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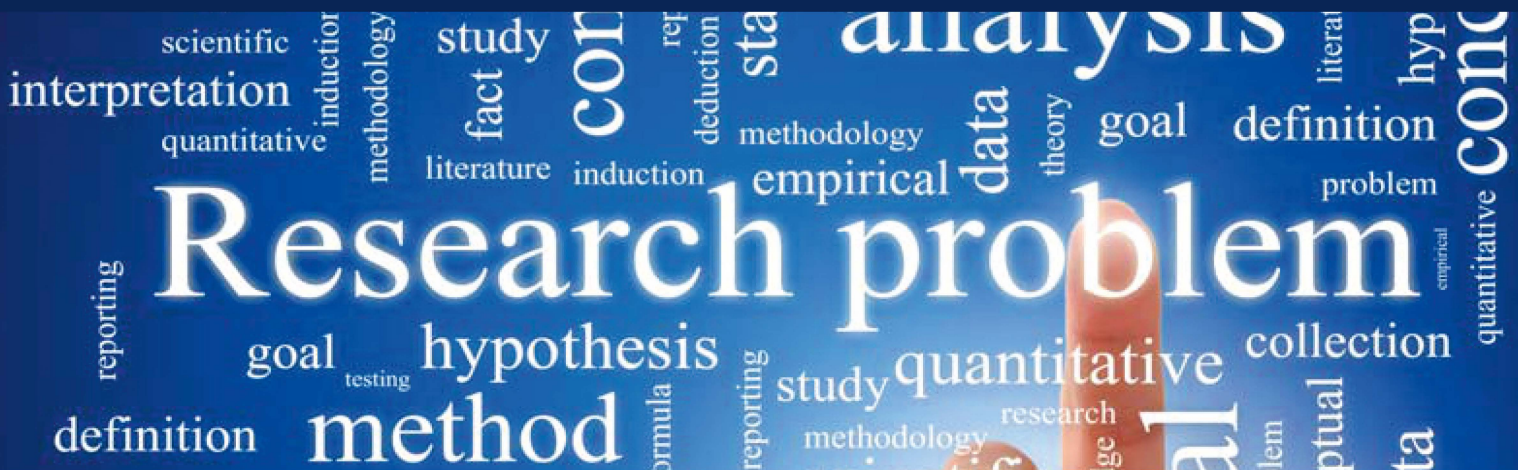
PBLMD

IMPLEMENTING PBL STUDENT-CENTERED ACTIVE-LEARNING STUDY PROGRAMMES

Editors

Larisa Bugaian and Romeo V. Turcan

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Erasmus+

Chisinau, 2020



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**Introducing Problem Based Learning in
Moldova: Toward Enhancing Students'
Competitiveness and Employability**

www.pblmd.aau.dk

Development and implementation of PBL in pilot study programmes

Consolidated report

Work Package 4

Prepared by: Ala Cotelnic, AESM
Angela Niculița, MSU

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Chisinau, 2019

EXECUTIVE SUMMARY

This report consolidates the process and findings included in the reports of the universities of the Republic of Moldova, member of the project, and comprises the overview of the universities' vision on PBL-based study programmes; identification of performance indicators with reference to the development/implementation of the PBL model by each University; analysis of these indicators; conclusions from the analysis made in reference to the development and implementation of PBL-based pilot study programmes.

The report concerned provides the consolidation of the reports drawn up by each university in part on its characteristic Bachelor's degree study programme that are annexed to this report.

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1 INTRODUCTION

The purpose of this report is to conduct an analysis of the process of development and implementation of pilot programmes with the application of problem-based learning (PBL) within the partner universities of the Republic of Moldova. In this report we rely on the findings elucidated in Work Packages 2 and 3 developed by universities in the period 2015-2017, but also on the results of the Work Package 4, presented at the beginning of the year 2018.

In order to have a broader view of the process we have specified three stages of the project deployment: the stage of preparation or development of pilot programmes, the stage of implementation of these programmes and the stage of achievement of student mobility. The first stage included training sessions in Moldova offered by the project partners in the European Union, as well as visits, and academic mobilities at EU partner universities where academic staff from the universities of RM gained experience and formed the necessary competences to prepare and launch pilot programmes with PBL application in the previously selected field. This stage also included the elaboration of new study programmes with the application of the PBL or adaptation, by the corresponding amendments, to this method of existing programmes, the approval of educational plans, the promotion of pilot programmes for high school graduates and the conduct of admission to these programmes.

The implementation stage consists of the direct conduct of pilot programmes, joint co-teaching with EU partners and the conduct of the mobility of academic staff from the universities in the RM to universities in the EU.

The third stage refers to students' academic mobility, enrolled in the pilot programmes offered by universities in the Republic of Moldova to the EU's higher education institutions, partners in this project.

For the purpose of conducting the proposed analysis it was necessary to identify qualitative and quantitative indicators – performance indicators.

2 ANALYSIS OF KEY PERFORMANCE INDICATORS

2.1 OVERVIEW OF UNIVERSITIES ON THE STUDY PROGRAMMES IMPLEMENTED

PBL is a student-centred, research-based training model in which students undertake to solve an authentic, poorly structured problem that requires more thorough research (Jonassen & Hung, 2008). Students identify gaps in their knowledge, conduct research and apply what they learned to develop solutions and present their discoveries (Barrows, 1996). Through collaboration and research, students can cultivate problem solving (Norman & Schmidt, 1992), metacognitive abilities (Gijbels et al., 2005), commitment to learning (Dochy et al., 2003) and intrinsic motivation.

Starting from the above, and following the study of the teaching methods centred on the student in several universities in the European Union, each University in Moldova, partner in the project, aimed at introducing these methods in the study programme included as a pilot in the project. A gradual implementation of the problem-based learning (PBL) was to be carried out within the respective pilot programme.

Each university either developed or modified an educational plan, taking into account the requirements of the PBL, as well as the normative acts in force in the Republic of Moldova. These programmes have been implemented since 1 September 2017.

The general purpose of the pilot programme consists in the training of specialists with multiple competences in the field of training, able to identify problems in the field in which they will work, to form teams in which to solve them, to be able to work in the team, in a competitive economic environment in a permanent change. The theoretical and applicative competences offered by the programme will facilitate the integration of future graduates into the labour market. For this purpose, it will be passed from classical (theorized) education, where the teacher is a provider of information, and the student is the receiver of the information, to PBL (problem-based learning).

Updating the curricular support and revision of teaching methods in the pilot programmes is the key to their success, contributing to the achievement of the mission and objectives of the study programme. Achieving these goals will be done gradually, from one semester to the next, from simple learning tasks to complex ones.

In this respect, each pilot programme was structured on semesters (6 or 8 depending on the specifics of the programme). A theme has been identified for each semester. According to this, there have been determined those modules or courses to be included in order to ensure the intended outcomes and to achieve the objectives proposed. The detailed information on the semester structuring of the pilot programmes implemented are found in the final reports for the Work Package 4 conducted by universities (Appendixes 1-6).

The developed or modified educational plans were approved by the Senates of the universities, and in some cases by the Ministry of Education, Culture and Research (MECC) - *Business and Administration* programme at AESM, the *Software Engineering* programme at TUM; by MECC and the Ministry of Health, Labour and Social Protection - *Public Health* programme at SUMPh. These documents shall be found in Appendixes 1-6 to this report.

One important, necessary, but difficult thing that universities have done was to promote pilot programmes with the application of the PBL method and information on the possibilities for application to the 2017 admission, and then the admission 2018 to these programmes. In this respect, various methods were used: high school visits, information placed on the university's website, on the university's Facebook page, etc. Also, each university developed flyers to promote the study programme under the PBL. These promotional materials are presented in Appendixes 1-6 to this report.

Each university enrolled a certain number of students in the pilot programme (Table 1) and, starting on 1 September 2017, there was initiated the implementation of the PBL through activities specific to a student-centred education process.

2.2 IDENTIFICATION AND ANALYSIS OF KEY PERFORMANCE INDICATORS

When designing the Pilot Programme with the application of the problem-based learning (PBL), each university in Moldova took into account the diversity of the degree and models of implementation of the PBL method in the EU partner universities visited and the experience that has been studied, including the use of other active teaching methods. Each university has its own specificity and an individual approach per programme on the use of active methods of teaching, in general, and PBL in particular.

In order to achieve the intended purpose, we have identified in this report a series of indicators, reflecting the performance of the implementation of the problem-based learning, based on which we synthesized the information for each university in the Republic of Moldova, partner in the project. The result of this synthesis is shown in Table 1.

Table 1: Key performance indicators

Indicators	AESM	USARB	CSU	MSU	SUMPh	TUM
PBL implementation level	Study programme "Business and Administration"	Study programme "Public Administration"	Study programme "Entrepreneurship and Business Administration" (Business and Administration)	Study programme "Law"	Discipline "Neuroscience"	Study programme "Software Engineering"
PBL: Traditional ratio	40:60	60:40	65:35	15:85	50:50	50:50
Language of instruction	Rom. - Eng.	Rom.	Rom.	Eng.	Rom.	Eng.
Number of staff from the universities - members of the Consortium - trained in RM by EU partners (development period/ programme implementation period)	65/33	26/20	30/21	30/20	36/23	61/43
Number of staff from universities in the RM, members of the project, involved in study visits to EU Universities (development/ implementation)	8/6	8/4	8/4	8/7	11/4	19/12
Number of mobilities of academic staff in the EU (development/ implementation)	15/2	11/4	13/2	12/7	5/8	11/11

Approved study programme	Approved by the Senate, Minutes no.10 of 4.05.2017 Coordinated with ME 06.06.2017, No. ISÎ-01-18120	Approved by the Senate, Minutes no.21 of 30.05.2017	Approved by the Senate, Minutes no.8 of 27.04.2017	Approved by the Senate, Protocol no.1 of 30.08.2017	Approved by the Senate, Minutes no.3/2 of 05.06.2017 Coordinated with MH June 2017 ME 20.07.2017 ISÎ-01-18126	Approved by the Senate, Minutes no.4 of 27.12.2016 Coordinated with ME 24.07.2017 ISÎ-01-18130
Number of students enrolled in the programme: 2017/2018	31/29	15/6	25/15	26/24	28/26	55/60
Number of visits of EU partners for training, co-teaching, evaluation (development/implementation)	31/26					
Student mobility: autumn/spring	1/5	0/0	0/0	6/6	0/4	3/9
Extending PBL implementation to other study programmes	Bachelor's degree study programmes: World Economy and International Economic Relations; Marketing and Logistics;	Bachelor's degree study programmes: Law	Bachelor's degree study programmes: Accounting; Computer Science; Engineering and management in food industry	Master's degree study programmes: Public policies and services; Marketing studies; Hotel and tourism management and marketing; Landscape design and green spaces; Labour and organisational psychology	Bachelor's degree study programme „Optometry”	MSc Information Technology MSc Information Security MSc Computers and Information Networks Prof. master IT for business

- **Indicator *PBL implementation level***. At the project initiation stage, each partner university in the RM established the level of implementation of the PBL method. Five universities - Academy of Economic Studies of Moldova (AESM), State University „Alecu Russo” of Bălți (USARB), State University of Cahul (CSU), State University of Moldova (MSU) and Technical University of Moldova (TUM) - chose the implementation at the study programme level, the first cycle, Bachelor’s degree (these programmes are mentioned in Table 1). The University of Medicine and Pharmacy „Nicolae Testimianu” decided to implement the PBL at discipline level: *Neuroscience* in the „Public health” Bachelor’s degree programme. Universities modified the existing educational plans to form interdisciplinary modules, in order to introduce projects to specific disciplines.
- **Indicator *PBL:Traditional ratio***. At the moment, problem-based learning is being implemented in the programmes selected in the project. Since the course and degree of implementation of the PBL method differs from university to university, we have tried to reflect how each university in the consortium succeeded in introducing PBLs in the study process for that programme. This indicator characterizes the ratio of the number of ECTS for PBL-based courses to the number of ECTS for traditional courses.
In the context of this ratio, a fully PBL-based study programme provides a share of about 50:50 of ECTS for projects and face-to-face activities (such as lectures, seminars, workshops, laboratories and experiments). The responsibility for the correctness of the data with reference to this indicator belongs to each university.
In general, however, this sharing is questionable. Of course, there are several variants of sharing of training activities with the application of PBL to traditional, face to face ones; the reference version of this project being 50:50 for the entire duration of the study programme. Table 1 shows that the situation is different at different universities. However, we admit that not all universities correctly perceived how to share these two components.
- **Indicator *Language of instruction*** of the study programmes is: Romanian - for the programme „Public administration” at USARB, „Public health” programme at SUMPh, „Entrepreneurship and business administration” at CSU; English - „Law” programme at MSU and „Software engineering’ at TUM; Romanian and English – „Business and administration” programme at AESM. The English language of instruction allows to also enrol foreign citizens to studies.
- **Indicator *Number of staff from the universities - members of the Consortium - trained in RM by EU partners (development period/programme implementation period)***. The training took place at various trainings organized mostly at the Technical University of Moldova, but also at other universities. The number of trained staff was calculated on the basis of the registration lists to the training. In the case of a few days training, each participant was counted once. The staff who participated in many trainings was taken into account every time. The number of trained staff is divided into two groups: the development period (from the start of the project - October 2015 to September 1, 2017) and the programme implementation period, starting September 1, 2017 when PBL programmes started to be implemented, until the report is drawn up.
- **Indicator *Number of staff from universities in the RM, members of the project, involved in study visits to EU Universities (development/implementation)***. There are shown the number of visits of didactic staff from Moldovan universities to universities in the European

Union: Aalborg University, Denmark - 61 visits, University of Gloucester, UK - 8 visits, Royal University (KTH) in Stockholm, Sweden - 11 visits University of Siegen, Germany - 13 visits, University of Plymouth, UK - 6 visits. Visits to the University of Plymouth were made by the SUMPh team. All study visits are divided, as in the case of the above indicator, into two components: development and implementation.

- **Indicator *Number of mobilities of academic staff in the EU (development/implementation)***. The development of the PBLMD project at the universities of the Republic of Moldova can be divided into two periods, namely the development (elaboration / modification) of the Bachelor's degree study programmes by applying the problem-based method (PBL) at selected specialties and the implementation period of these programmes. In both periods, academic staff from local universities went on mobility to partner universities in the EU.

The mobility in the development period was aimed at acquiring knowledge and skills on how the PBL method works in an open university environment, familiarizing with the level and model of implementation of the PBL method at EU partner universities, enhancing teaching skills tailored to the PBL, but also to research different teaching methods according to the PBL principles within the different areas of professional training.

During the implementation period, the purpose of the mobility made by teaching staff from the Moldovan universities was to research the experience of partner universities with regard to the development of the PBL-based curriculum, the development of analytical programmes on the disciplines based on the application of this method, and the existing practice on conceptualizing a continuous training programme centred on PBL for university professors.

- **Indicator *Approved study programme***. This indicator reflects the level at which the pilot study programmes were approved, taking into account the level of modification of the educational plan, but also the own decision of the higher education institution. Thus, the TUM's „Software engineering” pilot programme was approved by the TUM's Senate and coordinated with the MECC, the latter being a mandatory condition, given that the programme was developed and launched with its inclusion in the 2017 Nomenclature. AESM and SUMPh decided to undergo through the same procedure as TUM even though the educational plans for the pilot programmes of these institutions have not been modified so as to require such an action. The SUMPh, being subordinated to both the MECC and the Ministry of Health, Labour and Social Protection, coordinated its study programme „Public health” with both ministries. According to the MECC regulations that do not impose compulsory co-ordination of bachelor's degree educational plans in the case of minor changes, the other universities approved the pilot programmes at their University Senates.
- **Indicator *Number of students enrolled in the programme: 2017/2018***. During the course of the project, the partner universities in the Republic of Moldova have already succeeded in conducting two admissions to studies to the pilot programmes. This indicator reflects the number of students enrolled in each pilot programme in the academic year 2017-2018 and, by slash, the number of students enrolled in the same programmes in the academic year 2018-2019.

- **Indicator *Number of visits of EU partners for training, co-teaching, evaluation (development/implementation)***. During the development and implementation of the pilot programmes, the EU partners made a series of visits to the universities of the Republic of Moldova with the purpose of carrying out PBL-specific training activities together with the academic staff from the Moldovan universities (co-teaching). The indicator reflects the number of such visits made to partner universities in Moldova during the respective periods.
- **Indicator *Student mobility: autumn/spring***. The PBLMD project also included a separate budget (Special Mobility Strand) to support the mobility of students from the Republic of Moldova, enrolled in pilot programmes, to partner universities in the EU. Each partner university in the Republic of Moldova had 15 student mobilities that could be used starting with September 2018, the second year of pilot programmes' implementation. All student mobilities were done in the study year 2018-2019, the autumn and spring semesters, the mandatory condition of participation being the student's registration in the second year of study at the pilot programme of the respective university. The indicator provides the number of mobilities made by the students of each partner university in the Republic of Moldova.
- **Indicator *Extending PBL implementation to other study programmes***. During the implementation of pilot programmes with PBL application, teachers have gained the experience that has allowed them to extend the use of this method to other Bachelor's or Master's degree programmes. Also, teachers who have not been involved in the pilot programmes but have participated in the training provided by European Union's teachers or internal trainers have begun to implement PBL in other groups and / or programmes. Thus, each university presented the level of extension of PBL implementation to other study programmes.

3 FINAL REMARKS

The implementation of the problem-based learning in the universities of the Republic of Moldova, as pilot programmes, implies a revolutionizing of the study process in these programmes. We started from the fact that learning outcomes should not only provide knowledge but also develop skills and competences both professional and personal. We recognize that today the programmes offered by universities in Moldova often fail especially when it comes to developing professional skills and competences, as well as certain personal skills (interpersonal communication, professional orientation and employability, and adaptation to the labour market). Activities that should lead to the development of skills and competences (case studies, projects, internship) are irrelevant or formally carried out (e.g. students' internship).

We want, by the implementation of the PBL, to bring students closer to the real life and the problems faced by economic agents, to facilitate student mobility by deepening the knowledge of English, in particular, in specialty disciplines, but also by providing quality training, closer to the one offered in European universities.

Obviously, all these will take time and effort from both the teachers and the university, but also the economic agents, the local public administration, which we want to fully involve in the training activity through different activities carried out jointly. We want, in partnership with economic agents, to propose a considerable number of topics of Bachelor/Master's degree project or joint research topics annually. We consider it necessary to develop the involvement of economic agents in such activities as students' internships, students' research activities, case studies, projects and other activities included in the study programme.

By implementing the PBL we want to ensure the stimulation of innovation and creativity, including entrepreneurship.

