with the national grading system, the grading scale recommended by the European Credit Transfer and Accumulation System (A,B,C,D,E,FX,F) is applied.

The equivalency with the national grading scale is as follows: A: 9,01-10,00; B: 8,01-9,00; C: 7,01-8,00; D: 6,01-7,00; E: 5,0-6,00; FX: 3,01-4,99; F: 1,0-3,00.

4.5. Clasificarea generală a diplomei conferite

Overall classification of the qualification (in original language)

Diplomă de studii superioare de licență (nu există gradări la nivel național)

Bachelor's degree (there is no gradation at the national level)

5. INFORMAȚII PRIVIND CALIFICAREA OBTINUTĂ **INFORMATION ON THE ACQUIRED QUALIFICATION**

- 5.1. Acces la continuarea studiilor

Access to further studies

Titularul Diplomei de studii superioare de licență are acces la Ciclul II – studii superioare de master

The holder of the Bachelor's degree has access to Cycle II – Master studies

- 5.2. Statutul profesional
Professional status

Titularul Diplomei de studii superioare de licență poate activa în calitate de

The holder of the Bachelor's degree can be employed as

6. INFORMAȚII SUPLIMENTARE **ADDITIONAL INFORMATION**

- 6.1. Informații adiționale

Additional information

Denumirea unității de curs / disciplinei / modulului Name of course / subject / module	Numărul total de ore Total number of hours	Nota Grade	Nota ECTS ECTS grade	Nr. credite Nr of credits
Unități de curs la libera alegere: / Additional disciplines				

- 6.2. Alte surse pentru obținerea informațiilor suplimentare
Further information sources

Pagina Web a Universității de Stat „Alecu Russo” din Bălți, adresa www.usarb.md

Alecu Russo Balti State University web site – www.usarb.md

7. LEGALITATEA SUPLEMENTULUI **CERTIFICATION OF THE SUPPLEMENT**

- 7.1. Data (ziua, luna, anul)
Date (day/month/year)