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Appendix 1. Work package 4 AESM

Appendix 2. Work package 4 USARB

Appendix 3. Work package 4 CSU

Appendix 4. Work package 4 SUMPh

Appendix 5. Work package 4 MSU

Appendix 6. Work package 4 TUM



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„Business and Administration” at AESM

Academy of Economic Studies of Moldova

Work Package 4

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Chisinau, 2018

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1 INTRODUCTION

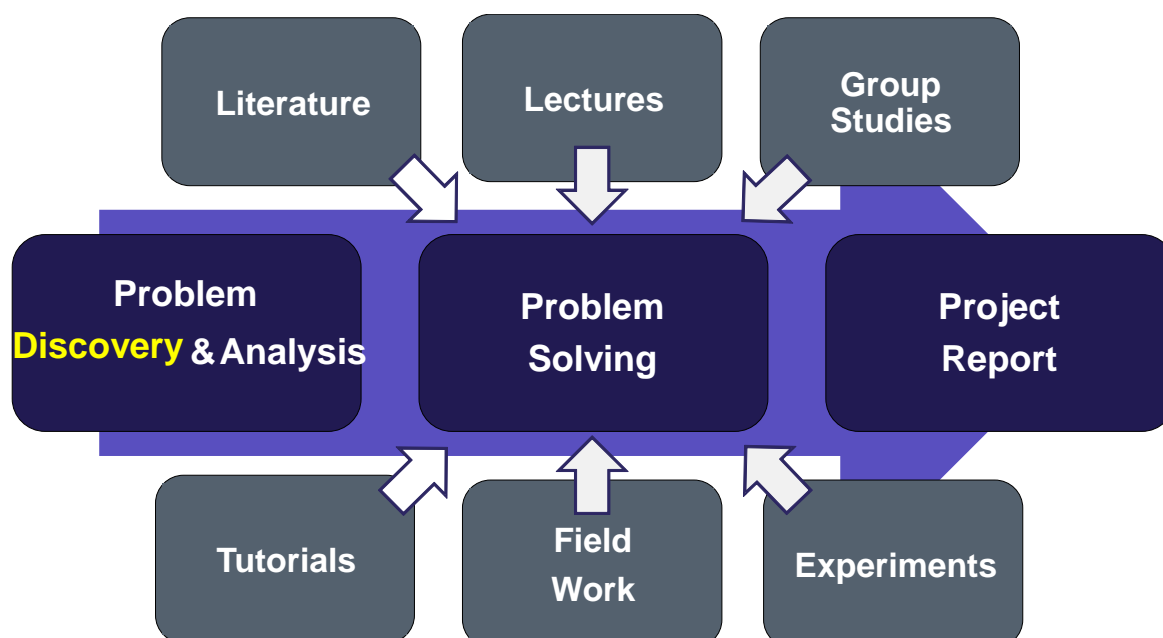
The purpose of this Work Package – WP4 - is to develop a sustainability strategy for the implementation of problem-based learning - PBL, active teaching and learning, centered on the student at the Academy of Economic Studies of Moldova. Specifically, this report will propose an innovative bachelor's degree programme based on PBL - Business and Administration, active teaching and learning, centered on the student at study programme and in the university [Annex 2].

In this report, we rely on the material accumulated during Work Package 2 (WP2) and Work Package 3 (WP3) that we developed between 2015-2017. We also rely on the experience we have gained during our study visits and staff mobility at partner universities in the European Union, as well as during the PBL training sessions offered by EU project partners in Chisinau.

1.1 Key assumptions

There is no PBL model suitable for all purposes. However, PBL-based models are mainly based on two key assumptions. The first assumption is that work on the project is in the *centre*, at the basis, consisting of discovery and problem analysis, problem solving and project report (Figure 1). The second assumption assumes that other teaching and learning (face-to-face) activities such as literature, lectures, group studies and tutorials are designed to *support* work on the project. These two assumptions will also be at the base of our PBL, the bachelor's degree study programme Business and Administration based on PBL, student-centered active teaching and learning.

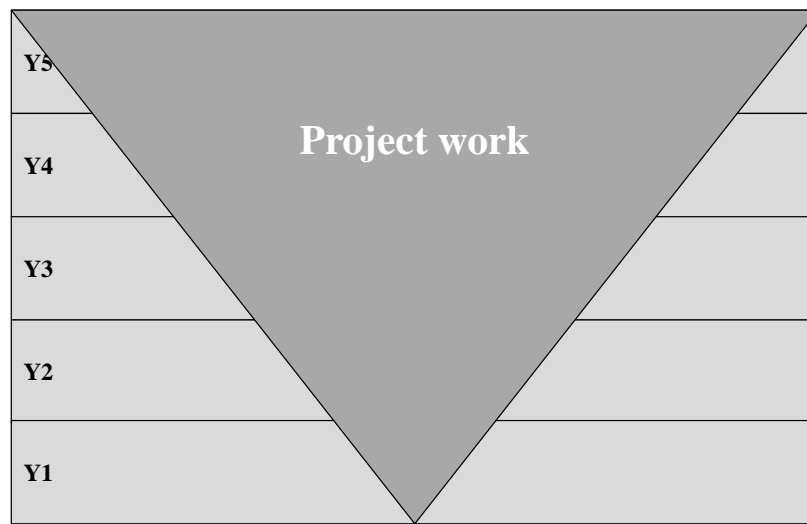
Figure 1: PBL Model at AAU: An example



Source: AAU, 2017 (the word 'Discovery' is introduced by Romeo V. Turcan)

Another assumption relates to the relationship between work on the project and face-to-face activities. In the context of this report, wholly based on PBL, this means a study programme in which there is a 50:50 sharing between student work on the project and face-to-face activities (such as lectures, seminars, workshops, laboratories and experiments). An example of progression is presented in Figure 2. Of course, there are many ways to distribute the relationship between work on the project and face-to-face activities during the semesters; the main purpose is to achieve an approximate 50:50 time sharing for the duration of the study programme.

Figure 2: An example of 50:50 time sharing between project work and face-to-face activities



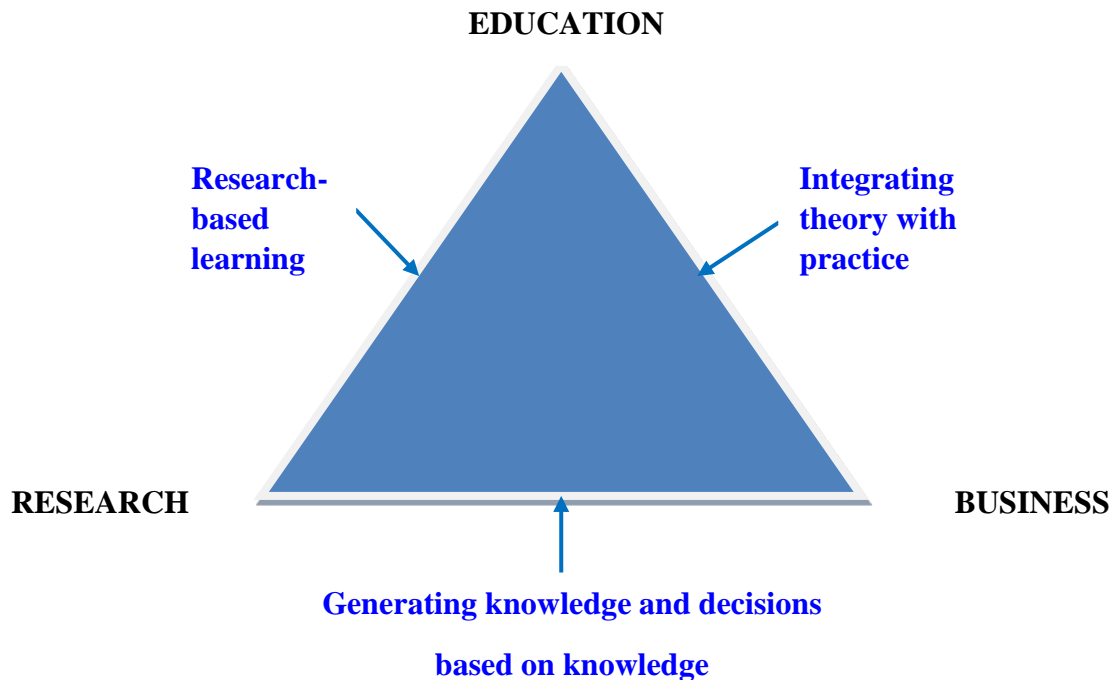
Source: Louise Faber, PBLMD 2016

1.2 Expected outcomes

A series of results are foreseen as a result of the successful implementation of the Business and Administration bachelor's degree programme, based on PBL, active, student-centered learning [Annex 1]. It is expected that by 2020, this study programme will become internationally recognized, which will attract European and international students as full-time or exchange students. It is also expected that by 2020 at least five bachelor's degree programmes at our university will be redesigned based on PBL, with methodologies and active teaching methods centered on the student, and that potential students will be enrolled in these programmes from 1 September 2020. It is also envisaged to better adapt students' knowledge, skills and abilities to the needs of the labor market.

Successful implementation of the study programme as well as the effects of its spreading across the university will contribute to the further development and consolidation of the integration of education, research and business environment / policy makers (Figure 3). Academic staff will excel in engaging in research-based teaching, our students will learn and be able to apply theories in practice in the private or public sector, and our researchers will work with private and public organizations to create and transfer new knowledge.

Figure 3. Socially committed university



Source: Olav J. Sorensen, 2015

2 OUR VISION ON THE BACHELOR'S DEGREE PROGRAMME BASED ON PBL – BUSINESS AND ADMINISTRATION

2.1 OVERVIEW

Speaking historically, most of the Moldovan universities have focused over a rather long period, mainly on teaching and learning. In universities, the classical system of focusing on teacher activities prevails, which we consider surpassed, at least from the fact that it was designed to integrate graduates into a stable and inflexible labor market to the changing society, especially in relation to international influences. However, considering the speed at which changes are being made today, the flexibility of the labor market, it is clear that a student-centered education offers more benefits to society, offers the possibility of training specialists who would have the skills that employers require. *The change from teacher-centered education to student-centered education involves a cultural transformation, and thus behavioral and attitude changes, both on the part of the students and the teachers as well as the institution in general. Failure to involve one of these factors makes it impossible to achieve this method.*

Following the study of student-centered teaching methods in several universities in the European Union, we aim to introduce these methods into the Business and Administration study programme at AESM. We will focus on the gradual implementation of problem-based education (PBL) within this pilot programme [Annex 1].

The aim of the programme [Annex 2] is to train multi-skilled professionals, potential managers and entrepreneurs to help create a new status for the businessman, in general, and the entrepreneur in particular as the main actors in the competitive economic system. The theoretical and applied skills offered by the programme will facilitate the integration of future graduates into the labor market.

The programme is developed in accordance with the **National Qualifications Framework** (NQF) for the Business and Administration specialty ¹. The NQF is a tool that establishes the structure of qualifications and ensures national recognition as well as the international compatibility and comparability of qualifications acquired within the higher education system. Through it, all the learning outcomes gained in the higher education system can be recognized, measured and related. The National Qualifications Framework respects the traditions and experience of Moldovan higher education and is compatible with the General Framework of Qualifications in the European Higher Education Area.

The training of highly qualified specialists in Business and Administration lasts for 6 semesters or 3 years of study. In each semester, students have the opportunity to accumulate 30 study credits

¹ Cadrul Național al Calificărilor: Învățământul superior: ciclul I, studii superioare de Licență; ciclul II, studii superioare de Masterat; Doctorat: Domeniul general de studiu 36. Științe economice: Domeniul de formare profesională 812 Turism / Min. Educației al Rep. Moldova. - Ch.:S. n., 2013 (Tipogr. "Bons Offices"). p. 67 - 91 http://edu.gov.md/sites/default/files/cnc_36_812-stiinte_economice.pdf

so at the end of the period they can earn 180 ECTS. In each semester, students will have both theoretical and practical courses in which they will work in teams or individually, developing different projects.

In order to successfully achieve this educational offer, an adequate, qualitative and productive student-centered educational environment will be created, characterized by the following characteristics:

- creating a genuine learning environment close to the business environment and relevant to the student's interests in achieving the objectives; acquisition of knowledge, skills training and personal and professional skills;
- combining theoretical aspects with the cultivation of skills related to the realities of business management activities;
- structuring educational approaches on the concept of "problem-based learning" and developing practical dexterity;
- ensuring conditions to facilitate access, progress in university careers and mobility of students and graduates in the European area

Teaching under the pilot study programme [Annex 1] will be based on the current consensus among scholars on learning and the cerebral cortex, according to which we do not learn if we passively receive and then remind us what we have taught. So the student will be actively involved in what is done during and outside the classroom:

- This type of learning requires a stage where students are asked to process the information they are offered. They will benefit from activities, concrete or potential situations, which require them to interpret information in a personal way and thereby create their own meanings. It is important, and the teacher will consider that that meaning is a personal and unique thing; it builds on learning and previous experience that differs from person to person. There is no unique way, suitable for all to learn; there are needed a lot of tasks and experiences to meet individual needs.
- Learning should include activities of processing the new learned subject, which must relate to what the student already knows. Tasks will be authentic, established in a significant context and related to the real life of economic agents, highlighting some real problems that either the teacher or the students present. Given that learning will involve errors, the tasks will be designed to give students the opportunity to self-evaluate, correct, discuss with colleagues, receive the teacher's response, and do other "compliance with reality" checks.
- Group work will be widely used, which asks students to discuss the subject / information learned so that with colleagues they can check each other and learn from each other.

Students' assessment will take various forms: written exam with open questions, multiple answer tests, oral examinations. In the PBL context, some exams will be in the form of a project, which consists of presenting the written report and individual oral examination. The advantage of this model is the combination of group work, problem solving, holistic approach (problem-theory-methodology), reflection, communication and abilities. We will also opt for the use of innovative assessment forms, eg: computer aided exam, video exam, peer evaluation through Moodle platform.

Some requirements for progression will also be made, which are reduced to:

- the linear learning model, which provides an analytical progression from macro to micro level, each learning module being based on modules previously studied;
- from the fundamental to the field, specialty elements;
- holistic progression - solving real business problems on the first day, increasing complexity of problems, circular learning model.

We hope for an easier employment of graduates from this programme, for the following reasons:

- Active learning methods will empower graduate students to engage actively in solving various tasks at the organization level, be more responsive to tasks, having a strong initiative spirit, critical thinking, creativity, willingness to find more original solutions, will be more cooperative, listening to the opinions of others and arguing their own opinion.
- PBL will provide graduates with a better knowledge of the real-life problems of domestic business, which will make it easier to integrate into the organization
- Teamwork, project development will be an important asset for graduates, enabling them to lead a group, coordinate communication, set up a trustworthy climate in the team, be able to make decisions, to mediate the conflicts that have arisen.
- The given model involves permanent self-evaluation, so that awareness of the need for lifelong learning increases.

The general learning outcomes of the programme (in strict accordance with the NQF for Business and Administration) are as follows:

Upon completion of the studies the student will be able:

1. to demonstrate functional knowledge in the following fields: economic theory - genesis, essence, methodology and method, economic laws; management - the evolution of management science, the content of the main processes and managerial functions; marketing - development and implementation of the company's marketing policy, markets - studying, functioning and development of the resource, goods and services markets; customers - factors of influence, purchasing and consumption processes, consumer patterns; law - knowledge of legislation on entrepreneurship and business, small business, consumer protection, advertising in the Republic of Moldova; finance - finance management, accounting and other financial systems; information systems - development and exploitation of information systems with impact on the achievement of managerial functions in the organization;
2. to set up and develop a business;
3. to know ways to identify business ideas and evaluate opportunities;
4. to possess methods for assessing and minimizing business risks;
5. to ensure that the activities are carried out in accordance with the legislation in force;
6. to adjust the organization's activity to the requirements of the environment;
7. to make optimal decisions under conditions of risk and uncertainty;
8. to develop the organizational structure of the organization;
9. to evaluate and improve the efficiency and effectiveness of the organization's activities;
10. to self-motivate and increase the efficiency of their own activity;
11. to form teams and develop collaboration;

12. to motivate and create productive work relations;
13. to apply quality management systems;
14. to communicate convincingly and effectively, including in an international language;
15. to use and manage the efficient use of available resources;
16. to organize the business and administration research process;
17. to solve problems in the field of business administration;
18. to develop and coordinate the implementation of projects;
19. to know the competence and involvement of managers at different hierarchical levels;
20. to apply the principles, values and norms of professional ethics.

2.2 GENERIC LEARNING OBJECTIVES AND OUTCOMES

The concern for continuously increasing the amount of knowledge acquired by students in different fields no longer corresponds to the current education. The amount of information is increasing at a very fast pace, and education in the pursuit of this growth is practically unrealistic. The emphasis is on the formative aspect, the student's learning how to master and use the information, using the skills and abilities that the faculty has developed. This shift of focus does not imply an ignorance of knowledge and the role they have, because even the formation and development of skills and capacities is achieved through them in the Learning Processes.

In the context of the above, we undertake the following objectives:

- **The objectives of the Business and Administration bachelor's degree programme** can be synthesized as follows:
 - ✓ Training of specialists in business management through undergraduate education;
 - ✓ Creating business skills by organizing courses at specialized disciplines such as Finance, Accounting, Marketing, Management, etc. ;
 - ✓ Using student-centered teaching methods, including problem-based learning;
 - ✓ Providing the opportunity to study business through a holistic approach in different contexts and from different perspectives;
 - ✓ Preparing students for the challenges of a 21st century management;
 - ✓ Promoting employment opportunities by involving students in looking for and finding answers to a variety of authentic business issues;
 - ✓ Preparing students for further masters studies or others.

- **Learning objectives:**
 - ✓ Knowledge of business management functions and how business and management integrate with each other;
 - ✓ Understanding complexity, changeover, ambiguity and other business challenges;
 - ✓ Knowledge of contemporary issues in business management, including sustainability, globalization, corporate social responsibility, diversity and governance.
 - ✓ Ability to work effectively both individually and in team with others.

2.3 SEMESTERS

2.3.1 Semester 1

The theme of the semester: ORGANIZATION - AS A KNOWLEDGE CREATION ENVIRONMENT

In the first semester students will be able to accumulate the general and humanistic component by listening to courses such as economic mathematics, economics, business language, communication art. We also think that these courses are important for students not only to comply with certain provisions of the Plan-Framework (which we can not ignore), but also from the point of view of the future specialized courses they will listen to or in order to solve certain problems when developing different projects.

Microeconomics is a fundamental course that allows students to have a good start in economic science.

Management of the organization is a specialized course that will allow the initiation in the chosen specialty through the knowledge gained during the course, but also the development of the skills to work in a team, to highlight certain problems in the science of business management and to seek, at an early stage, certain solutions. A project will be developed within this course.

Learning Objectives:

- Providing students with a specific framework for understanding the fundamentals of the contemporary market economy;
- Developing the skills needed to formulate and solve various behavioral problems of the consumer, the manufacturer, the assessment of production costs etc.;
- Explaining the manifestation of economic laws at microeconomic level;
- Awareness of the importance and role of mathematical methods in shaping economic and social activity;
- Knowing the methods of higher mathematics as thoroughly as possible in order to model and manage economic phenomena;
- Analyzing concrete situations and problems and choosing the most effective methods to solve them;
- Application of modern (IT) methodologies for processing and presenting information in all disciplines in the field of economy;
- Knowledge of economic evolution, content, concepts and theories;
- Establishment of merit, continuity links and theoretical-methodological relations between different schools, doctrines and trends of economic thinking;
- Developing communication skills in English;
- Acquiring the main concepts, principles and functions of management, the logic of the evolution of managerial science;
- Developing the skills to apply individual and group decision making methods and creative approaches to their realization;
- Developing communication skills (dialogue, debate, negotiation, conflict resolution);

- Accumulating a set of knowledge about the rules of communication and conduct, and developing the appropriate skills to achieve success in communication.

Learning outcomes:

1. *Knowledge* of the foundations of the contemporary economy, the theoretical basis of market balance and imbalance, different market structures.
2. *Designing* the behavior of individual economic agents, relationships that are formed between them in different markets.
3. *Managing information* to evaluate consumer optimal choice, cost assessment of production and efficient producer operation.
4. Applying economic models in studying processes and economic phenomena.
5. Interpretation of economic issues and ways of solving under the current systemic transformations of the economic and social environment.
6. Elaboration of the models, the schemes of obtaining the results by using the specifics of the specific applications (IT) in order to automate the processing and analysis of the data.
7. Applying classical software in assessing economic operations in order to obtain timely information to be proposed as support for decision-making.
8. Carrying out the comparative study of the theoretical positions and the methodological approaches of the main representatives of the universal economic thinking.
9. Understanding the key points in speaking in a clear standard foreign language on business-related topics and produce coherent texts in a wide range of topics related to the professional field.
10. Argumentation of his / her point of view regarding a problem (e.g. why he / she applied to a post), expressing the advantages and disadvantages of the various options.
11. *Knowing* the organization of the organization's activities; management and professional realization of people within organizations.
12. Ensuring that activities are carried out in accordance with established laws and regulations; adopting optimal decisions under conditions of certainty, uncertainty, risk; promoting organizational change; analysis of the organization's internal and external environment;
13. Competencies in the conduct of meetings; optimal application of different forms of communication - written, oral, nonoral.
14. Work techniques and skills needed to perform a project.

Year of study I, semester I

	Module	ECTS	Assessment form
1.	Organization Management	8	E+P
2.	Microeconomics	5	E
3.	Economic mathematics	5	E
4.	Economic Informatics	4	E
5.	Foreign business language	4	E
6.	Art of communication and professional ethics	4	E
TOTAL		30	

At the end of the semester, which lasts for 15 weeks, the examination session takes place. In order to be admitted to each exam in part, the student must prove that he / she is ready for this exam. This is done by:

- two tests (T1,T2) that take place during the semester. The student is admitted to the exam if he / she gets both grades (greater than or equal to 5) in both tests;
- obtaining the pass grade to the current achievement (Rc), i.e. the activism shown by the student at the discipline in question during the semester and the degree of preparation for each seminar is appreciated;
- getting the promotion grade on individual work (Li). Individual work is appreciated by the student's accomplishment of tasks that have been assigned by the teacher to each student.

In order to be admitted to the exam, the student must have promotion grades for each of the components listed above. The final grade (Nf) obtained by the student after the final exam (Ef) is determined, taking into account the following:

$$Nf = 0,15 * T_1 + 0,15 * T_2 + 0,2 * Rc + 0,1 * Li + 0,4 * Ef \quad (1)$$

$$Nf = 0.15 * T_1 + 0.15 * T_2 + 0.2 * Rc + 0.1 * Li + 0.4 * Ef \quad (1)$$

To be promoted in the second semester, the student must pass the examinations in the session. If the student has arrears in any discipline, he / she has the possibility to take the exam during two additional sessions: one week - at the end of the academic year and one with a two-week period at the beginning of the next academic year.

Each discipline according to the educational plan requires a certain amount of work by the student, depending on the number of ECTS allocated to the discipline in question. An ECTS is 30 working hours. Some of these hours are performed in the auditorium, face to face with the teacher, and the other, which is larger, represents the individual work of the student. The individual work of the student is monitored and evaluated by the teacher and involves the student's elaboration of papers, the study of certain specialized sources in addition to the programme, the elaboration of projects.

Assessment is an integral part of the course unit. Teaching and learning elements at AESM are planned using different types of assessment, the use of which is strictly in accordance with the AESM Regulation on Assessment of Student Learning Activity². According to this AESM Regulation, the following forms of assessment are used:

- *Formative or progress assessment.* It is carried out throughout the training, in small and successive steps; provides an efficient periodicity to the training process, is designed to identify the strengths and weaknesses of the training, determining a sufficiently objective analysis of the mechanisms and causes of failure or success of the students. Student formative assessment is ongoing throughout the course unit / module / academic year, through knowledge and skills tests, seminar papers, practical laboratory work, and project and application implementation specific to the specialization.
- *Cumulative or final evaluation.* It takes place at the end of a training period (semester, academic year, schooling cycle). The main purpose of the cumulative assessment is to

² http://ase.md/files/documente/regulamente/interne/3.1_evaluare_stud_1.pdf

highlight the effects, efficiency, and overall learning outcomes. This type of assessment highlights the level and quality of student training by reference to the outcomes set for professional training. Final assessment methods are provided in the educational plan and can be; exam; verification; project; portfolio; defence of the bachelor project / thesis / graduate paper, depending on the graduated study programme. Assessment procedures are described in the curriculum of the discipline.

The grading system is of two kinds:

1. with grades from 1 to 10. The final grade is two digits after the comma;
2. by ECTS grading.

The assessment and grading scale of students is presented in Annex 4.

In order to enhance the quality of the teaching and satisfaction of the requirements formulated by the beneficiaries, the Business and Administration study programme is monitored and evaluated periodically through the following activities:

- Questioning students:
 - Assessment of teaching quality
 - Assessing the degree of student satisfaction with the AESM conditions and services;
- Questioning employers;
- Questioning AESM graduates.

An important role in developing / improving the educational plan and the analytical programmes is given to employers and graduates who are invited as consultants in the process of their elaboration and improvement (the form of expertise), during the organization of production and bachelor internship (the form of the corresponding agreements), while passing the bachelor's examination (problem-formulation / topics for the bachelor theses) (the participatory form) etc.

Increasingly, the teaching-learning-assessment process within AESM is carried out by using ICT tools, in particular the e-Learning platform - MOODLE. This is highly appreciated by students as they can learn depending on their personal rhythm anywhere, anytime; all course materials are concentrated in one place; can self-assess themselves, and the Forum allows students to interact with the teacher and get informed from the first source, etc.

In the first semester the students will perform a project that is based on the knowledge of the organization and its internal environment through the processes that take place within it, by knowing, identifying and characterizing the variables of the internal environment but also by knowing the external environment, by knowing and identifying the factors of direct and indirect influence. Within this project, students will demonstrate that they possess the economic terminology, they know the main economic indicators, which characterize an organization and are able to carry out the respective calculations.

2.3.2 Semester 2

The theme of the semester: DEVELOPMENT OF THE SOCIETY AS AN AMOUNT OF MACROECONOMIC PROCESSES

Semester II contains course modules that enable students to advance in the knowledge of economic sciences (macroeconomics, economics of economic units), to gain experience in project development. The project in the second semester has a general character, does not refer directly to

the specialty, but it contributes to the development of critical thinking, analysis, synthesis, drawing conclusions skills based on the analyzed materials.

Year of study I, semester II

	Module	ECTS	Assessment form
1.	Macroeconomics	5	E
2.	Economics of Economic Units	5	E
3.	Foreign business language	5	E
4.	World economy and European integration	5	E
5.	Economic, social and political development	10	E + P
TOTAL		30	

Learning objectives and outcomes

At the end of the semester, students shall be able:

- to explain the concepts of the categorical system of macroeconomics: aggregate demand, aggregate supply, labor market, money market, inflation, unemployment, macroeconomic indicators, growth, open economy;
- to gain skills in the analysis of macroeconomic phenomena;
- to know the particularities of the functioning of the markets of the national economy;
- to know the methods and mechanisms for evaluating the results at the macroeconomic level;
- to develop and evaluate balancing policies, macroeconomic processes;
- to know the most efficient methods and techniques for influencing the activity of economic units in order to maximize the results of the economic activity;
- to acquire skills in conducting economic calculations and assessing the performance of economic units
- to estimate the efficiency of resource use within economic units;
- to propose ways to improve the economic performance of the economic unit.
- to carry out the primary processing of raw statistical information, a work which results in the indicators: an advanced degree of generalization.
- to analyse and interpret the results obtained from the statistical studies and to test the assumptions regarding the future trend of phenomena and statistical processes evolution.
- to determine the role and the place of the main elements of the world economy system, to determine the impact of the community policies on the evolution of the European economy, to perform the comparative analysis of the integrationist tendencies in different regions.

Semester progression, student assessment, assessment methods, assessment types, grading system, student activity monitoring are identical to the information presented for semester I.

It should be mentioned the promotion of the study year, which in AESM is carried out in accordance with the AESM Regulation on the Promotion of the Year of Study³. The student who

³ http://ase.md/files/documente/regulamente/interne/3.6_promovare.pdf

has accumulated during the whole academic year the number of compulsory study credits provided in the educational plan for the respective year is promoted in the following year of study.

At the same time, enrolment of the student in the next year of study is conditioned by the accumulation of minimum 40 (30 for part-time education) study credits at the compulsory course units / modules provided in the Annual Study Contract for the current academic year and the accumulation of the total number of credit points provided by the educational plan for previous academic years, and the year of completion of university studies.

The elaboration of the project must lead to students' understanding of the actuality of the different components of the visions of development, moreover to the understanding that they are not mutually exclusive, but live today in theory and especially in the practice of development. We believe that this is the most open and fertile context in which a systematic reflection and an academic debate, even a political one, about the development possibilities of the contemporary society can truly be fruitful.

2.3.3 Semester 3

The theme of the semester: MARKETING AND MARKETING RESEARCH

Learning objectives and outcomes

At the end of the semester, students shall be able:

- to acquire practical skills of elaboration and validation of a simple, multiple, non-linear, linear econometric model, taking into account the working hypotheses;
- to apply econometric methods and make forecasts of the state and development of economic processes.
- to acquire the main concepts, principles and functions of corporate ethics and corporate social responsibility, the ethics of ethical behaviour;
- to develop abilities to apply methods to improve ethical behaviour.
- to develop a fair behavior; to develop judgments based on the knowledge of the social and ethical issues that arise in work or study;
- **to address ethical issues in the management field.**
- to know and monitor the factors of the marketing environment, to examine the real and potential market characteristics, to be able to identify the possible ways of market growth;
- to know the particularities of the business to business market;
- to develop marketing policy in businesses and organizations
- to use correctly the terms of the accounting language;
- to propose personal assumptions to explain accounting situations;
- to issue judgments on statements with accounting content;
- to demonstrate the practical possession of knowledge of the legal basis of merceological, commercial and expert activity, verification of the quality of goods / consignments;
- to perform a comparative study on the theoretical positions and the methodological approaches of the economic sphere elaborated by the main representatives of philosophy.

Year of study II, semester III

	Module	ECTS	Assessment form
1.	Quantitative analysis methods	8	E
2.	Marketing and market analysis	12	E + P
3.	Business culture	5	E
4.	Merchandise and expertise of consumer goods	5	E
	TOTAL	30	

In the third semester, the volume of work done by students in the project-based teams continues to grow. We considered that the knowledge that students gained at this stage, along with the courses they listen to in parallel, will allow them to conduct research on marketing and market analysis.

The project developed by the student will include a complex problem based on marketing research. Students have to demonstrate skills to collect, analyze, and interpret information using research methods and techniques to learn about the environment, identify business opportunities, anticipate market trends. Students need to be aware that marketing research has a broad sphere of activity, becoming a necessity for each economic agent in the conditions of increasing the complexity of environmental factors. The basis for marketing policy requires information with recent, relevant and sufficient data. Areas of marketing research are very numerous and they are determined according to the activity of the economic agent and the purpose.

2.3.4 Semester 4

The theme of the semester: THE ENTERPRISE AND ITS DECISIVE ROLE IN THE MARKET ECONOMY

Learning objectives and outcomes

At the end of the semester, students shall be able:

- to know the particularities of the manifestation and use of economic laws in the internal production relations, the current management system and the manifestation of the basic functions of management - planning, organization, control, motivation - within the production activity.
- to understand legal relationships specific to the business environment; principles, concepts and legal institutions specific to the business environment
- to apply qualitative methods of analysis and processing of financial information;
- to use financial regulations and norms, to know the sources of financing, resource allocation criteria, financing policy, investments and dividends applied within the enterprise;
- to know and apply methods of managing financial resources and to analyze the alternatives for the mobilization and placement of financial resources in order to choose the optimal option;
- to foresee the financial indicators of the enterprise's activity and to develop action directions for their achievement;

- to consolidate the theoretical managerial skills in the real economic environment of a company / institution, to find the appropriate methods for improving the performance of the company's activity;
- to increase the awareness of the employment opportunities existing on the national and European labor market in the studied field;
- to promote excellence in training and research, in the processing, transmission and use of knowledge in substantiating decision-making processes;
- to realize the possibilities of "transfer" and "use" of the knowledge acquired in the faculty in the real economy;
- to identify and understand entrepreneurial actions, to identify the entrepreneur's skills and his / her own skills; to know the process of initiation and development of small and medium enterprises (own and third parties); identify sources of funding.
- to be aware of ensuring the launching and carrying out of entrepreneurial activities in accordance with the established laws and regulations; adopt optimal decisions in the process of launching and developing the business; analysis of the internal and external environment of the business; adjust the activity to customer requirements in order to increase the efficiency and effectiveness of entrepreneurial activities.

Year of study II, semester IV

	Module	ECTS	Assessment form
1.	Accounting and analysis in business	10	E
2.	Company management	16	E + P
3.	Business Law	4	E
	TOTAL	30	

In the fourth semester students will develop a complex business management project based on the knowledge and skills they have gained over the course. The project will allow analysis of all aspects of the company's activity, highlighting certain problems in its activity, searching for solutions. The enterprise may be a real (preferably) or a virtual one.

In the fourth semester, the project will be a more complex one, which will also be based on student internships within a company. Students will have to demonstrate good knowledge of all processes in the enterprise, the interdependence of the enterprise's functions, and a pertinent analysis of its work.

2.3.5 Semester 5

The theme of the semester: SETTING UP AND DEVELOPMENT OF A BUSINESS

Learning objectives and outcomes

At the end of the semester, students shall be able:

- to apply the knowledge in the field of performing the basic function of management, planning, within the economic units, in order to manage the resources correctly and to adapt the economic units to the market requirements.
- to develop appropriate strategies and policies in a changing environment;

- to develop skills to assess and minimize entrepreneurial risks
- to define the concepts of economic activity under conditions of risk and uncertainty;
- to establish the functional correlation between risk level and economic outcome
- to apply the knowledge in determining the level of risk in business by using quantitative methods (statistical-mathematical, the use of the expert method etc.), including specific indicators and financial instruments for hedging risks.
- to estimate various concepts for the evaluation of the results of the activity under conditions of uncertainty and risk;
- to develop risk management strategies and models
- to acquire the main concepts, principles and functions of quality management, logic of science evolution quality management;
- to develop skills for applying quality management methods and standards for the quality management system.
- to use the quality management system documents, determine the ways of disseminating the information; to be familiar with the requirements for the development, modification, dissemination of documents;
- to develop skills for analyzing and evaluating job positions;
- to demonstrate skills in human resource hiring; training and professional development of staff.
- to design and use marketing information systems, marketing research to solve strategic and tactical marketing problems, use current internal and external information to substantiate tactical marketing decisions
- to apply in practice the methods of survey, observation, experiment, documentation, techniques for quantitative and qualitative data analysis, including using the computer
- to distinguish the tangencies and differences in financial and managerial accounting;
- to know the legal framework governing accounting.

Year of study III, semester V

	Module	ECTS	Assessment form
1.	Setting up and developing a business	21	E+P
2.	Quality management	5	E
3.	Optional course	4	E
	TOTAL	30	

The elaboration of the project in semester V will require from the students a deep knowledge of Moldovan legislation in the field of business set up and development, the stages of setting up an enterprise, identifying and calculating the risks related to the business development, the elaboration of a business plan.

2.3.6 Semester 6

The theme of the semester: INTEGRATED MANAGEMENT OF THE COMPANY

Learning objectives and outcomes

At the end of the semester, students shall be able:

- to develop the skills of applying corporate management methods and legislative acts in corporate decision making.
- to ensure the conduct of collaboration activities between corporate management subjects; to determine the main forms of corporate unions to streamline corporate activity; to use methods of protection against hostile taking;
- to determine the rights and obligations of management bodies in corporate governance; to develop fair and efficient working relationships;
- to develop analytical and synthesis skills, effective communication; organizational qualities; to practice the experimental application of the theoretical knowledge acquired during the studies
- to learn how to work in an organization different from that of the university, integrate into existing work teams and actively participate in current activities
- to look for ways to apply in-depth theoretical knowledge to his/her training courses, to better relate the education and the theoretical training students receive within the faculty with the requirements of the labor market.
- to apply the theoretical knowledge in organizing and carrying out activities in the functional structures in which the practice takes place;
- to deepen the knowledge of the legislation and the rules in force regarding the activity of the organization and on the basis of which the specific operations are carried out.
- to develop written and oral scientific communication in the elaboration and presentation of the bachelor thesis;
- to use digital action tools, to create documents and to use basic electronic research services;
- to apply at least one foreign language for the use of foreign language texts in the elaboration of the thesis;
- to assume the ethical responsibility for the results of the research included in the bachelor thesis;

Year of study III, semester VI

	Module	ECTS	Assessment form
1.	Corporate Management	4	E
2.	Optional course	4	E
3.	Bachelor's project	22	E + P
	TOTAL	30	

The project in the 6th semester will be elaborated in the form of a bachelor thesis, i.e. the completion paper of the undergraduate studies. The bachelor's thesis must demonstrate that the student knows and can use the research methods specific to the economic and managerial field, must be able to select the relevant literature from the researched field, understand and reflect on the theory, give the opinion of the discussed, demonstrating critical thinking.

According to the Regulation on the Bachelor's Degree Completion Exam in AESM⁴, the Bachelor's Degree Exam in AESM includes a single test: the public defence of the Bachelor's thesis.

Students who have completed the educational plan in full and have accumulated the number of credits set for the Business and Administration study programme are admitted to the bachelor's degree completion exam. The lists of students admitted to the bachelor's degree completion examination, drafted by faculty deans and approved by AESM rector one month before the start of the bachelor's examination, are submitted to the Commission of the Bachelor's Degree Completion examination.

The bachelor thesis may be elaborated in a team, in accordance with the provisions of the Regulation regarding the team development of the bachelor / master's degree thesis⁵.

In the process of defending the bachelor thesis, the graduate is assessed according to the following criteria:

- a) critical understanding of the notions, concepts, theories and principles specific to the field of training;
- b) demonstration of the generic and specific skills acquired by the graduate during the studies;
- c) carrying out the research and demonstrating the capacity to apply the theoretical and methodological knowledge in the elaboration of practical solutions specific to the field of professional training;
- d) the use of relevant knowledge in the field of training in setting up and supporting the arguments, the conclusions in the process of elaboration and defence of the bachelor thesis;
- e) demonstration of communication skills in the process of defending the bachelor thesis (well-structured message, appropriate language, use of technical means, politeness, prompt answers to the subject).

The bachelor's degree thesis is evaluated with grades based on the grading scale from 10 to 1, the minimum promotion grade being 5. It will be done the conversion of the grades into the ECTS grading scale, respectively:

Grade at the bachelor's degree completion exam	ECTS Scale
10	A
9	B
8	C
7	D
5/6	E
4	FX
1/2/3	F

The final grade awarded as a result of the bachelor's degree thesis defence is determined by the members of the Commission of the Bachelor's Degree Completion examination.

⁴ http://ase.md/files/documente/regulamente/interne/3.2_examen_licenta.pdf

⁵ http://ase.md/files/documente/regulamente/interne/3.4_teza_echipa.pdf

Thus, the progress through the studies during the 6 semesters, according to the present plan, implies the accumulation of 91 study credits following the hearing of the theoretical courses and the accumulation of 89 study credits as a result of the realization and defence of the projects elaborated in the team. So the implementation of this Pilot Programme [Annex 2] will, in theory, allow us to reach the 50:50 ratio of lectures and teamwork. We are aware that even reaching this ratio will not place us on the level of use and implementation of PBL, along with the Aalborg University, where this model was initiated in 1972, and the experience currently used has been accumulated over the course of 45 years.

For each module included in the educational plan, a curriculum will be developed, specifying the number of hours, including direct and individual work, objectives, learning outcomes, module content, course structure, assessment method, etc.

3 CONCLUDING REMARKS

The implementation of problem-based learning in AESM, as a pilot-programme in the Business and Administration bachelor's degree study programme, involves a revolution in the study process of this programme [Annex 1]. We started from the fact that learning outcomes not only have to provide knowledge but also to develop both professional and personal skills and competences. We recognize that today our programmes fail mainly in the areas of professional skills and competences, as well as certain personal skills (interpersonal communication, professional orientation and employability and adaptation to the labor market).

Activities that should lead to the development of skills and competences (case studies, projects, internship) are inadequate or formally conducted (e.g. student internships).

By the PBL implementation, we want to bring students closer to the real life faced by economic agents, to facilitate student mobility by deepening English language knowledge, especially in specialized disciplines, but also by offering quality training closer to one offered in European universities [Annex 4].

Obviously, all this will require time and effort both from the teachers, from the university, but also from the economic agents, whom we want to fully involve in the training activity through various joint activities. We want to propose, in partnership with economic agents, a considerable number of joint bachelor / master project topics or research themes. We believe it is necessary to develop the involvement of economic agents in such activities as student internships, student research activities, case studies, projects and other activities included in the study programme.