- 7.2. Semnătura

Signature

05.07.2019

- 7.3. Funcția semnatarului

- 7.4. Stampila sau sigiliul oficial

Capacity

Prim-prorector

Vice-Rector

Official stamp or seal

8. SISTEMUL NAȚIONAL DE ÎNVĂȚĂMÂNT SUPERIOR

8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

8. Informații privind Sistemul Național de Învățământ Superior (în conformitate cu prevederile Codului Educației al Republicii Moldova, Legea Nr 152 din 17.07.2014)	8. Information on the National Higher Education System (according to provisions of Code of Education, Law Nr.152, 17.07.2014)
<p>8.1 Acces la învățământul superior La concursul de admitere în:</p> <ul style="list-style-type: none"> - <i>ciclul I, studii superioare de licență</i> pot participa deținătorii diplomei de bacalaureat, ai diplomei de studii profesionale sau ai unui act echivalent de studii, recunoscut de structura abilităță pentru recunoașterea și echivalarea acestor de studii și calificărilor; - <i>ciclul II, studii superioare de master</i> pot participa deținătorii diplomei de studii superioare de licență sau ai unui act echivalent de studii. În cazul înscrierii la un program de studii diferit de domeniul absolvit la ciclul I, candidații urmează să acumuleze 30 de credite de studii transferabile la disciplinele fundamentale și de specialitate aferente domeniului de studii pentru care optează, ceea ce reprezintă minimul curricular inițial necesar pentru continuarea studiilor superioare în ciclul II la alt domeniu de formare profesională care poate fi obținut în perioada studiilor superioare de licență. - <i>ciclul III, studii superioare de doctorat</i> pot participa candidații deținători ai diplomei de studii superioare de master sau ai unui act de studii echivalent. 	<p>8.1 Access to Higher Education In the competition for admission to higher education, there can participate:</p> <ul style="list-style-type: none"> - <i>for cycle I, bachelor studies</i> - holders of a <i>Bacalaureate diploma</i> (3 EQF), holders of a diploma of professional studies (4 EQF), or holders of an equivalent document of studies, recognized by the responsible authority; - <i>for cycle II, master studies</i> - holders of a Bachelor's degree diploma (6 EQF) or an equivalent degree. In case the holders apply for a programme different from the field of training completed at the 1stcycle, candidates must earn 30 ECTS credits for the fundamental and specialty disciplines related to the field of studies they choose, which represents the curricular prerequisite necessary for accessing the 2ndcycle in a different field of training, which can be accumulated during Bachelor studies. - <i>for cycle III, doctoral studies</i> - holders of a Master's degree diploma or an equivalent degree.
<p>8.2 Cadrul Național al Calificărilor din Republica Moldova (CNCRM) http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=372759</p> <p>Nivelurile de calificare ale Cadrului național al calificărilor din Republica Moldova corespund cu nivelurile Cadrului european al calificărilor după cum urmează:</p> <ol style="list-style-type: none"> 1) nivelul 1 CNCRM corespunde nivelului 1 EQF; 2) nivelul 2 CNCRM corespunde nivelului 2 EQF; 3) nivelul 3 CNCRM corespunde nivelului 3 EQF; 4) nivelul 4 CNCRM corespunde nivelului 4 EQF; 5) nivelul 5 CNCRM corespunde nivelului 5 EQF; 6) nivelul 6 CNCRM corespunde nivelului 6 EQF; 7) nivelul 7 CNCRM corespunde nivelului 7 EQF; 8) nivelul 8 CNCRM corespunde nivelului 8 EQF. <p>Nivelurile de calificare ale Cadrului național al calificărilor din Republica Moldova obținute în sistemul de învățământ superior trebuie să corespundă nivelurilor Cadrului de calificări pentru Spațiul European al Învățământului Superior după cum urmează:</p> <ol style="list-style-type: none"> 1) nivelul 6 CNCRM corespunde nivelului 1 QF-EHEA; 2) nivelul 7 CNCRM corespunde nivelului 2 QF-EHEA; 3) nivelul 8 CNCRM corespunde nivelului 3 QF-EHEA. 	