By implementing PBL, we want to ensure the stimulation of innovation and creativity, including the entrepreneurship spirit.

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Annex 1: Our vision on the bachelor's degree programme Business and Administration

6.Sem	Corporate Management 5 ECTS	Elective Course 5 ECTS	<i>BACHELOR'S DEGREE PROJECT</i> 20 ECTS		
5.Sem	Quality management 5 ECTS	Elective Course 4 ECTS	<i>SETTING UP AND DEVELOPING A BUSINESS, project</i> 21 ECTS		
4. Sem	Business Accounting and Analysis 10 ECTS	Business law 4 ECTS	<i>COMPANY'S MANAGEMENT, project</i> 16 ECTS		
3.Sem	Quantitative methods of analysis 8 ECTS	Business culture 5 ECTS	Commodity science and expertise of consumer goods 5 ECTS	<i>MARKETING AND MARKET ANALYSIS, project</i> 12 ECTS	
2.Sem	Macroeconomics 5 ECTS	Economy of Economic entities 5 ECTS	Foreign Business - English 5 ECTS	World Economy 5 ECTS	<i>ECONOMIC, SOCIAL AND POLITICAL DEVELOPMENT, project</i> 10 ECTS
1.Sem	Microeconomics 5 ECTS	Economic Mathematics 5 ECTS	Economic Informatics 4 ECTS	Foreign Business - English 4 ECTS	The art of Communication and Professional Ethics 4 ECTS THE BASICS OF ORGANIZATION MANAGEMENT, project 8 ECTS

Annex 2. Bachelor`Degree programme Business and Administration – Romanian

MINISTERUL EDUCAȚIEI AL REPUBLICII MOLDOVA

ACADEMIA DE STUDII ECONOMICE DIN MOLDOVA

COORDONAT
Ministerul Educației
al Republicii Moldova

Nr. de înregistrare _____
 -01-1820

APROBAT
Senatul ASEM
4 mai 2017
Proces verbal nr. 10



Rector ASEM,
academician,
Gr. BELOSTECNIC

PLANUL DE ÎNVĂȚĂMÎNT

Ciclul I – studii superioare de licență, nivelul de calificare ISCED - 6

Facultatea: **Business și administrarea afacerilor**

Domeniul general de studii: **36. Științe economice**

Domeniul de formare profesională: **363. Business și administrare**

Specialitatea: **363.1. Business și administrare**

Numărul total de credite de studiu: **180**

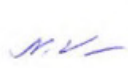

Titlul obținut: **Licențiat în științe economice**

Baza admiterii: **Diploma de bacalaureat sau un act echivalent de studii, diploma de studii superioare**

Limba de instruire: **Engleză - Română**

Forma de organizare: **Învățământ cu frecvență**

CHIȘINĂU, 2017

 coordonat 

NOTA EXPLICATIVĂ

I. Introducere

Necesitățile și rigorile societății contemporane în formarea specialiștilor în domeniul Business și Administrare rezultă din prioritățile economice și sociale ale Republicii Moldova în perioada actuală: integrarea în circuitul economic mondial, descentralizarea activităților economice, sporirea autonomiei decizionale, formarea unei viziuni manageriale reformatoare, orientată spre performanță economică și dezvoltare socială durabilă, etc. Concomitent, actualmente, esențial pentru reușita la nivel național este ca procesul de schimbare să pornească și să se realizeze de la nivelul organizației: fie ea privată sau publică, economică sau socială. În acest context managerul modern trebuie să apară și să acționeze ca inițiator, susținător și promotor al schimbării și inovării. Realizarea cu succes a acestor decizii sociale și profesionale în diverse tipuri de întreprinderi și organizații publice/private implică cunoștințele și abilitățile formate la absolvenții domeniului Business și Administrare. Astfel, pentru a fi competitiv pe piața internă și externă muncii, aceștia trebuie să posede și să aplice prompt un set de abilități și competențe profesionale și sociale și un vast instrumentar managerial.

În deplină conformitate cu misiunea și obiectivele strategice ale ASEM, acest program de formare profesională este orientat spre realizarea cerințelor majore înaintate de piața forței de muncă și are scopul de a forma manageri/antreprenori competenți, capabili să se dezvolte continuu, să sporească performanțele proprii și organizaționale și să formeze un mediu organizațional și o echipă orientată și capabilă să satisfacă cerințele clienților.

Elaborarea programului s-a realizat prin următoarele 5 etape:

- 1) **Fundamentare (stabilirea elementelor de intrare).** S-a efectuat: analiza cadrului legal, documentelor normative și de reglementare cu referire la procesele educaționale în învățământul superior; analiza prealabilă referitoare la nevoile specifice exprimate de diversele categorii de clienți, beneficiari și parteneri (cadre științifico-didactice, absolvenți, studenți și organizații interesate din diferite domenii de activitate); analiza celor mai noi direcții de dezvoltare și cercetare în domeniul de formare; analiza comparativă a planurilor de studii pe baza unor modele de la universități de prestigiu din țară și străinătate; analiza mediului de studiu și a metodologiilor specifice actuale de predare în domeniu; analiza și evaluarea prealabilă a propunerilor venite din partea mediului academic, unor experți externi/studenți; analiza observațiilor și a neconformităților constatate pe parcursul anilor universitari precedenți; elaborarea criteriilor de evaluare a instruirii;
- 2) **Predeterminarea rezultatelor (elemente de ieșire)** – au fost stabilite rezultatele învățării (competențele), pe care trebuie să le atingă studenții, prin alegerea dintr-o gamă largă de finalități a acelor relevante pentru studenți și piața forței de muncă, o parte din ele fiind determinate prin feedbackul cu aceștia;
- 3) **Asigurarea unui proces eficient și eficient de învățare** – s-a luat decizia asupra modului în care studenții trebuie să fie ghidați și susținuți pentru a realiza obiectivele și a atinge finalitățile programului de studiu. Au fost stabilite și selectate: unitățile de curs adecvate pentru formarea competențelor proiectate; volumul de muncă necesar (punctele credite) pentru realizarea fiecărui curs; consecutivitatea și modalitatea predării cursurilor; selectarea, instruirea și perfecționarea cadrelor științifico-didactice în vederea asigurării disciplinelor prevăzute de planurile de studii, asigurarea unui suport bibliografic adecvat;
- 4) **Stabilirea modului de evaluare** – s-a luat decizia asupra criteriilor de evaluare și a modului în care se va determina dacă și când studenții au atins finalitățile de studiu proiectate; s-a elaborat conținutul procesului de evaluare care asigură continuitatea procesului de studiu;
- 5) **Redactarea, analiza, verificarea, validarea și aprobarea planului de studii.**

II. Concepția formării specialistului

Programul de studii este destinat formării specialiștilor pentru activități ce se referă la management, inițierea și administrarea cu succes a afacerilor, precum și conducerii diferitor subdiviziuni ale organizațiilor. La nivel de unitate economică specialistul din domeniul Business și Administrare este cel care trebuie să asigure buna desfășurare a tuturor activităților: planificarea activității economice;

formarea și perfecționarea structurii organizatorice a firmei, asigurarea cu resurse economice, producerea / prestarea serviciilor; vânzările; managementul resurselor umane, funcționarea eficientă a sistemelor informațional și decizional; controlul realizării obiectivelor organizaționale, crearea unui climat organizațional pozitiv, constituirea unei echipe productive. În același timp, absolvenții domeniului de formare Business și Administrare sunt potențialii antreprenori care vor crea locuri de muncă și noi perspective în progresul socio-economic al țării. În acest sens ei vor fi instruiți în identificarea și valorificarea ideilor de afaceri, propagarea și stimularea spiritului întreprinzător.

Absolvenții programului au posibilitatea să execute o varietate de activități comerciale și manageriale, în entități economice și organizații din diverse ramuri ale economiei naționale, atât la nivel de agenți economici, cu diferite forme de proprietate (de stat, privată sau mixtă), cât și la nivel național. Absolvenții își pot continua studiile la ciclul II de studii superioare – Master.

În acest context, respectivul program de formare profesională are drept obiectiv major să formeze *personalități întregi și competente profesional*, capabili de a face față cerințelor actuale și de perspectivă a pieței forței de muncă locale și internaționale, care vor:

- conștientiza importanța practicării unor activități eficiente și eficiente în viața profesională și cea cotidiană;
- forma și dezvolta competențele necesare pentru autorcalizare și obținerea succesului în activitatea profesională și de afaceri;
- acumula un volum de cunoștințe și crea valoare academică adăugată în domeniul Business și Administrare, care va servi drept bază pentru dezvoltarea personală și profesională.

Totodată, programul va dezvolta la studenți următoarele **competențe - cheie generice**: De analiză-diagnostic a situației; Competența de identificare și soluționare a problemelor; Spirit de inițiativă și antreprenorial; Gândire critică și strategică; Competența de muncă în echipă; Competența de a preîntâmpina și soluționa conflictele, Competența de autoinstruire și învățare; De fundamentare a deciziilor; Creativitate; Competența de comunicare utilizând și o limbă străină; Competența de operare cu tehnologia informațională; Înțelegere pentru culturile și obiceiurile altor popoare.

Pentru a realiza cu succes această ofertă educațională, în ASEM este creat un *mediu educațional plăcut, calitativ și productiv, centrat pe student*, care se bazează pe următoarele principii de organizare a formării personale, sociale și profesionale:

- Crearea unui mediu de învățare autentic, apropiat de mediul afacerilor și relevant intereselor persoanei, pentru realizarea obiectivelor proiectate: însușirea de cunoștințe, formarea de deprinderi și de competențe; aplicarea acestora pe parcursul studiilor și pe perioada stagiului de practică;
- Îmbinarea aspectelor de natură teoretică cu cultivarea unor abilități legate de realitățile activităților din domeniul administrării afacerilor;
- Structurarea demersurilor educaționale pe concepția “învață acționând” și dezvoltarea unor dexterități de ordin practic;
- Valorificarea unor tehnici moderne de instruire, inclusiv de dezvoltare a creativității.

III. Finalități de studiu

Finalitățile se vor realiza prin valorificarea conținutului unităților de curs, dar și prin utilizarea adecvată a activităților de predare - învățare - cercetare – autodezvoltare – evaluare.

La finalizarea studiilor studentul va fi competent:

1. să demonstreze cunoștințe funcționale în următoarele domenii: teorie economică – geneză, esență, metodologia și metoda, legități economice; management – evoluția științei management, conținutul principalelor procese și funcții manageriale; marketing – elaborarea și realizarea politicii de marketing a întreprinderii, piețe – studierea, funcționarea și dezvoltarea piețelor de resurse, bunuri și servicii; clienți – factori de influență, procese de cumpărare și consum, modele de consum; drept – cunoașterea legislației privind antreprenoriatul și întreprinderile, micul business, protecția consumatorului, publicitatea din Republica Moldova; finanțe – managementul finanțelor, utilizarea contabilității și altor sisteme financiare; sisteme informaționale – dezvoltarea și exploatarea sistemelor informaționale cu impact asupra realizării funcțiilor manageriale în organizație;
2. să inițieze și să dezvolte o afacere;
3. să cunoască metode de identificare a ideilor de afaceri și evaluare a oportunităților;

4. să posede metode de evaluare și minimizare a riscurilor în afaceri;
5. să asigure desfășurarea activităților în conformitate cu legislația în vigoare;
6. să ajusteze activitatea organizației la cerințele mediului ambiant;
7. să adopte decizii optime în condiții de risc și incertitudine;
8. să elaboreze structura organizatorică a organizației;
9. să evalueze și să îmbunătățească eficiența și eficacitatea activităților din organizație;
10. să se automotiveze și să sporească eficiența propriei activități;
11. să formeze echipe și să dezvolte colaborarea;
12. să motiveze și să creeze relații de muncă productive;
13. să aplice sisteme de management al calității;
14. să comunice convingător și eficient, inclusiv într-o limbă de circulație internațională;
15. să utilizeze și să gestioneze eficient resursele disponibile;
16. să organizeze procesul de cercetare în domeniul business și administrare;
17. să rezolve probleme din domeniul administrării afacerilor;
18. să colaboreze și să coordoneze realizarea proiectelor;
19. să cunoască aria de competență și implicare a managerilor de la diferite niveluri ierarhice;
20. să aplice principiile, valorile și normele eticii profesionale.

Calendarul universitar

(în săptămâni)

Anul de studii	Activități didactice		Sesiuni de examene		Stagii de practică	Vacanțe		
	Sem. I	Sem. II	Sem. I	Sem. II		Iarnă	Primăvară	Vară
I	15	15	4	4	-	3	1	10
II	15	11	4	4	4	3	1	10
III	15	5	4	1	7	3	1	-

Planul procesului de studii pe semestre/ani de studii

ANUL I de STUDII

SEMESTRUL I

Cod	Denumirea unității de curs	Total ore			Număr de ore pe tipuri de activități			Ore pe săptămână în auditoriu				Forma de evaluare	Nr. puncte credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator/ Practice	din care					
								Total	Curs	Seminar	Lab./Pract.		
F.01.O.001.21	Microeconomie	150	60	90	30	30	-	4	2	2	-	E	5
F.01.O.002.62	Matematică economică	150	60	90	30	30	-	4	2	2	-	E	5
G.01.O.003.63	Informatică economică	150	60	90	14	-	46	4	1	-	3	E	5
F.01.O.004.32	Istoria gândirii economice	150	44	106	30	14	-	3	2	1	-	E	5
F.02.O.005.11	Fundamentele managementului organizației /Proiect	150	60	90	30	30	-	4	2	2	-	E	5
G.01.O.006.33	Limba străină de afaceri I (eng.)	150	90	60	-	90	-	6	-	6	-	E	5
G.01.O.007.15	Educație fizică I	30	30	-	-	30	-	2	-	2	-	V	-
Total		930	404	526	134	224	46	27	9	15	3	6E, 1V	30

ANUL I de STUDII

SEMESTRUL II

Cod	Denumirea unității de curs	Total ore			Număr de ore pe tipuri de activități			Ore pe săptămână în auditoriu				Forma de evaluare	Nr. puncte credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator/ Practice	din care					
								Total	Curs	Seminar	Lab./Pract.		
F.02.O.008.21	Macroeconomie	150	60	90	30	30	-	4	2	2	-	E	5
U.01.O.009.24	Arta comunicării și etica profesională /Proiect	150	60	90	30	30	-	4	2	2	-	E	5
F.02.O.010.21	Economia unităților economice	150	60	90	30	30	-	4	2	2	-	E	5
F.02.O.011.62	Statistică	150	60	90	30	30	-	4	2	2	-	E	5
U.02.O.012.31	Economie mondială și integrare europeană	150	44	106	30	14	-	3	2	1	-	E	5
G.02.O.013.33	Limba străină de afaceri II (eng.)	150	90	60	-	90	-	6	-	6	-	E	5
G.02.O.014.15	Educație fizică II	30	30	-	-	30	-	2	-	2	-	V	-
Total		930	404	526	150	254	-	27	10	17	-	6E, 1V	30

ANUL II de STUDII

SEMESTRUL III

Cod	Denumirea unității de curs	Total ore			Număr de ore pe tipuri de activități			Ore pe săptămână în auditoriu				Forma de evaluare	Nr. puncte credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator/Practice	din care					
								Total	Curs	Seminar	Lab./Pract.		
F.03.O.015.62	Econometrie	150	60	90	30	30	-	4	2	2	-	E	5
S.03.O.016.11	Antreprenoriat și cultura afacerilor /Proiect	240	120	120	60	60		8	4	4		2E	8
F.03.O.017.12	Marketing general și business to business	150	90	60	60	30	-	6	4	2	-	E	5
S.03.O.018.52	Bazele contabilității	120	60	60	30	30	-	4	2	2	-	E	4
S.03.O.019.14	Merceologie și expertiza mărfurilor de larg consum	120	60	60	30	14	16	4	2	2	-	E	4
Total		780	390	390	210	164	16	26	14	12	-	6E	26
O disciplină opțională													
U.03.A.020.32	Filosofie socială și economică	120	44	76	30	14	-	3	2	1	-	E	4
U.03.A.020.32	Politiologic	120	44	76	30	14	-	3	2	1	-	E	4
Total discipline obligatorii și opționale		900	434	466	240	178	16	29	16	13	-	7E	30

ANUL II de STUDII

SEMESTRUL IV

Activitatea didactică – 11 săptămâni

Cod	Denumirea unității de curs	Total ore			Număr de ore pe tipuri de activități			Ore pe săptămână în auditoriu				Forma de evaluare	Nr. puncte credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator/Practice	din care					
								Total	Curs	Seminar	Lab./Pract.		
S.04.O.021.11/52	Managementul Operațiunilor /Proiect	300	104	196	55	55		10	7	3		3E	10
F.04.O.022.23	Dreptul Afacerilor	120	44	76	30	14	-	4	3	1	-	E	4
S.04.O.023.52	Contabilitatea întreprinderii	90	44	46	22	22	-	4	3	1	-	E	3
F.04.O.024.42	Finanțele întreprinderii	120	44	76	30	14	-	4	3	1	-	E	4
S.04.O.025.11	Practica în producție	180	160	20								E	6
Total		810	396	414	134	102	-	22	16	6	-	7E	27
O disciplină opțională													
S.04.A.026.13	Economia Turismului	90	44	46	30	14	-	4	3	1	-	E	3
S.04.A.026.13	Turism Internațional	90	44	46	30	14	-	4	3	1	-	E	3
Total discipline obligatorii și opționale		900	440	560	164	116	-	26	19	7	-	8E	30

ANUL III de STUDII

SEMESTRUL V

Cod	Denumirea unității de curs	Total ore			Număr de ore pe tipuri de activități			Ore pe săptămână în auditoriu				Forma de evaluare	Nr. puncte credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator/Practice	din care					
								Total	Curs	Seminar	Lab./Pract.		
S.05.O.027.11	Gestiunea firmei /Proiect	420	180	240	90	90	-	12	6	6	-	3E	14
S.05.O.028.22	Managementul resurselor umane	120	60	60	30	30	-	4	2	2	-	E	4
S.05.O.029.12	Cercetări de marketing	120	60	60	30	30	-	4	2	2	-	E	4
Total		660	300	360	150	150	-	20	10	10	-	5E	22
O disciplină opțională I													
S.05.A.030.11	Managementul serviciilor	120	44	76	22	22	-	3	2	1	-	E	4
S.05.A.030.11	Managementul aprovizionării și vânzărilor	120	44	76	22	22	-	3	2	1	-	E	4
S.05.A.030.61	Sisteme informaționale în management	120	44	76	22	-	22	3	2	-	1	E	4
O disciplină opțională II													
S.05.A.031.12	Logistica	120	44	76	22	22	-	3	2	1	-	E	4
S.05.A.031.12	Tehnici de vânzări	120	44	76	22	22	-	3	2	1	-	E	4
Total discipline obligatorii și opționale		900	388	512	194	194/172	0/22	26	14	12/11	0/1	7E	30

ANUL III de STUDII

SEMESTRUL VI

Activitatea didactică – 5 săptămâni

Cod	Denumirea unității de curs	Total ore			Număr de ore pe tipuri de activități			Ore pe săptămână în auditoriu				Forma de evaluare	Nr. puncte credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator/Practice	din care					
								Total	Curs	Seminar	Lab./Pract.		
S.06.O.032.11	Management corporativ	120	52	68	28	24	-	13	7	6	-	E	4
S.06.O.033.11	Practica de licență	360	280	80	-	-	-	-	-	-	-	E	12
O disciplină opțională													
S.06.A.034.11	Management comparat	120	52	68	28	24	-	13	7	6	-	E	4
S.06.A.034.11	Management inovativ	120	52	68	28	24	-	13	7	6	-	E	4
Total		900	384	516	56	48	-	26	14	12	-	3E	20
Total discipline obligatorii și opționale în planul de învățământ		5160	2454	2806								37E 2V	170
<i>Examenul de licență</i> (elaborarea și susținerea tezei de licență)												E	10
Total credite de studii acumulate													180