<p>8.2 National Qualifications Framework of the Republic of Moldova (NQFRM) http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=372759</p> <p>The levels of qualification of the National Qualifications Framework of the Republic of Moldova are compatible with the European Qualifications Framework, as follows:</p> <ol style="list-style-type: none"> 1. Level 1 NQFRM corresponds to level 1 EQF; 2. Level 2 NQFRM corresponds to level 2 EQF; 3. Level 3 NQFRM corresponds to level 3 EQF; 4. Level 4 NQFRM corresponds to level 4 EQF; 5. Level 5 NQFRM corresponds to level 5 EQF; 6. Level 6 NQFRM corresponds to level 6 EQF; 7. Level 7 NQFRM corresponds to level 7 EQF; 8. Level 8 NQFRM corresponds to level 8 EQF. <p>The levels of qualifications of the National Qualifications Framework of the Republic of Moldova obtained in higher education must refer to the overarching framework of qualifications of the European Higher Education Area, as follows:</p> <ol style="list-style-type: none"> 1. Level 6 NQFRM corresponds to level 1 QF-EHEA; 2. Level 7 NQFRM corresponds to level 2 QF-EHEA; 3. Level 8 NQFRM corresponds to level 3 QF-EHEA.
<p>8.3 Învățământul superior este organizat în universități, academii de studii, institute, școli superioare, școli de înalte studii și altele asemenea. Instituțiile de învățământ superior pot fi publice și private.</p>	<p>8.3 Higher education is being realized in universities, academies of studies, institutes, higher schools, schools of higher education, and others alike. Higher education institutions can be public and private.</p>
<p>8.4 Autorizarea / acreditarea programelor de studii http://www.anacip.md/index.php/ro/legislatie/anacip/metodologii/sum mary/19-metodologii/377-metodologia-de-evaluare-externa-a-calitatii-in-vederea-autorizarii-de-functiune-provizorie-si-acreditarii-programelor-de-studii-si-a-institutiilor-de-invatamant-profesional-tehnici-superior-si-de-formare-continua</p> <p>Orice persoană juridică, publică sau privată, interesată în oferirea de programe de studii superioare se supune obligatoriu procesului de evaluare externă, în vederea autorizării de funcționare provizorie, înainte de a începe să activeze.</p> <p>Acreditările sunt supuse atât <i>instituția de învățământ superior</i>, cât și <i>programele de studii</i>.</p> <p>Instituțiile de învățământ superior nu pot obține autorizare de funcționare provizorie sau acreditare pentru programele de studii superioare de master și de doctorat (ciclurile II și III), dacă nu sunt acreditate programele de studii superioare de licență (ciclul I) din același domeniu.</p> <p>Acreditarea programelor de studii superioare de licență (ciclul I) se face pentru fiecare program care conduce la o calificare universitară distinctă.</p> <p>Evaluarea externă a calității în învățământul superior este realizată de către Agenția Națională de Asigurare a Calității în Educație și</p>	<p>8.4 Authorization/accreditations of study programmes http://www.anacip.md/index.php/ro/legislatie/anacip/metodologii/sum mary/19-metodologii/377-metodologia-de-evaluare-externa-a-calitatii-in-vederea-autorizarii-de-functiune-provizorie-si-acreditarii-programelor-de-studii-si-a-institutiilor-de-invatamant-profesional-tehnici-superior-si-de-formare-continua</p> <p>Any legal entity or natural person, interested in providing higher education programmes must compulsorily undergo an external evaluation process in order to receive authorization for provisional operation, before starting their activity.</p> <p>Both higher education institutions and study programmes are submitted to the process of accreditation.</p> <p>Higher education institutions cannot receive authorization for provisional operation or accreditation for master and doctoral programmes if bachelor programmes for the same field have not been accredited.</p> <p>Accreditation is given to each bachelor programmes (cycle I) leading to a specific university qualification.</p> <p>External quality evaluation of higher education is being realized by National Agency for Quality Assurance in Education and Research (NAQAER/ANACEC) or by any other quality assurance agency, registered in the European Register for Quality Assurance in Higher</p>