Stagiile de practică

Stagiile de practică		Sem.	Durata nr. săpt.	Perioada	Număr de credite
1.	Practica în producție	IV	4	Februarie	6
2.	Practica de licență	VI	7	Martie - Mai	12

Examenul de licență

Nr. crt.	Denumirea activității	Perioada
1.	Susținerea tezei de licență	Sem. VI, Mai - Iunie

Discipline facultative (la libera alegere)

Denumirea disciplinei	Anul	Sem.	Număr de ore pe tipuri de activități			Evaluări	Nr. de credite
			C	S	L/P		
1. Limba română pentru alolingvi	I	I		30	-	E	2
2. Limba străină II (fr., germ., span.)	I-III	II-V		30	-	E	2
3. Sociologie	I	II	16	14	-	E	2
4. Ecologie și protecția mediului	I	II	16	14	-	E	2
5. Programare WEB	I	II	16	14	-	E	2
6. Drept comunitar	I	II	16	14	-	E	2
7. Deontologia asistentului social	I	II	16	14	-	E	2
8. Cultura comunicării	I	II	16	14	-	E	2
9. Fiabilitatea sistemelor	I	II	16	14	-	E	2
10. Tehnologiile aplicațiilor Office	I	II	16	14	-	E	2
11. Etica profesională	I	II	16	14	-	E	2
12. Economie mondială și integrare europeană	I	II	16	14	-	E	2
13. Design și estetica mărfurilor	II	III	16	14	-	E	2
14. Cibernetica sistemelor economice	II	III	16	14	-	E	2
15. Metodologia cercetărilor științifico-economice	II	III	16	14	-	E	2
16. Istoria administrației publice din Republica Moldova	II	III	16	14	-	E	2
17. Migrație și dezvoltare	II	III	16	14	-	E	2
18. Studiul comunicării publice	II	III	16	14	-	E	2
19. Metode numerice	II	III	16	14	-	E	2
20. Asamblarea și depanarea PC	II	III	16	14	-	E	2
21. Psihologia comunicării de afaceri	II	III	16	14	-	E	2
22. Filosofia dreptului	II	III	16	14	-	E	2
23. Geoeconomia	II	IV	16	14	-	E	2
24. Oenologie	II	IV	16	14	-	E	2
25. Bazele nutriției	II	IV	16	14	-	E	2
26. Dreptul European	II	IV	16	14	-	E	2
27. Activitatea instituțiilor de credit nebancaire	II	IV	16	14	-	E	2
28. Finanțarea nebancaară a întreprinderilor mici și mijlocii	II	IV	16	14	-	E	2
29. Asigurări sociale și medicale	II	IV	16	14	-	E	2
30. Asistența socială a șomerilor	II	IV	16	14	-	E	2
31. Comunicare birotică și de secretariat	II	IV	16	14	-	E	2
32. Politici de ocupare a forței de muncă	II	IV	16	14	-	E	2
33. Grafica interactivă	II	IV	16	14	-	E	2
34. Sisteme de operare II	II	IV	16	14	-	E	2
35. Aditivi și ingrediente în alimentația publică	II	IV	16	14	-	E	2
36. Drept constituțional comparat	II	IV	16	14	-	E	2
37. Tranzacții internaționale	III	V	16	14	-	E	2
38. Comerț internațional	III	V	16	14	-	E	2
39. Design și estetică în marketing	III	V	16	14	-	E	2
40. Igienă și sanitarie	III	V	16	14	-	E	2
41. Psihologia comunicării	III	V	16	14	-	E	2
42. Practici bursiere internaționale	III	V	16	14	-	E	2
43. Corespondența economică în limba străină	III	V	16	14	-	E	2
44. Protecția proprietății intelectuale	III	V	16	14	-	E	2
45. Voluntariat și parteneriat în asistența socială	III	V	16	14	-	E	2
46. Comunicare didactică	III	V	16	14	-	E	2
47. Sisteme informatice contabile	III	V	16	14	-	E	2
48. Economia informațională tenebră	III	V	16	14	-	E	2
49. Control și audit financiar	III	V	16	14	-	E	2
50. Grafica pe calculator	III	V	16	14	-	E	2
51. Urbanism comercial și amenajarea teritoriului	III	V	16	14	-	E	2
52. Corespondența juridică și economică	III	V	16	14	-	E	2

Matricea corelării finalităților de studiu a programului cu cele ale unităților de curs

Cod	Unitatea de curs	Finalități de studiu																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F.01.O.001.21	Microeconomie	V					V	V								V					
F.01.O.002.62	Matematică economică	V						V													
G.01.O.003.63	Informatică economică	V						V								V					
F.01.O.004.32	Istoria gândirii economice	V																	V		
F.02.O.005.11	Fundamentele managementului organizației	V	V	V		V		V	V	V	V	V	V	V	V	V	V	V		V	V
G.01.O.006.33	Limba străină	V										V	V		V						
G.01.O.007.15	Educație fizică I																				
F.02.O.008.21	Macroeconomie	V					V	V								V					
U.01.O.009.24	Arta comunicării și etica profesională	V					V					V	V		V						V
F.02.O.010.21	Economia unităților economice	V					V	V		V						V	V				
F.02.O.011.62	Statistică	V		V	V			V							V						
U.02.O.012.31	Economie mondială și integrare europeană	V				V															
G.02.O.013.33	Limba străină de afaceri	V										V	V		V						
G.02.O.014.15	Educație fizică II																				
F.03.O.015.62	Econometrie	V			V			V													
S.03.O.016.11	Antreprenariat și cultura afacerilor	V	V	V	V	V	V	V	V		V	V	V	V						V	V
F.03.O.017.12	Marketing general și business to business	V					V	V				V				V					
S.03.O.018.52	Bazele contabilității	V				V	V								V					V	V
S.03.O.019.14	Merceologie și expertiza mărfurilor de larg consum	V														V					
U.03.A.020.32	Filosofie socială și economică	V														V				V	V
U.03.A.020.32	Politologie	V														V				V	V
S.04.O.021.11/5 2	Managementul Operațiunilor	V		V	V	V	V			V	V	V	V	V	V	V	V	V	V	V	V
S.04.O.022.11	Practica în producție	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
F.04.O.023.23	Dreptul Afacerilor	V			V	V															
F.04.O.024.42	Finanțele întreprinderii	V						V													
S.04.O.025.52	Contabilitatea întreprinderii	V				V								V						V	V
S.04.A.026.13	Economia Turismului	V						V		V											
S.04.A.026.13	Turism Internațional	V						V													
S.05.O.027.11	Gestiunea firmei	V	V	V	V	V	V	V		V		V	V	V	V	V	V	V	V	V	V
S.05.O.028.22	Managementul resurselor umane	V						V				V	V		V						
S.05.O.029.12	Cercetări de marketing	V						V				V			V	V	V				
S.05.A.030.11	Managementul serviciilor	V						V				V			V						
S.05.A.030.11	Managementul aprovizionării și vânzării	V						V							V	V	V				
S.05.A.030.61	Sisteme informaționale în management	V													V						
S.05.A.031.12	Logistica	V						V													
S.05.A.031.12	Tehnici de vânzări	V						V					V	V		V	V				

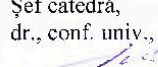
S.06.O.032.11	Management corporativ	V	V		V	V	V		V			V	V	V				V	V		
S.06.O.033.11	Practica de licență	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
S.06.A.034.11	Management comparat	V				V							V							V	
S.06.A.034.11	Management inovațional	V				V						V	V							V	
	Examenul de licență: Elaborarea și susținerea tezei de licență	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V

Examinat și avizat
CONSILIUL FACULTĂȚII
BUSINESS ȘI ADMINISTRAREA AFACERILOR
Proces verbal nr. 4 din 26.04.2017

Decan,
dr., conf. univ.,  Angela SOLCAN

Elaborat și validat
CATEDRA MANAGEMENT

Proces verbal nr. 8 din 30 ianuarie 2017

Șef catedră,
dr., conf. univ.,  Gheorghe ȚURCANU

Annex 3. Bachelor`Degree programme Business and Administration – English Translation

MINISTRY OF EDUCATION OF THE REPUBLIC OF MOLDOVA

ACADEMY OF ECONOMIC STUDIES OF MOLDOVA

COORDINATED

Ministry of Education
of the Republic of Moldova

Registration No. _____

APPROVED

AESM Senate
May 4, 2017
Minute No. 10

AESM Rector,
academician

Gr. Belostecinic

CURRICULUM

Cycle I – Bachelor education. Qualification level ISCED-6

Faculty: Business and Business Administration

General field of education: 36. Economic Science

Field of professional education: 363. Business and Administration

Specialty: 363.1 Business and administration

Total number of ECTS credits: 180

Awarded title: Bachelor in economic sciences

Original admission document: Baccalaureate Degree or an equivalent document; Higher education degree

Language of study: English-Romanian

CHISINAU, 2017

EXPLANATORY NOTE

I. Introduction

The needs and requirement in the modern society in terms of education of specialists in the field of Business and Administration stem from the current economic and social priorities of Moldova: integration in the world economic flow; decentralisation of economic activities; increasing decision-making autonomy; forming a reformatory managerial vision focused on economic performance and sustainable social development, etc. At the same time, it is essential for the national success that the change process start and be carried out at the level of organisation, be it private or public, economic or social. In this context, modern management should act as initiator, supporter, and promoter of change and innovation. Successful fulfilment of these social and professional desiderates in different types of public/private enterprises and organisation imply that proper knowledge and skills should be developed with the graduates of Business and Administration. Therefore, in order to be competitive on the domestic and foreign labour market, graduates need to get and be able to apply a set of professional and social skills and competences, as well as a variety of managerial tools.

Being fully in line with the mission and strategic objectives of AESM, this curriculum takes into account the major requirements existing on the labour market and *aims at educating competent managers/entrepreneurs, able to continuously self-develop and increase their own performances and those of the organisation, as well as to form an organisational environment and a team capable of satisfying clients' needs.*

This Curriculum has been developed in the following 5 stages:

- 1) Reasoning (establishing the inputs).** The following actions have been conducted: analysis of the legal framework, regulatory documents on the education processes in higher education; analysis of the specific needs expressed by various categories of clients, beneficiaries, and partners (teachers and researchers, graduates, students and interested organisations in various fields); analysis of the newest research and development areas in the field of education; comparative analysis of curricula based on some models from prestigious national and international universities; analysis of the education environment and the current teaching methodologies for the corresponding field; analysis and assessment of the suggestions by the academia, some foreign experts, students; analysis of the observations and gaps identified during the previous academic years; development of the criteria for evaluation of education;
- 2) Establishing the results (outcomes)** – the learning outcomes (competences) to be acquired by the students have been established by selecting from a wide range of outcomes the ones that a relevant for the students and the labour market, some of them having been identified based on the feedback from the latter;
- 3) Securing an efficient and effective learning process** – a decision was made about the way in which students have to be guided and supported in order to meet the objectives and reach the curricular outcomes. The following items have been established and selected: the proper course units for developing the planned competences; the necessary workload (credit points) for each course; the sequence and manner of course teaching; the teachers have been selected and trained to deliver the subjects included in the curricula; proper bibliographic aids have been secured.

- 4) **Establishing the evaluation module** – a decision was made on the criteria for evaluation and the way in which it would be determined whether and when students have reached the planned outcomes. The content of the evaluation process was developed to secure the continuity of the education process;
- 5) **Editing, analysis, verification, validation and approval of the curriculum.**

II. Concept of specialists' education

The curriculum is designed to educate specialists for activities related to successful management, start-up and administration of business, as well as leading different subdivisions of an organisation. Within the economic entity, the specialist in the field of Business and Administration is the one who should ensure the normal run of all activities: planning the economic activity; establishing and improving the organisational structure of the company; securing economic resources; producing/providing services; sales; human resource management; efficiently operating the information and decision-making systems; overseeing the achievement of organisation's objectives; creating a positive organisational climate; establishing the productive team. At the same time, the graduates of Business and Administration are potential entrepreneurs, who will create jobs and new prospects for the social and economic progress of the country. In this line, they will be trained to identify and leverage business ideas and to stimulate and propagate the entrepreneurial spirit.

The graduates of the program have the possibility to conduct a variety of commercial and managerial activities within economic entities and organisations in various branches of the national economics, with different ownership forms (public, private, or mixt), as well as at national level. Graduates may continue their studies in the IInd cycle – Master level.

Therefore, the major aim of this curriculum is to form *integral and professionally competent personalities*, capable to meet the current and future demands on the domestic and international labour market, and who shall:

- Understand the importance of carrying out efficient and effective activity in the professional but also the daily life;
- Form and develop the competences necessary for self-fulfilment and success in the professional and business activity;
- Acquire knowledge and create added academic value in the field of Business and Administration, which shall serve as a foundation for the personal and professional development.

At the same time, the program will develop the following **generic key competences** in students: to analyse and diagnose a situation; to identify and solve problems; sense of initiative and entrepreneurship; critical and strategic thinking; team work; to prevent and solve conflicts; self-learning; justify decisions in a creative manner; communicate in a foreign language; use information technology; understand and be open to the cultures and customs of other peoples.

In order to successfully implement this educational offer, *a pleasant, qualitative, and productive student-centred education environment* has been created within AESM, which is based on the following principles of organising the personal, social, and professional education:

- Creating a genuine learning environment, close to the business environment and relevant for individual's interests and for meeting the planned objectives: acquiring knowledge, forming skills and competences; applying the latter during the studies and the internship;
- Matching theoretical aspects with abilities related to the realities of the business administration activities;
- Structuring the education approaches on the "learn by doing" concept and developing practical dexterities;
- Using modern education techniques, including with the aim at developing creativity.

III. Learning outcomes

The outcomes shall be achieved by tapping the content of the course units, as well as by properly using the teaching-learning-research-self-development-evaluation activities.

By the end of the academic period, the student shall be able to:

1. show functional knowledge in the following areas: economic theory – genesis, essence, methodology and method, laws governing economics; management – developments in the science of management, main managerial processes and functions; marketing – development and implementation of the marketing policy of enterprise; markets – research, operation and development of the markets of resources, goods, and services; customers – influencing factors, purchase and consumption processes, consumption models; law – knowing the legal framework on entrepreneurship and enterprises, small business, consumer protection, and advertising in Moldova; finance – finance management; applying accounting and other financial systems; information systems – development and use of information systems with an impact on carrying out the managerial functions within the organisation;
2. start and develop a business;
3. be familiar with the methods to identify business ideas and assess opportunities
4. be familiar with the methods of assessment and minimisation of business risks;
5. secure the conduct of activities in line with the legislation in force;
6. conduct the activity of the organisation in line with the demands of the market;
7. adopt optimal decisions in uncertain conditions;
8. prepare the organisational structure of the entity;
9. evaluate and improve the efficiency and effectiveness of the activities within the organisation;
10. get self-motivated and increase own work efficiency;
11. establish teams and develop cooperation;
12. motivate and establish productive work relations;
13. apply the quality management system;
14. communicate in a persuasive and efficient manner, including in an international language;
15. efficiently use and manage the available resources;
16. organise the research process in the field of business and administration;
17. solve problems in the field of business administration;
18. develop projects and coordinate the implementation thereof.

19. be familiar with the areas of competence and involvement of managers at different hierarchical levels;
20. follow the principles, values and rules of professional ethics.

Academic calendar

(In weeks)

Academic year	Teaching activities		Examination sessions		Internship	Holydays		
	Sem. I	Sem. II	Sem. I	Sem. II		Winter	Spring	Summer
I	15	15	4	4	-	3	1	10
II	15	11	4	4	4	3	1	10
III	15	5	4	1	7	3	1	-

Academic Process Plan by Semesters/Years

Year I, Semester I

Code	Name of course unit	Total hours			No. of hours by types of activities			Hours per week in classroom				Form of evaluation	No. of credits
		Total	Direct contact	Individual study	Lecture	Seminar	Laboratory/Practice	Total	Lecture	Seminar	Laboratory/Practice		
F.01.O.001.21	Microeconomics	150	60	90	30	30	-	4	2	2	-	E	5
F.01.O.002.62	Economic Mathematics	150	60	90	30	30	-	4	2	2	-	E	5
G.01.O.003.63	Economic Informatics	150	60	90	14	-	46	4	1	-	3	E	5
F.01.O.004.32	History of Economic Thinking	150	44	106	30	14	-	3	2	1	-	E	5
F02.O.005.11	Basics of organisation management/Project	150	60	90	30	30	-	4	2	2	-	E	5
U.01.O.006.33	Business Foreign Language I (English)	150	90	60	-	90	-	6	-	6	-	E	5
G.01.O.007.15	Physical education I	30	30	-	-	30	-	2	-	2	-	V	-
	Total	930	404	526	134	224	46	27	9	15	3	6E, 1V	30

Year I, Semester II

Code	Name of course unit	Total hours			No. of hours by types of activities			Hours per week in classroom				Form of evaluation	No. of credits
		Total	Direct contact	Individual study	Lecture	Seminar	Laboratory/Practice	Total	Lecture	Seminar	Laboratory/Practice		
F.01.O.001.21	Microeconomics	150	60	90	30	30	-	4	2	2	-	E	5
U.01.O.005.24	Art of communication and professional Ethics/Project	150	60	90	30	30	-	4	2	2	-	E	5
F.02.O.010.21	Economics of economic entities	150	60	90	30	30	-	4	2	2	-	E	5
F.02.O.012.62	Statistics	150	60	90	30	30	-	4	2	2	-	E	5
F.02.O.013.31	World economics and European Integration	150	44	106	30	14	-	3	2	1	-	E	5
U.02.O.013.33	Business Foreign Language II (English)	150	90	60	-	90	-	6	-	6	-	E	5
G.02.O.014.15	Physical education II	30	30	-	-	30	-	2	-	2	-	V	-
	Total	930	404	526	150	254		27	10	17	-	6E, 1V	30

Year II, Semester III

Code	Name of course unit	Total hours			No. of hours by types of activities			Hours per week in classroom				Form of evaluation	No. of credits
		Total	Direct contact	Individual study	Lecture	Seminar	Laboratory/Practice	Total	Lecture	Seminar	Laboratory/Practice		
F.03.O.015.62	Econometrics	150	60	90	30	30	-	4	2	2	-	E	5
S.03.O.016.11	Entrepreneurship and business culture/Project	240	120	120	60	60		8	4	4		2E	8
S.03.O.017.12	General and business to business Marketing	150	90	60	60	30	-	6	4	2	-	E	5
S.03.O.018.52	Basics of Accounting	120	60	60	30	30	-	4	2	2	-	E	4
S.03.O.022.14	Commodity and consumer goods research	120	60	60	30	14	16	4	2	2	-	E	4
	Total	780	390	390	210	164	16	26	14	12	-	6E	26
One optional course													
U.03.A.020. 32	Social and Economic Philosophy	120	44	76	30	14	-	3	2	1	-	E	4

U.03.A.020. 32	Political Science	120	44	76	30	14	-	3	2	1	-	E	4
Total hours mandatory and optional courses		900	434	466	240	178	16	29	16	13	-	7E	30

Year II, Semester IV

Code	Name of course unit	Total hours			No. of hours by types of activities			Hours per week in classroom				Form of evaluation	No. of credits
		Total	Direct contact	Individual study	Lecture	Seminar	Laboratory/Practice	Total	Lecture	Seminar	Laboratory/Practice		
S.04.O.021.11/52	Operations Management /Project	300	104	196	55	55	-	10	7	2	-	3E	10
F.04.O.022.23	Business Law	120	44	76	30	14	-	4	3	3	-	E	4
S.04.O.023.52	Enterprise Accounting	90	44	46	22	22	-	4	3	1	-	E	3
F.04.O.024.42	Corporate finances	120	44	76	30	14	-	4	3	1	-	E	4
S.04.O.025.11	Internship	180	160	20			-			1	-	E	6
	Total	810	396	414	134	102		22	16	6	-	7E	27
One optional course													
U.04.A.026. 13	Tourism Economics	90	44	46	30	14	-	4	3	1	-	E	3
U.04.A.026. 13	International Tourism	90	44	46	30	14	-	4	3	1	-	E	3
Total hours mandatory and optional courses		900	440	560	164	116		26	19	7	-	8E	30