<p>Cercetare sau o altă agenție de evaluare a calității, înscrisă în Registrul European pentru Asigurarea Calității în Învățământul Superior. Programele de studii și instituțiile de învățământ superior sunt supuse evaluării externe periodic, în vederea reacreditării, cel puțin o dată la 5 ani.</p>	<p>Education. Study programmes undergo external evaluation for reaccreditation at least once in 5 years.</p>
<p>8.5 Tipuri de programe și titluri acordate Programele de studii superioare se diferențiază în funcție de: a) ciclul de învățământ superior; b) domeniul de formare profesională; c) forma de organizare a învățământului superior. Studiile superioare de licență (ciclul I) și de master (ciclul II) se organizează în următoarele forme de învățământ: a) cu frecvență; b) cu frecvență redusă; c) la distanță. Studiile superioare de doctorat se organizează în următoarele forme de învățământ: a) cu frecvență; b) cu frecvență redusă. Calificări și Titluri acordate: Titlurile acordate pentru absolvenții programelor de licență, master și doctorat (ciclul I, II și III) se confrera în conformitate cu Ordinul Ministrului Educației, Culturii și Cercetării nr. 1017 din 03.07.2018, publicat în Monitorul Oficial nr 377-383 din 05.10.2018, art. 1474 https://mecc.gov.md/sites/default/files/corelarea_titluri_licenta-master-doctor.pdf Programele de studii superioare integrate – diploma echivalentă cu diploma de studii superioare de master. Diplomele de ciclul I, licență și ciclul II master sunt însotite obligatoriu de suplimentul la diplomă redactat în limbile română și engleză. Calificările pentru fiecare ciclu de studii și domeniul de formare profesională se acordă în conformitate cu Cadrul Național al Calificărilor, aprobat de Ministerul Educației, Culturii și Cercetării, în conformitate cu Cadrul European al Calificărilor.</p>	<p>8.5 Types of programmes and degrees awarded Academic programmes vary depending on the: a) cycle; b) field of training; c) mode of study. Bachelor and Master programmes can be organized in the following modes of study: a) <i>full time</i>, b) <i>part time</i>, c) <i>distance learning</i>. Doctoral programmes are organized in the following modes of study: a) <i>full time</i>, b) <i>part time</i>. Higher education programmes include education, research or creative artistic activities which ensuring the advanced training in a fundamental or professional field. Awarded Degrees and Titles: Titles for bachelor, master and doctoral programmes are awarded according to the provisions of the Minister's Order no. 1017 from 03.10.2018, published in the Official Monitor of the Republic of Moldova no. 377-383 from 05.10.2018, art. 1474 https://mecc.gov.md/sites/default/files/corelarea_titluri_licenta-master-doctor.pdf <i>Integrated/ long higher education programmes</i> – a programme leading directly to a second cycle degree. The diplomas for cycle I, bachelor and cycle II, master are appended compulsorily with a diploma supplement drawn in Romanian and English languages. The qualifications for each cycle and field of study are awarded according to the National Qualification Framework approved by the Ministry of Education, Culture and Research in accordance with the European Qualifications Framework.</p>
<p>8.6 Organizarea și structura studiilor Învățământul superior este structurat pe trei cicluri de studii: licență (ciclul I), master (ciclul II) și doctorat (ciclul III). 8.4.1 Ciclul I – studii superioare de licență (nivelul 6 CNCRM/QF-EHEA/nivelul 6 EQF), corespund unui număr de 180–240 de credite de studii transferabile. 8.4.2 Ciclul II – studii superioare de master (nivelul 7 CNCRM/QF-EHEA/nivelul 7 EQF), corespund unui număr de 90–120 de credite de studii. 8.4.3 Ciclul III – studii superioare de doctorat (nivelul 8 CNCRM/QF-EHEA/nivelul 8 EQF). Programele pot fi de două tipuri: <i>doctorat științific</i> și <i>doctorat profesional</i>. Doctoratul profesional este specific pentru domeniile artelor și sportului. 8.4.4 În cadrul studiilor superioare de licență (ciclul I) pot fi organizate programe de studii la specialități duble numai în domeniile științe ale educației și militărie. Programele de studii la specialități duble finalizează cu acordarea unei singure calificări și cu eliberarea unei singure diplome universitare în două specialități. Durata studiilor la specialitățile duble la ciclul I de studii superioare în domeniul științe ale educației este mai mare cu un an. 8.4.5 Programe de studii superioare integrate pot fi organizate în următoarele domenii: arhitectură, medicină veterinară, medicină preventivă, medicină, stomatologie, farmacie. Durata programelor de studii superioare integrate corespunde unui număr de cel puțin 300 de credite de studii transferabile. Anul universitar în ciclul I, studii superioare (licență), este constituit din două semestre relativ egale, care includ două sesiuni de examene, stagiile de practică și două vacanțe. Durata unui semestru constituie în medie 15 săptămâni de contact direct cu studenții. Pentru un semestru academic la ciclul I și ciclul II se alocă 30 de credite de studii transferabile, respectiv pentru un an academic – 60 de credite de studii transferabile.