Year III, Semester V

Code	Name of course unit	Total hours			No. of hours by types of activities			Hours per week in classroom				Form of evaluation	No. of credits
		Total	Direct contact	Individual study	Lecture	Seminar	Laboratory/Practice	Total	Lecture	Seminar	Laboratory/Practice		
S.05.O.027.11	Company Management/Project	420	180	240	90	90	-	12	6	6	-	3E	14
S.05.O.028.22	Human Resources Management	120	60	60	30	30	-	4	2	2	-	E	4
S.05.O.029.12	Marketing Research	120	60	60	30	30	-	4	2	2	-	E	4
	Total	660	300	360	150	150		20	10	10	-	5E	22

One optional course I													
S.05.A.030. 11	Service Management	120	44	76	22	22	-	3	2	1	-	E	4
S.05.A.030. 11	Supply and Sales Management	120	44	76	22	22	-	3	2	1	-	E	4
S.05.A.030.61	Management Information Systems	120	44	76	22	-	22	3	2	-	1	E	4
One optional course II													
S.05.A.031. 12	Logistics	120	44	76	22	22	-	3	2	1	-	E	4
S.05.A.031. 12	Sale Techniques	120	44	76	22	22	-	3	2	1	-	E	4
Total hours mandatory and optional courses		900	388	512	194	194/172	0/22	26	14	12/11	0/1	7E	30

Year III, Semester VI

Code	Name of course unit	Total hours			No. of hours by types of activities			Hours per week in classroom				Form of evaluation	No. of credits
		Total	Direct contact	Individual study	Lecture	Seminar	Laboratory/Practice	Total	Lecture	Seminar	Laboratory/Practice		
S.06.O.032.11	Corporate Management	120	52	68	28	24	-	12	6	6	-	3E	14
S.06.O.033.11	Final Internship	360	280	80	-	-	-	4	2	2	-	E	4
<i>One optional course I</i>													
S.06.A.034. 11	Compared Management	120	52	68	28	24	-	13	7	6	-	E	4
S.06.A.034. 11	Innovation Management	120	52	68	28	24	-	13	7	6	-	E	4
Total		900	384	516	56	48	-	26	14	12	-	3E	20
Total hours mandatory and optional courses for the curriculum		5160	2454	2806								37E	170
<i>Final examination (Development and presentation of the Bachelor Thesis)</i>												E	10
Total credits accumulated													180

Internships

No.	Internships	Semester	No. of weeks	Period	No. of credits
1	Production Internship	IV	4	February	6
2	Dissertation Internship	VI	7	March-May	12

Dissertation Examination

No.	Name of activity	Semester
1	Presentation of the BA dissertation	Semester VI, May-June

Optional courses

No.	Course name	Year	Semes.	Number of hours per types of activities			Evaluations	No. of credits
				Lectures	Seminars	Lab./Practice		
1	Romanian language for allophones	I	I		30	-	E	2
2	Foreign language II (Fr., Germ., Span.)	I-III	II-V		30	-	E	2
3	Sociology	I	II	16	14	-	E	2
4	Environmental protection	I	II	16	14	-	E	2
5	Web programming	I	II	16	14	-	E	2
6	Community law	I	II	16	14	-	E	2
7	Ethics of the Social Assistant	I	II	16	14	-	E	2
8	Culture of communication	I	II	16	14	-	E	2
9	Reliability of the systems	I	II	16	14	-	E	2
10	Technology of Office applications	I	II	16	14	-	E	2
11	Professional ethics	I	II	16	14	-	E	2
12	World economics and EU integration	I	II	16	14	-	E	2
13	Design and aesthetics of commodities	II	III	16	14	-	E	2
14	Cybernetics of economic systems	II	III	16	14	-	E	2
15	Methodology of scientific and economic researches	II	III	16	14	-	E	2
16	History of public administration in Moldova	II	III	16	14	-	E	2
17	Migration and development	II	III	16	14	-	E	2
18	Study of public communication	II	III	16	14	-	E	2
19	Numeric methods	II	III	16	14	-	E	2
20	PC assembling and troubleshooting	II	III	16	14	-	E	2
21	Psychology of business communication	II	III	16	14	-	E	2
22	Philosophy of law	II	III	16	14	-	E	2
23	Geo-economics	II	IV	16	14	-	E	2
24	Oenology	II	IV	16	14	-	E	2
25	Fundamentals of nutrition	II	IV	16	14	-	E	2
26	European law	II	IV	16	14	-	E	2

27	Activity of non-banking credit institutions	II	IV	16	14	-	E	2
28	Non-bank financing of small and medium enterprises	II	IV	16	14	-	E	2
29	Social and health insurance	II	IV	16	14	-	E	2
30	Social security of the unemployed	II	IV	16	14	-	E	2
31	Office and secretarial communication	II	IV	16	14	-	E	2
32	Employment policies	II	IV	16	14	-	E	2
33	Interactive graphics	II	IV	16	14	-	E	2
34	Operation systems II	II	IV	16	14	-	E	2
35	Additives and ingredients in public catering	II	IV	16	14	-	E	2
36	Compared constitutional law	II	IV	16	14	-	E	2
37	International transactions	III	V	16	14	-	E	2
38	International trade	III	V	16	14	-	E	2
39	Design and aesthetics in marketing	III	V	16	14	-	E	2
40	Hygiene and sanitation	III	V	16	14	-	E	2
41	Psychology of communication	III	V	16	14	-	E	2
42	International stock exchange practices	III	V	16	14	-	E	2
43	Economic correspondence in foreign language	III	V	16	14	-	E	2
44	Intellectual property protection	III	V	16	14	-	E	2
45	Volunteering and partnerships in social assistance	III	V	16	14	-	E	2
46	Didactic communication	III	V	16	14	-	E	2
47	Accounting information systems	III	V	16	14	-	E	2
48	Grey information economics	III	V	16	14	-	E	2
49	Financial audit	III	V	16	14	-	E	2
50	Computer graphics	III	V	16	14	-	E	2
51	Commercial urbanism and land planning	III	V	16	14	-	E	2
52	Legal and economic correspondence	III	V	16	14	-	E	2

Matrix of Program and Course Unit Outcomes Correlation

Code	Course unit	Learning outcomes																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
F.01.O.001.21	Macroeconomics	V					V	V								V					
F.01.O.002.62	Economic mathematics	V						V													
G.01.O.003.63	Economic informatics	V						V								V					
F.01.O.004.32	History of economic thinking	V																			

F.02.O.005.11	Basics of organisation management	V	V	V		V		V	V	V	V	V	V	V	V	V	V	V	V	V	V
G.01.O.006.33	Foreign language	V									V	V		V							
G.01.O.007.15	Physical education I																				
F.02.O.008.21	Macroeconomics	V																			
U.01.O.009.24	Communication art and professional ethics	V				V					V	V		V							
F.02.O.010.21	Economics of the economic entities	V				V	V	V							VV						
F.02.O.011.62	Statistics	V		V	V		V							V							
U.01.O.012.31	World economics and EU integration	V				V															
G.02.O.013.33	Foreign language for business	V									V	V		V							
G.02.O.014.15	Physical education II																				
F.03.O.015.62	Econometrics	V			V		V														
S.03.O.016.11	Entrepreneurship and business culture	V	V	V	V	V	V	V		V	V	V	V							V	V
F.03.O.017.12	General and business-to-business marketing	V				V	V				V				V						
S.03.O.018.52	Basics of accounting	V				V	V							V						V	V
S.03.O.019.14	Commodities and consumer goods research	V													V						
U.03.A.020.32	Social and economic philosophy	V													V					V	V
U.03.A.020.32	Political science	V													V					V	V
S.04.O.021.11/52	Operations management	V		V	V	V	V			V	V	V	V	V	V	V	V	V	V	V	V
S.04.O.022.11	Production internship	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
F.04.O.023.23	Business law	V			V	V															
F.04.O.024.42	Enterprise finance	V					V														
S.04.O.025.52	Enterprise accounting	V				V								V						V	V
S.04.O.026.13	Tourism economics	V					V	V													
S.04.O.026.13	International tourism	V					V														
S.05.O.027.11	Company management	V	V	V	V	V	V	V		V		V	V	V	V	V	V	V	V	V	V
S.05.O.028.22	Human resource management	V					V				V	V		V							
S.05.O.029.12	Marketing research	V					V				V				V	V	V				
S.05.A.030.11	Service management	V					V				V				V						
S.05.A.030.11	Supply and sales management	V					V								V	V	V				
S.05.A.030.61	Information systems in management	V																			
S.05.A.031.12	Logistics	V					V														
S.05.A.031.12	Sales techniques	V					V					V	V		V	V					

Annex 4. Advertising flyer of the study programme Business and Administration - 2017

PERSPECTIVE PROFESIONALE

Absolvenții au posibilitatea să execute o varietate de activități comerciale și manageriale, activând în calitate de:

- întreprinzător
- manager
- economist
- coordonator de proiect
- consultant/instructor
- agent comercial
- funcționar în instituțiile publice

OPORTUNITĂȚI DE CONTINUARE A STUDIILOR

- ➔ ciclul II, Masterat;
- ➔ programe de colaborare cu universități din alte țări



BUSINESS ADMINISTRATION
Program de studii re-proiectat în cadrul proiectului PBLMD -
"Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability"
<http://www.pblmd.aau.dk>



Erasmus+

Acest proiect a fost finanțat cu suportul Uniunii Europene

Academia de Studii Economice a Moldovei

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tel. 373 22 2241 28
fax 373 22 22 19 68
e-mail: anticamera@ase.md
www.ase.md
www.facebook.com/ASEM.BA

Universitatea angajată în viitor !

BUSINESS ADMINISTRATION
New!

Facultatea Business și Administrarea Afacerilor

DESPRE PROGRAM

Programul de studii **Business Administration** are drept scop formarea specialiștilor cu o pre-gătire universitară (ciclul I, Licență) pentru activități ce se referă la management, inițierea și administrarea cu succes a afacerilor, indiferent de mărime și domeniul de activitate, precum și în asociații necomerciale și în administrația publică.

DURATA STUDIILOR:

3 ani/ 6 semestre

LIMBA DE INSTRUIRE:

Engleză/Română

CREDITE DE STUDIU ECTS:

180

TITLUL OBȚINUT:

Licențiat în științe economice

BAZA ADMITERII

Diploma de bacalaureat sau un act echivalent de studii, diploma de studii superioare.



METODE DE PREDARE-ÎNVĂȚARE

Programul de studii este bazat pe noile metode de predare-învățare centrate pe student, inclusiv: învățarea bazată pe probleme (PBL), proiecte, lucru în echipă, e-Learning, co-predare cu profesori din universități străine.

OPORTUNITĂȚI DE PRACTICĂ

Programul de studii prevede stagii de practică în anul II, proiect de semestru interdisciplinar în grup (studenți de la 6 universități și un stagiul de elaborare a tezei de licență în anul III.

OPORTUNITĂȚI DE STUDII PESTE HOTARE

30 de studenți, cu rezultate academice bune, vor studia 1 semestru (anul 2) la Universitatea Aalborg din Danemarca sau Universitatea din Gloucestershire, Marea Britanie. Mobilitatea va fi finanțată în cadrul proiectului PBLMD "Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability", programul Erasmus+. <http://www.pblmd.aau.dk>

CONȚINUTUL PROGRAMULUI

- ✓ Micro/Macroeconomie
- ✓ Finanțele întreprinderii
- ✓ Economia Unităților Economice
- ✓ Statistică
- ✓ Contabilitatea întreprinderii
- ✓ Marketing
- ✓ Dreptul Afacerilor
- ✓ Fundamentele managementului Organizației
- ✓ Antreprenariat
- ✓ Managementul calității
- ✓ Managementul resurselor umane
- ✓ Management inovațional etc.



COMPETENȚE DOBÂNDITE

La finalizarea programului de studii absolventul va fi competent să:

- ✓ să rezolve probleme din domeniul administrării afacerilor;
- ✓ să comunice convingător și eficient, inclusiv într-o limbă de circulație internațională;
- ✓ să inițieze și dezvolte o afacere;
- ✓ să asigure desfășurarea activităților în conformitate cu legislația în vigoare;
- ✓ să utilizeze tehnologiile informaționale;
- ✓ să adopte decizii în condiții de risc și incert;
- ✓ să utilizeze și gestioneze eficient resursele disponibile;
- ✓ să elaboreze și să coordoneze realizarea proiectelor;
- ✓ să aplice principiile, valorile și normele eticii profesionale.

Pentru mai multe informații despre program, vă rugăm să vizitați site-ul nostru:
<http://ase.md/files/planuri/zi/Business-si-Administrare.pdf>

ASEM - UNIVERSITATEA ANGAJATĂ ÎN VIITOR !

Annex 5: Poster of the Business and Administration study programme

BUSINESS ADMINISTRATION New!

ASEM - UNIVERSITY ENGAGED IN THE FUTURE!



PROGRAMME DESCRIPTION

The programme of study "Business Administration" aims at training professionals with an academic background (Cycle I, Bachelor) for activities that refer to the set-up and successful management of businesses, regardless of the extent and field of business, including non-government organizations and public administration.

LENGTH OF STUDY: 3years/ 6 semesters

LANGUAGE OF STUDY: English/ Romanian

STUDY CREDITS ECTS: 180

QUALIFICATION:
Bachelor of economics

ADMISSION REQUIREMENTS
Baccalaureate diploma or an equivalent degree of study, higher education diploma.

OPPORTUNITIES FOR ACADEMIC MOBILITY
Thirty 2nd year students with best academic results will have the opportunity to study one semester at Aalborg University, Denmark or at the University of Gloucestershire, Great Britain. The mobility will be financed by ERASMUS+ Project, PBLMD „Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability”.
<http://www.pblmd.aau.dk>

INTERNSHIP OPPORTUNITIES
The programme of study includes an internship period in the 2nd year, a semester interdisciplinary group project and a practice period for writing the thesis.

TEACHING-LEARNING METHODS

The new programme of study is based on new student centred teaching-learning methods such as: problem based learning (PBL), projects, team work, e-Learning, co-teaching by foreign academic staff.

ACQUIRED SKILLS

Upon completion of the programme of study the graduates will be able to:

- ✓ Display field-related knowledge;
- ✓ Solve business administration problems;
- ✓ Launch and develop a business;
- ✓ Run legal business activities;
- ✓ Take decisions under risk and uncertainty;
- ✓ Develop and coordinate projects;
- ✓ Apply business ethics principles, values and norms;
- ✓ Communicate persuasively and efficiently, inclusively in a foreign language.

PROFESSIONAL PROSPECTS

The graduates of the new programme of study will have the opportunity to perform commercial and managerial activities and act as:

- Entrepreneurs
- Managers
- Economists
- Project coordinators
- Trade agents
- Public officers
- Advisors/trainers.

For additional information please visit our site:
<http://ase.md/files/planuri/zi/Business-si-Administrare.pdf>

Redesigned study program within the project
PBLMD - "Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability"
<http://www.pblmd.aau.dk>



This project has been funded with support from the European Commission



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www.ase.md



www.facebook.com/ASEM.BAA

Annex 6: AESM's grading system

Grading of the students will be done according to the following grading scale:

- a) **Grade 10 or “excellent” (ECTS - A equivalent)** is given for the profound and remarkable demonstration of the theoretical and practical skills developed by the course unit / module, creativity and skills in the application of acquired competences, considerable independent work and versatile knowledge of literature in that field. The student has mastered 91-100% of the material included in the curriculum / syllabus of the course unit / module.
- b) **Grade 9 or “very good” (ECTS - B equivalent)** is given for a very good demonstration of the theoretical and practical skills developed by the course unit / module, very good skills in the application of competences acquired with some insignificant / nonessential errors. The student has mastered 81-90% of the material included in the curriculum / syllabus of the course unit / module.
- c) **Grade 8 or “good” (ECTS - C equivalent)** is given for the good demonstration of the theoretical and practical skills developed by the course unit / module, good abilities to apply the learning objectives with a certain lack of trust and imprecision related to the depth and details of the course unit / module, but which the student can correct by answering additional questions. The student acquired 71-80% of the material included in the curriculum / syllabus of the course unit / module.
- d) **Grades 6 and 7 or “satisfactory” (ECTS - D equivalent)** are awarded to demonstrate basic skills developed by the course unit / module and their ability to apply in typical situations. The student's response is unreliable and there are considerable loopholes in knowing the course unit / module. The student acquired 61-65% and 66-70% respectively of the material included in the curriculum / syllabus of the course unit / module.
- e) **Grade 5 or “weak” (ECTS - E equivalent)** is awarded for the demonstration of the minimum competences in the field of the course unit / module, in the implementation of which he / she encounters many difficulties. The student has mastered 51 to 60% of the material included in the curriculum / syllabus of the course unit / module.
- f) **Grades 3 and 4 (ECTS - FX equivalent)** are awarded when the student fails to demonstrate the minimum competences and further training is required to promote the course unit. The student acquired 31-40% and 41-50% of the material, respectively.
- g) **Grades 1 and 2 or “unsatisfactory” (ECTS - F equivalent)** are awarded to the student who cheated or demonstrated a minimum knowledge of the learning material of 0 - 30%. In this case, for the promotion of the course unit, the student is still required a lot of work to do.

„BSc in Public Administration”

Balti State University „Alecu Russo”

Work Package 4

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1 INTRODUCTION

The purpose of Work Package 4 (WP4) is to develop a bachelor's degree programme in Public Administration [Annex 2], based on the implementation of PBL methodology, student centered teaching and learning, active learning at the State University "Alecu Russo" in Balti (USARB). Specifically, this report will propose an innovative bachelor's degree programme based on PBL in the field of study "Public Administration", implemented since 1 September 2017 [Annex 2].

In this report, we rely on the findings outlined in WP2 and WP3 that we have developed between 2015-2017. We also rely on the experience we have accumulated during our study visits and staff mobility at EU partner universities as well as the experience gained during the PBL training sessions offered by EU project partners in Chisinau.

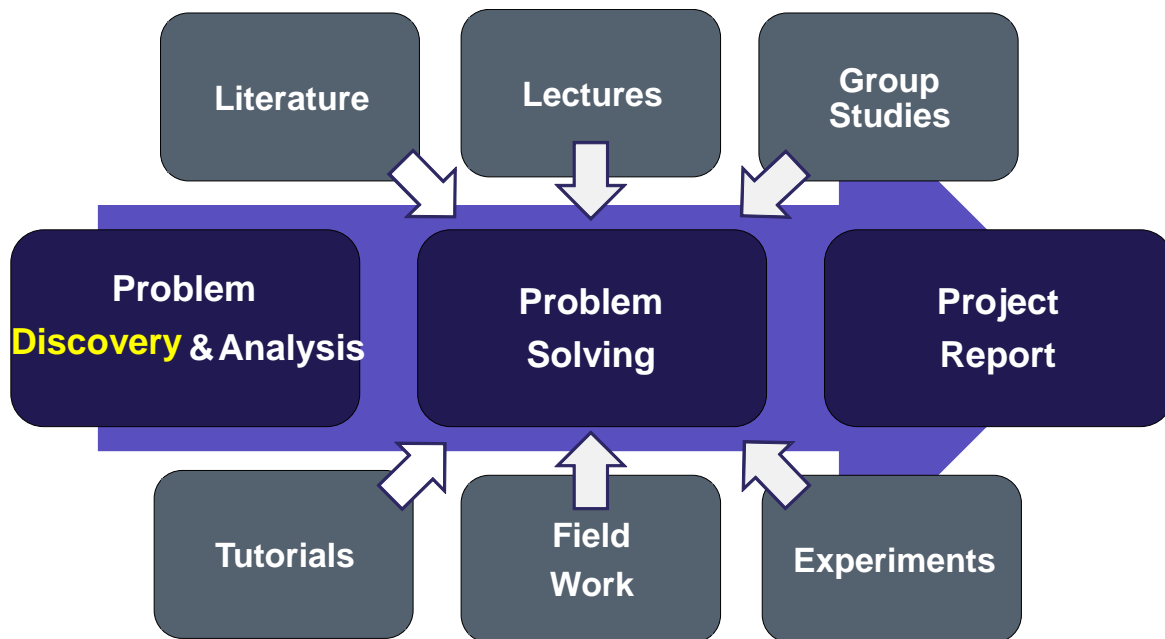
As a result of these work packages, a re-conceptualized educational plan was developed for the specialty "Public Administration", which has been implemented since 1 September 2017 at the USARB [Annex 2],

For the elaboration of the educational plan for the "Public Administration" study programme, there were taken into account the experience of the universities of the European Union visited during the elaboration of Work Packages 2 and 3, the content of the educational plan for this specialty valid until 1 September 2017 and the provisions the legal framework in force in the Republic of Moldova. Also, the report presents a *roadmap* outline necessary for the implementation of the respective study programme, indicating the normative acts necessary to be adjusted to increase the degree of academic autonomy of the universities in the Republic of Moldova [Annex 5].

1.1 KEY ASSUMPTIONS

There is no PBL model suitable for all purposes. However, PBL-based models are mainly based on two key assumptions. The first assumption is that work on the project is in the *center*, at the basis, consisting of discovery and problem analysis, problem solving and project report (Figure 1). The second assumption assumes that other teaching and learning (face-to-face) activities such as literature, lectures, group studies and tutorials are designed to *support* work on the project. These two assumptions will also be at the base of our PBL, PBL-based bachelor's degree programme in Public Administration, teaching and student-centered learning, active learning.

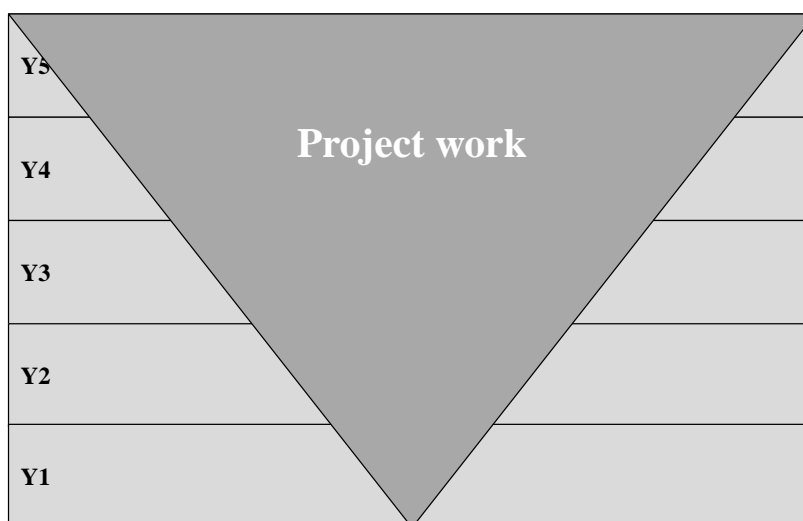
Figure 1: PBL Model at AAU: An example



Source: AAU, 2017 (the word "Discovering" is introduced by Romeo V. Turcan)

Another assumption relates to the relationship between work on the project and face-to-face activities. In the context of this report, wholly based on PBL, this means a study programme in which there is a 50:50 sharing between student work on the project and face-to-face activities (such as lectures, seminars, workshops, laboratories and experiments). An example of progression is presented in Figure 2. Of course, there are many ways to distribute the relationship between work on the project and face-to-face activities during the semesters; the main purpose is to achieve an approximate 50:50 time sharing for the duration of the study programme.

Figure 2: An example of 50:50 time sharing between project work and face-to-face activities



Source: Louise Faber, PBLMD 2016

1.2 EXPECTED OUTCOMES

The knowledge-based society, the education technology, the surplus and increased access to information, the dynamics of the labor market, the multitude of educational service providers lead to profound and multidimensional transformations at the level of the universities of the Republic of Moldova, in order to increase their competitiveness on a national level and, why not, international, which imposed a new way of thinking and conceiving the whole higher education system. In this respect, the higher education system must offer learning and training opportunities that are constantly adapted to the rapid changes in science, technology and the labor market. This presupposes the existence of a higher quality education that provides a curricular compatibility that offers the possibility of training competencies in accordance with the labor market requirements, optimal study conditions, materials, equipment and modern methods, centered on the student.

PBL is a student-centered training model based on research where students commit themselves to solving a genuine, poorly structured problem that requires more in-depth research (Jonassen & Hung, 2008). Students identify the gaps in their knowledge, conduct research, and apply what they have learned to develop solutions and present their findings (Barrows, 1996). Through **collaboration and research**, students can cultivate **problem solving** (Norman & Schmidt, 1992), **metacognitive skills** (Gijbels et al., 2005), **learning commitment** (Dochy et al., 2003) and **intrinsic motivation**.

When designing the PBL-based pilot study programme [Annex 2], we took into account the degree of use of the PBL method in the various universities we visited and the experience we studied, including the use of other active teaching methods. Each university has its own specificity and an individual approach per programme on the use of active teaching methods, especially of PBL. In the context of teaching legal subjects in study programmes subject to analysis for the specialty “Public Administration”, we found that PBL does not apply to the same extent as in other programmes. For example, in the Science of Law, being a rigid and static one, students can not excel without profound theoretical knowledge.

In order to start this pilot programme [Annex 2], an updated version of the educational plan for the “Public Administration” specialty has been developed, where teachers will use active teaching methods, especially PBL, within the various disciplines. The desirability of reaching the 50 to 50 ratio between courses and the project is difficult to achieve within the “Public Administration” specialty because of the specifics of the subjects taught, including the limitations imposed by the legal framework. In this context, we come to the conclusion that, in the process of implementing the study programme based entirely on PBL, the Framework Plan for Higher Education, approved by Order of the Minister of Education no. 1045 of 29.10.2015, may present some inconvenience from the following perspectives:

- although it mentions university autonomy as a fundamental principle in the process of exercising academic freedom, the Framework Plan significantly reduces it by obliging universities, when developing educational plans, to compulsorily include disciplines for the training of general skills and competences (10%) and disciplines of socio-humanistic orientation (10%). In this way, the proportion of fundamental and specialized disciplines,

which contributes to the training of professional skills of future specialists, is diminishing proportionally;

- given that the duration of the studies in the Public Administration specialty is of three years, the compulsory inclusion of disciplines that do not develop the concrete professional skills leads to the natural exclusion from the educational plan of some courses inherent in the formation of the future specialist.

Taking into account the above mentioned and taking into account the legislative constraints that cannot be removed without causing some long-term effects, it was decided, by the project team, in agreement with the decision-makers of the USARB, to develop a realistic educational plan, which has chances of implementation and which is PBL oriented. For success, it is necessary for all those who are teaching to realize that it is necessary to emphasize students' thinking, their involvement in project development, solving problems that are related to practical life (by finding new, original solutions to them), on scientific research and learning new research techniques, stimulating the student's thinking, imagination, creativity and originality, thus removing the lack of motivation and formalism of both sides of the didactical process. The expected outcomes both at programme level and at institutional level are presented in Table 1.

Table 1. Expected outcomes

Expected outcomes	For learners	For trainers
At programme level	<ul style="list-style-type: none"> • increasing attendance at classes; • increasing confidence • improving attitudes towards learning; • assuming greater responsibility for their own learning process; • possibilities of developing complex competences, such as: higher level cognitive capacities, problem solving, collaboration and communication; • integration of students from different social and cultural backgrounds. 	<ul style="list-style-type: none"> • structuring problems as learning opportunities; • collaborating with colleagues to develop interdisciplinary projects; • "managing" the learning process; • the proper integration of modern technologies into the teaching process; • designing authentic assessment methods and tools; • opportunities for professional development.
At institutional level	<ul style="list-style-type: none"> • motivating students from other programmes to engage in their own learning; • activating student self-governance structures in terms of their involvement in the academic process 	<ul style="list-style-type: none"> • increasing the number of students by attracting new students to the university by offering programmes that take into account the students' learning needs and

	<p>(initiatives to modify other programmes as well);</p> <ul style="list-style-type: none"> • in-depth study of international languages by students from other programmes; • increasing lifelong learning culture (LLC). Students who have graduated from PBL-based programmes will learn more lessons alone and will be more inclined to think more practical and logical, having the ability to tackle all kinds of problems from the moment of their appearance, turning them into a learning experience. PBL can develop the skills of graduates for lifelong learning, making them more efficient at their workplace and enabling them to bring valuable contributions to the society they live in. 	<p>these are carefully considered;</p> <ul style="list-style-type: none"> • their retention in the university. If the university uses the PBL approach, there will be a low tendency for students to abandon their studies. This is due to flexibility in programmes using PBL, and students engage in their studies more than when there applied traditional training methods. Indeed, students feel more appreciated when they learn in the PBL environment because they are given great importance to their learning needs; • improving the quality of the didactic process in particular and the quality culture at an institutional level; • increasing the degree of autonomy and academic freedom, because the role of the teacher is that of a mentor that encourages the student to justify his thinking and express it by formulating and solving problems.
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2 OUR VISION ON THE BACHELOR'S DEGREE PROGRAMME BASED ON PBL– 0400.1 PUBLIC ADMINISTRATION

One of the weaknesses of the national system of university education is the inefficiency of the mechanism of interaction of the higher education institutions with the research-development field, with the business environment and the labor market. This leads to a low level of motivation and accountability for learning outcomes by students, causing inconsistency between university professional training and labor market needs.

The listed inequalities are the result of an educational practice accepted in the national university education in which the teacher sets the emphasis on the process of teaching the knowledge, followed by their assessment, giving minor importance to the learning process of the student. The situation would be different if the correlation between these three teaching-learning-evaluation processes is equivalent, and the teaching is not confined to simply passing on knowledge.

The teacher renounces from the delivery of knowledge as a product, focusing on the “knowledge as a process” model, paying attention to the learner’s learning, motivation, counseling, and orientation needs.

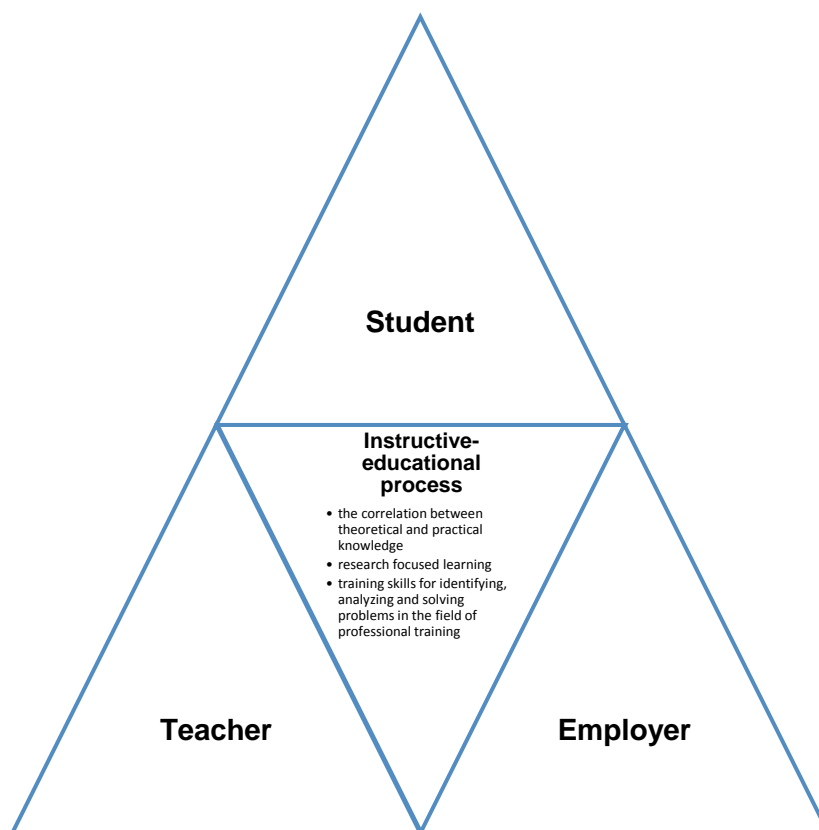
Changing from *teacher-centered education* where teachers offer students ready-made, pre-fabricated cognitive products as a balance of truths expressed through knowledge given to learners, stimulating predominantly memorial and reproductive exercises and capacities, to *student-centered education*, the teaching staff stimulate the students’ thinking, materialized through the results of research projects, solving problems related to social life, scientific research and learning new research techniques, stimulating the learner’s thinking, imagination, creativity and originality, thus removing the lack of motivation and formalism of both educational agents.

Changing the emphasis from teacher-centered education to student-centered education turns the student into an active subject of the educational act perceived as a partner of the teaching staff. Completing this education and training process, by involving a new subject, labor market representatives, allows the study programme goals to be continually reported to labor market requirements, and graduates of study programmes have a higher degree of employability.

Transfer of PBL methodologies to other study programmes. Following study and mobility visits at European universities, USARB teachers have begun to implement new teaching methods, centered on the PBL methodology, both in the “Public Administration” specialty and in the “Law” specialty. Changes have been made to curricula of course units, with group work assignments being set up, which use the hours planned for individual study. Students identify the most pressing problems in the field of justice, and under the guidance of teachers, based on the PBL, they are guided by course holders, grouping together, trying to find solutions and propose changes to the law *ferenda*.

The transfer of competences acquired during the mobility period for the introduction of the PBLMD methodology in the specialty “Public Administration” and the training of the students from the “Law” specialty is a natural thing because the specialties are related and the training of the specialists in both specialties is ensured by the same teaching staff. Several disciplines in the

educational plan of both specialties are commune; they are taught in the torrent since the first year of studies (e.g. General Theory of Law, European Civilization, EU Institutional Law).



Studying the experience of European universities and teaching methods applied in university education, in particular, problem-based education (PBL), allowed us to re-conceptualize the teaching style, teaching methods and procedures used, and gradually implement the PBL within the pilot programme in the specialty 0400.1 Public administration, but also the Law specialty.

The purpose of the pilot programme is to move from classical (theorized) education, where the teacher is an information provider, and the student is the recipient of the information, to PBL (problem-based education) and thus train specialists competitive on the labor market and qualified in their professional training field [Annex 2].

The distinctive features of the programme are to ensure high-quality professional training for all who want to build a career in central and local government structures, as well as in specialized departments within public companies. Professional training is focused on the acquisition of: the scientific and normative foundations of the theory of constitution; the general principles of the political system and the various management mechanisms; developing skills and training practical skills in public administration.

2.1 OVERVIEW

The educational plan for the specialty 0400.1 Public Administration was adapted to the objectives of the project “Introducing Problem Based Learning in Moldova: Toward Enhancing

Students' Competitiveness and Employability”, under the European programme ERASMUS+, being elaborated in accordance with the provisions of the national normative acts.

The flowchart of the educational plan [Annex 2] was outlined in accordance with the provisions of the Framework Plan and the National Qualifications Framework¹, being oriented towards the training of specialists in the field of public administration with the appropriate qualification.

The programme duration is 3 years, i.e. 180 ECTS credits, the year of study being divided into two semesters of 15 weeks each.

The duration of studies, level of qualification, general field of study, field of professional training, specialty, correlation between total number of credits and total number of study hours, certification, title obtained at the end of studies, admission basis, names and contents of course units, the language of instruction, the length of internships, the semestrial examination rules and the final assessment method comply with the standards set by the regulatory acts and can be seen in the table below.

Key features of the Public Administration pilot programme	
Education organization form	Full-time education
Level of qualification	Level 6 ISCED
General field of study	040 Administrative Sciences
Field of professional training	0400 Administrative Sciences
Specialty	0400.1 Public administration
Total number of study credits	180/5400 study hours
Certification	Bachelor's degree
Title obtained at the end of the studies	Bachelor in Administrative Sciences
Admission basis	Baccalaureate diploma or an equivalent study document; higher education diploma
Language of instruction	Romanian
Length of studies	3 years

¹ The program is developed in accordance with the National Qualifications Framework (NQF) for the Public Administration specialty. The NQF is the regulatory act establishing the structure of qualifications and ensuring national recognition as well as the international compatibility and comparability of qualifications acquired within the higher education system. Through it, all the learning outcomes gained in the higher education system can be recognized, measured and related. The National Qualifications Framework respects the traditions and experience of Moldovan higher education and is compatible with the General Framework of Qualifications in the European Higher Education Area.

Semester projects	Compulsory in semesters 1-6, in an amount of 40 credits, which represents 22.22%
Internships	Mandatory in semesters 4 and 5, in an amount of 18 credits
Examination and assessment rules	The 100% weight of the grade in the final assessment at the course units is composed of 40% the exam grade and 60% the grade from on the current assessments (the grades obtained during the control papers, tests, seminars, laboratory works, and theses).
Evaluation method at the end of the study programme	Defending the bachelor's degree thesis
Perspectives (rights) for graduates	Employment or continuation of studies in the second cycle – master's degree studies

The total number of study hours foreseen in the plan is 5400, of which the number of direct contact hours is 2700 and the number of independent working hours is 2700.

The share of ECTS credits of the course units in the educational plan is the following:

1. The *fundamental* (F) component consists of 58 *ECTS credits*. (The Framework Plan provides 36-63 ECTS credits).
2. For the *general skills and competences* (G) component, the plan provides 14 *ECTS credits*. (The Framework Plan provides 9-18 ECTS credits).
3. For the *socio-humanistic orientation* (U) component, the plan provides 12 *ECTS credits*. (The Framework Plan provides 9-18 ECTS credits).
4. For the core *specialization* (S) component, the plan provides 64 *ECTS credits*. (The Framework Plan provides 54-72 ECTS credits).
5. *Internships* - 18 *ECTS credits*. (The Framework Plan provides 18-22 ECTS credits).
6. *Elaboration and defense of the bachelor thesis*: documentation, investigation, research, experimentation, drafting, presentation, public defense - 14 *credits ECTS*. (The Framework Plan provides 9-18 ECTS credits).

The study process combines direct teacher-student contact activities with students' individual study activity. The ratio of direct contact hours and individual study is 1: 1. The overall workload of the student's individual work is 2700 hours, which represents 900 hours per year or 450 hours a semester.

In order to capitalize the individual study activities in the curricula of the course units, the component - *Individual study activities*, describing the individual study activities, was included; the way how to accomplish learning activities (individually or in groups); the criteria for evaluating learning products, and guiding students' individual work is done by course unit holders.

In addition to the classical didactic methods and procedures used by the course unit holders, we mention that new methods, including the method of projects, the case study method, simulation methods, etc., have been introduced in the teaching-learning-evaluation process.

The teaching methods indicated are used by the teaching staff, depending on the particularities of the course units, both in the lectures, according to the curricular provisions, as well as in the extracurricular activities, which pay particular attention to the team work activities.

Achieving the outcomes of this educational offer depends on the emphasis on the learner (student), which becomes the active subject of the qualitative and productive educational process, and the effective application by the trainers (teaching staff) of the teaching methods and procedures, of problem-based education, facilitates the formation of the following *professional and transversal competences*:

Professional competences:

CP1. Operating with the notions, concepts, theories and basic methods of the science of administration in the professional activity.

CP2. Interpretation of the fundamental principles of organization and functioning of administrative structures for the purpose of their subsequent transposition into professional activity in public and / or private institutions.

CP3. Identifying, analyzing and solving problems in the field of public administration in accordance with the legal provisions, in a cooperative, flexible and efficient way.

CP4. Drafting, reviewing and adopting decisions on administrative work.

CP5. Strategic planning of current professional and staff work, with a view to developing institutional and medium-term perspectives.