</p>	<p>8.6 Organisation and structure of studies Higher education is structured in three cycles: bachelor programmes (cycle I), master programmes (cycle II) and doctoral programmes (cycle III) 8.4.1. Cycle I – Bachelor degree (level 6 NQFRM/ QF-EHEA/level 6 EQF), 180-240 credits. 8.4.2. Cycle II – Master degree (level 7 NQFRM/QF-EHEA/ level 7 EQF), 90-120 credits. The programmes in the 2nd cycle can be: <i>advanced, interdisciplinary and complementary</i>. 8.4.3. Cycle III – Doctoral degree (level 8 NQFRM// QF-EHEA /level 8 EQF), 180 credits. The programmes are of two types: <i>scientific doctorate</i> and <i>professional doctorate</i>. Professional doctorate is specific for the field of arts and sports. 8.4.4. Double specialty programmes may be organized only in the fields of education sciences and military service. Upon completion of a double specialty programme, a single diploma for two specialties is awarded. The length of studies in double specialty programme, cycle I, in the field of education sciences is one year longer. 8.4.5. Integrated/long higher education programmes may be organized in the following fields: architecture, veterinary medicine, preventive medicine, medicine, stomatology, pharmacy. The length of integrated higher education programmes corresponds to a number of minimum 300 ECTS credits.</p> <p>The academic year for the 1st cycle of higher education consists of relatively equal semesters, which include two examination sessions, internships and two holidays. The average length of a semester is 15 weeks of contact hours with students. For cycle I and cycle II, one academic year study load of 60 ECTS credits is divided into two equal parts, each semester consisting of 30 ECTS credits.</p>
<p>8.7 Sistemul de evaluare și scală de notare Evaluarea rezultatelor învățării se face cu note de la „10” la „1” și, după caz, cu calificativele „excellent”, „foarte bine”, „bune”, „satisfăcător”, „nesatisfăcător”, „admis”, „respins”. În paralel cu Sistemul Național de Notare în învățământul superior se aplică și scara de notare cu calificative recomandate în Sistemul european de credite transferabile (A, B, C, D, E, FX, F), pentru completarea suplimentului la diplomă și facilitarea mobilității academice. Echivalarea cu scara națională de notare se face după cum urmează: A: 9,01–10,00; B: 8,01–9,00; C: 7,01–8,00; D: 6,01–7,00; E: 5,00–6,00; FX: 3,01–4,99; F: 1,00–3,00.</p>	<p>8.7 Assesment and grading system The learning outcomes is graded from “10” to “1” and, if necessary, with the descriptors “excellent”, “very good”, “good”, “satisfactory”, “unsatisfactory”, “admitted”, “rejected”. Alongside the National Grading System in higher education, the ECTS grading scale (A, B, C, D, E, FX, F) is used. The national grading scale is converted. The national grading scale is converted to ECTS grading scale as follows: A: 9.01 – 10.00; B: 8.01 – 9.00; C: 7.01 – 8.00; D: 6.01 – 7.00; E: 5.00 – 6.00; FX: 3.01 – 4.99; F: 1.00 – 3.00.</p>
<p>8.8 Surse nationale de informare – Ministerul Educației, Culturii și Cercetării al Republicii Moldova</p>	<p>8.8 National Sources of Information – Ministry of Education , Culture and Research of the Republic of</p>

<p>www.mecc.gov.md</p> <ul style="list-style-type: none"> - Agenția Națională de Asigurare a Calității în Educație și Cercetare, www.anacip.md - Autentificarea, Recunoașterea și Echivalarea Actelor de Studii, recognition@edu.md 	<p>Moldova, www.mecc.gov.md</p> <ul style="list-style-type: none"> - National Agency for Quality Assurance in Education and Research (NAQAER/ANACEC) www.anacip.md - Authentication, Recognition and Equivalence of Degrees, recognition@edu.md
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Annex 1: Partnership with training institutions

1.1. Universities contributing to training

University	Role
Alecu Russo Balti State University	Course content creation
Academy of Economical Studies of Moldova	Course content creation
Technical University of Moldova	Course content creation

Annex 2: Partnership with IT companies

2.1. Companies involved in training

Company	Role
Am-Soft	<ul style="list-style-type: none"> - Expertise of the study plans - Expertise of the curriculum - Expertise of the courses content - Coordination of internships - Coordination of the Bachelor Thesis - Teaching some modules - Participation in some exams
ULS	
SC „Code Factory” SRL	
ENDAVA	
YMK-IT Management	