CP6. The use of modern technologies, of various forms and methods of control of the evaluation of the administrative activity and the formulation of proposals for its efficiency.

Transversal competences:

CT1. Rigorous, efficient, responsible and timely implementation of professional tasks in a spirit of initiative and in accordance with ethical principles and professional ethics.

CT2. Applying grouping techniques, learning and exercising specific roles in teamwork, developing interpersonal communication skills, and taking responsibility for decision-making.

CT3. Self-assessment of the need for professional training and identification of resources and modalities of personal and professional development, in order to integrate and adapt to the requirements of the labor market.

The formation of the nominated competences will be possible if the pilot programme develops a symbiosis between the actions and roles of the actors of the educational act. The active involvement of the student and his / her transformation from the receiver of the information processed into a subject that identifies, analyzes and solves concrete problems, correlating the theoretical material with the practical one, will be the key to the success of the implementation of this programme.

Assessing students' academic outcomes will combine various forms:

- **Current assessment** during the educational process at classes, practical classes, seminars in different ways: tests, reports, individual tasks, portfolios, case studies, etc.
- **Final assessment** performed at the completion of the course unit's study, internships and of the study programme and is expressed in grades. The forms of final assessment are: the colloquium, the exam (oral and written), the public defense of the thesis. Oral examinations do not exceed 50% of the total number of exams in the session. The final grade at the course units in the programme consists of two components: 60% - the result of the assessment and 40% - the exam grade.

The implementation of the PBL in the pilot programme was also reflected in the way students are assessed, and the advantage of this model is to focus on the following issues: group work, problem solving, holistic approach (problem – theory - methodology), reflection, communication and skills. In this respect, in the course units where the semesters are fixed in the plan, the assessment will be organized in two forms:

- a. In the case of semestrial projects developed at a course unit, the exam will constitute the evaluation of the projects by the committee, and the grade will combine the written evaluation of the project and the individual oral examination.
- b. In the case of interdisciplinary projects, the evaluation of the projects will take place at least one week before the start of the examination session in front of the evaluation committee, and the project grade will be 50% of the grade per semester at the course units where the project was developed.

The departments responsible for the programme facilitate the use of innovative forms of assessment, e.g. computer exam, video exam, peer evaluation through Moodle platform, etc.

- The public defense of the bachelor thesis is the final assessment of the study programme in the field of professional training *0400 Administrative Sciences*. The students, who have fulfilled the provisions of the educational plan and have accumulated at least 174 credits, will be admitted to the defense of the bachelor thesis, being evaluated by the Evaluation Committee with grades between 5 and 10 at the second preventive defense of the bachelor thesis.

Through the public defense of the bachelor thesis it is evaluated the level of achievement of the learning outcomes, the competences of the graduates to perform researches, to apply the theoretical knowledge in the elaboration of practical solutions, specific to the field of professional training or to the performance of the case studies.

Student's educational path will focus on progression in his / her professional training, combining:

- initial study of the course units / fundamental modules, then of the specialized units (flowchart);
- application of knowledge gained at course units / modules previously studied in order to study subsequent course units / modules, thus facilitating an analytical progression from macro to micro level;

- solving real problems in the field of public administration, from simple to complex problems, both in group and individually, will ensure the holistic progression of the instructive-educational process.

The issues invoked allow us to believe that the employability and competitiveness of graduates of the programme will increase and will allow learners to become aware of:

- the need for active involvement in solving various existing (real) problems in the field of professional training;
- responsibility for teamwork tasks, focusing on effective group relationships related to critical thinking, creativity, willingness to find more original solutions, and argumentation of one's own opinion.
- team building skills for the development of semester projects, which develops communication skills, group distribution of tasks, conflict mediation, negotiation of solutions;
- the PBL method is based on a permanent self-evaluation of the learner, which develops awareness of the need for lifelong learning.

The overall learning outcomes of the pilot programme are expressed through the expected learning outcomes expressed through the graduate's ability:

- to perceive specialized problems at national and European level, possessing the knowledge and skills necessary to start a career in the given profession;
- to act in a team spirit in the context of administrative decision making;
- to instrument administrative acts and procedures;
- to use language specific to public administration;
- to understand the realities of the administrative environment;
- to analyze and synthesize socio-economic processes and phenomena by developing and implementing managerial strategies;
- to have decision-making and change management capacities and abilities in public administration;
- to strengthen their capacity to take risks and professional responsibilities;
- to initiate strategies for the development and diversification of the activity of the central and local public administration;
- to work with specialists from other fields and to act in the context of change management, etc.

2.2 SEMESTERS

Updating curricular support and reviewing teaching methods at the specialty *0400.1 Public Administration* is the key to the success of the pilot programme, contributing to the achievement of the mission and objectives of the study programme, such as:

- providing the knowledge and skills needed to start a career in the public service;
- training of specialists in the field of public administration capable of providing the local public management;

- the use of innovative teaching methods, in particular PBL, through which team spirit will develop in the context of problem solving;
- training public managers with skills and knowledge in the field of leadership;
- developing the capacities of investigating administrative acts and procedures by capitalizing on the specific language of public administration;
- creating a study environment focused on the holistic approach of the realities of the administrative environment, of the social-economic processes and phenomena;
- developing the communication, motivation and engagement skills of future specialists in public administration;
- cultivating decision-making and change management capacities in public administration;
- enhancing the capacities to take occupational risks and responsibilities;
- developing capacities to initiate strategies for the development and diversification of the work of central and local public administration;
- training a body of civil servants trained in the field of human resource management;
- preparing students for employment or continuing studies in the second cycle, master's degree studies.

The achievement of these objectives will be carried out in stages, from one semester to another, from simple to complex learning tasks.

2.2.1 Semester 1

The educational plan is elaborated in accordance with the provisions of the Framework Plan, which implies the study of the general and socio-humanistic courses in the first year of study, in addition to the fundamental training units specific to the field of professional training.

Fundamental units were given 86.67% in the first semester, and those of general culture - 13.33%. The study of the fundamental course units is the basis of the study of the specialized courses and initiates the students in the field of professional training.

The total hourly workload for the first semester is 900 hours (direct contact - 450 hours and individual study - 450 hours). The direct contact hours are broken down by type of activity: lecture - 194 hours, seminar - 180 hours, laboratory - 76 hours.

The table below shows the course units studied during the first semester, the number of credits, the form of assessment, the objectives and the brief description of each course unit.

Course unit / module name	Number of ECTS credits	Assessment form	Brief description of the correlation / integration of the course unit with / in the study programme
General theory of law	6	E	Fundamental compulsory course unit meant to familiarize students with the science of law and state, about the juridical reality of society in relation to the legal consciousness of society, about law as a system of norms, institutions and

			branches, legal relations within the society.
Constitutional law and political institutions	6	E	The fundamental compulsory course unit aims to bring to the knowledge of the students the main branch of the system of law, the core of which is the Constitution, the law with superior legal force to other laws, which systematically regulates both the principles of the social-economic structure and the organization of the state based on this, guarantees from a material point of view the assurance of the fundamental civil rights.
Module: 1.Theory of public administration 2. History of public administration	6	E	The study of these course units within a module was determined by the related aspect of the courses, which would facilitate the formation of complex knowledge in the evolution of both the theories in the field of contemporary public administration as well as the professional training of the future public administration specialist developing capacities and competences on the dimension of analysis, comparison, synthesis of genesis concepts and evolution of administrative structures in the history of humanity.
International public law	4	E	The course unit offers knowledge to any specialist who is going to launch in the political, social and economic life of the state, therefore the essential objective of the course unit lies in the formation of a wider vision of contemporary international activity and the role of each state in the development of international society.
Politology + project ²	4	P	The analytical and theoretical-practical course unit aims at familiarizing students with the subject matter and levels achieved in the field, initiating in the methods and procedures of political analysis, forming a political and

² The elaboration of the project at this course unit was conditioned by the field of professional training, which at the time of elaboration of the plan was 313 Political Sciences, now being modified by the legislator in 0400 Administrative Sciences

			<p>professional culture appropriate for the future specialists.</p> <p>Within this course unit the students will develop the first project, through which they will try to relate in a group to identify the problems in the field and to find a common denominator for solving the researched problems; will study the background and formality conditions to be respected in the process of developing a research project.</p>
English language I	4	E	<p>The compulsory course unit of general education is designed to develop students' writing, listening - comprehension and communication skills by using the general English and professional English lexicon in contexts relevant to professional activity.</p>

Objectives planned for the first semester:

- Knowledge of the notions, concepts, theories and basic methods of the science of administration;
- Understanding the basic principles of organization and operation of administrative structures;
- Identifying, analyzing and formulating personalized proposals in relation to problems in the field of administrative sciences;
- Studying the specialized vocabulary and developing communication skills in English;
- Developing individual or team work capacities to solve model-based situations in the professional training field;
- Rigorous, efficient, responsible and timely implementation of tasks, in a spirit of initiative and in accordance with ethical principles and professional ethics.

The expected outcomes will depend on the achievement of the objectives planned for this semester, as well as on the effective implementation of the teaching-learning strategies.

The teaching-learning strategies used by the teachers will be applied depending on the specificity of course units, combining new teaching methods with the classical ones such as: lecture, explanation, conversation, questioning, discovery, case study, brainstorming, teamwork, method of conceptual maps, text comment method, etc.

The assessment of the academic outcomes is carried out in accordance with the provisions of the Regulation on the assessment of students' learning outcomes of the USARB³, which is brought to the students' attention by the tutors of the academic groups. The criteria and methods for assessing students' knowledge are provided in curricula of the course units, where the quantifiable elements

³ Regulation on the assessment of students' learning outcomes, approved by the USARB's Senate Decision, minutes 9 of 16.03.2011.

are listed by grades (knowledge, analysis, synthesis, assessment, skills, etc.) and the way in which the current assessment during the semester and final assessment activities are performed. The teacher presents the curriculum of the course unit to students at the first class, specifying the expected learning outcomes, the current and final assessment modalities and forms.

There are not admitted to the final assessment students who:

- did not achieve curricular objectives;
- did not get an average grade for promotion in the current assessments;
- were absent in more than 30% of the auditorium activities;
- did not defend the semester project at the course units, where the grade for the project is part of the semester grade;
- did not carry out the tasks that involve the individual learning activity.

At the end of each semester, based on a predetermined timetable, the examination session takes place, and for re-examination sessions students with arrears.

In order to monitor the quality of the training of specialists in the university, the faculty and the assessment activities, the department of studies and the Dean's Office organize semestrial dynamic assessments. The results of these tests are taken into account in the calculation of the average grade per semester at the seminar, along with the current assessments conducted by the teacher.

Starting with the 2012-2013 academic year, some full-time teaching staff of the department started applying online assessment through Moodle tools.

The students' grading is carried out in accordance with the Order of the Minister of Education no.44 of 26.01.2016 on the modification and completion of the Regulation for organizing the studies in higher education based on the National Credit Studies System, which established that "the grade at the course unit / module is calculated on the basis of the semester grade⁴ and the examination grade⁵ expressed in two decimal digits."

The final grade is calculated on the basis of the marks recommended by the European Credit Transfer System as follows:

Grade	ECTS equivalent
9,01-10,0	A
8,01-9,0	B
7,01-8,0	C
6.01-7,0	D
5,0-6,0	E
3,01-4,99	FX
1,0-3,0	F

⁴ Weighted average of seminar / laboratory grades, rounded up to 2 digits after comma.

⁵ Expressed in integers.

Student satisfaction with the study programme is assessed using the method of questioning, according to the QMS system procedure “Customer Satisfaction Evaluation” in the Quality Management System Manual. Semesterly, the Quality Management Department organizes the students’ electronic questioning on the quality of the training, the forms of organizing the didactic activities, and the information is collected and processed automatically by the computer, which ensures the anonymity of the respondents. The results of the questionnaires are used to improve the teaching-learning process: the teaching methods, the taught content, the ratio of the number of hours of direct / indirect contact, the number of course / seminar / laboratory hours, the teacher-student relationships are reviewed.

2.2.2 Semester 2

Course units studied in the first semester represent the necessary pre-requisites for the study units in semester II.

In this semester, there will be studied course units: fundamental - 60%, socio-humanistic orientation - 13,33% and general culture - 26,67%, in line with the provisions of the Framework Plan.

The total hourly workload for the second semester is 900 hours (direct contact - 450 hours and individual study - 450 hours). The direct contact hours are broken down by type of activity: lecture - 193 hours, seminar - 127 hours, laboratory - 130 hours.

Course unit / module name	Number of ECTS credits	Assessment form	Brief description of the correlation / integration of the course unit with / in the study programme
Administrative law I + project	6	P+E	The fundamental course unit will familiarize students with the legal mechanisms of organizing and operating the public administration system and executive power in the state. Through the elaboration of the semestrial projects students will practice to apply the theoretical knowledge accumulated into practice, focusing on teamwork, where the group will identify the problems in the field, will relate them to the existing legislation, will analyze the national and international practices in order to formulate the solutions to solve the problem situations and proposals for improvement of the legislation in the public domain.

Civil law	5	E	The course unit is a synthesis of the most important institutions of civil law, the knowledge of which is indispensable for the future public administration specialist. From this perspective, the course is a compartmentalised analysis of all units that make up the civil law as a whole: introduction into civil law, real rights, general theory of obligations and civil contracts.
Criminal law	4	E	The course unit will focus on some specific elements of criminal law, in particular, the legal regulations aimed at the accountability of central and local public administration officials.
Institutional law of the European Union	3	E	The course unit will examine all the legal norms governing the establishment of the European Union, the structure of the institutions and bodies of the European Union and the way in which they operate. This course unit is of particular importance and momentum given that the Republic of Moldova is an associated state of the European Union and tends to become a member of this international organization.
European civilization	4	P	The course unit will help the future public administration specialist to have the conceptual landmarks on the evolution and characteristics of civilization on the European continent, selecting the common and selective features of the European peoples, to know the genesis and evolution of the European civilization from old times so far, contributing to the orientation of students in the European value system established over time, to the creation of arguable attitudes towards European phenomena.
Information and communication technologies	4	E	The course unit of general culture consists of two compartments: basic concepts of information technology and computing system; applied information and communication technologies. In turn, the Applied Information and Communication

			Technologies compartment consists of 5 practical modules: the use of the operating system; the use of on-line computer networks and electronic services; document processing; table processing; presentations processing.
English language II	4	E	The compulsory general education course unit by combining different methods and tasks will encourage students to speak, use the professional (administrative) lexicon, develop the ability to understand authentic texts, and test the ability to capture meaningful details, as well as use simple statements aimed at meeting the concrete professional needs.

The expected outcomes will depend on the achievement of the **planned objectives** for the second semester:

- Using the knowledge acquired within the fundamental disciplines to explain and interpret concepts and processes in public administration;
- Appropriate application of the fundamental principles for the quantitative and qualitative assessment of public administration processes;
- Interpretation of various administrative models in order to solve typical problems in the field of public administration;
- Analysis of draft administrative decisions to assess their legality;
- Legal analysis and assignment of situation solving and modeling of processes in the area of public administration;
- Perceiving the necessity of applying modern technologies in the activity of public administration;
- Implementation of medium complexity projects / tasks focusing on current and relevant problems in the field of training, allowing planning of group work, sharing of roles in the team, diversity in cooperation, high level of study

The promotion of students from one year of study to another is based on the order of the rector, according to points 1.1.-1.20, *Chapter III. Academic evaluation and promotion* of the Regulation on the assessment of students' learning outcomes of the USARB.

Students who during the academic year have accumulated the total number of compulsory credits (60) provided in the educational plan for the respective year are promoted in the next year of study. In the first cycle, full-time education, the promotion in the next year of study is conditioned by the accumulation of at least 40 ECTS credits at the compulsory course units / modules provided in the annual study contract.

2.2.3 Semester 3

The course units studied in the first year of study are the necessary pre-requisites for the study of course units in the third semester.

In this semester there will be studied courses: fundamental - 46,47%, specialty - 40% and socio-humanistic orientation - 13,33% in accordance with the provisions of the Framework Plan.

The total hourly workload for the third semester is 900 hours (direct contact - 450 hours and individual study - 450 hours). The direct contact hours are allocated by type of activity: lecture - 224 hours, seminar - 170 hours, laboratory - 56 hours.

Course unit / module name		Number of ECTS credits	Assessment form	Brief description of the correlation / integration of the course unit with / in the study programme
Administrative law II	The interdisciplinary project will be elaborated at the nominated course units according to a complex, multidisciplinary theme, agreed by the teachers, students, and the employers' opinions on the problems in the field. The work of the groups on the project will be guided by the teachers responsible for the course units during the laboratory hours and the public defense of the projects will take place at least one week before the start of the examination session in front of a committee consisting of three or more teachers, appointed by the head of the department.	6	E	The course unit aims at deepening students' knowledge of the organization and functioning of central and local public authorities, focusing on the study of the purpose, role and attributions of the public administration authorities, by familiarizing with the specialized terms, knowledge of the organization and functioning of the central administrative bodies, deconcentrated and decentralized, and ensuring operability in working with public administration legislation.
Financial and fiscal law		4	E	The training of the public administration specialist, without the knowledge of the science of financial and fiscal law, is impossible. This is also due to the fact that financial and fiscal legal relations are present in the most important spheres of political, social, economic life.

Contravention law	<p>The results of the assessment of the semestrial projects are fixed in the examination lists, being taken into account when fixing the final grade for the course units according to the following formula</p> $\{(The\ result\ of\ the\ current\ assessment\ +\ the\ grade\ for\ the\ semester\ report)\ / 2\} (60\%) + Examination\ grade\ (40\%) = Final\ grade\ at\ the\ nominated\ course\ units\ (100\%).$	4	E	<p>The specialized course unit will familiarize students with the directions of development of the state policy and the regulations in the field of contravention law; will cause students to present the correct solutions or qualifications of contraventions; to assess the existing problems regarding the forms, methods and other legal mechanisms for carrying out state activity in the field of contravention; to propose new methods of improvement and simplification of the contravention procedure, etc.</p>
Family and civil status law	3	E	<p>Studying this course unit is an important condition for the training of specialists in the field of public administration with a broad vision in all branches of social sciences. The course unit ensures the theoretical and practical aspect of the legal framework governing the conclusion and effects of marriage, termination, dissolution and termination of the marriage, parental and fatherly affiliation, adoption, parental care, legal maintenance obligation, registration of civil acts and facts and other institutions.</p>	
Information law	4	P	<p>The course unit offers students the opportunity to reveal and capitalize on the importance of studying informational social relations; typology of</p>	

			information by degree of access; the structure and composition of the information society; the protection of personal data in the case of automated processing; digital signature and electronic document; electronic document circulation; legal regulation of networks and domain names; information security, legal liability in the information sphere, etc.
Labor law / Labor law of the European Union	4	E	The free choice courses units are intended to interpret the meaning of the legal norms governing labor relations and other related legal relationships, both internally and at European level. In the course units, the procedure for concluding, modifying, suspending and terminating the individual labor contract, as well as the mechanism of functioning of the social partnership in the field of work and the way of negotiation and conclusion of the collective labor agreement and of the collective agreement, as well as the institution of supervision and control over the observance of the legislation of labor, safety and health at work.
Philosophy. Philosophical issues of the domain / Philosophy and history of science	4	E	The course units of socio-humanistic orientation aim at forming an integral vision on the evolution of philosophical and philosophical-political thinking during the history

			of mankind; familiarization with the fields of philosophical reflection (ontology, gnoseology, epistemology, axiology, praxiology); the interaction of political philosophy with other directions of philosophical knowledge, the foundations of modern political philosophy, the state and its particularities, the political institutions, the political elites, the problems of the world in the XXIst century.
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The academic progress of the students and the expected outcomes depend on the achievement of the **learning objectives** expected for the third semester:

- Defining notions, interpreting concepts and theories, as well as their application in typical situations in the field of public administration;
- Implementation of the methodological principles of decision making in the administrative field under conditions of qualified assistance;
- Using the criteria and requirements for the drafting of draft administrative decisions for various factual situations;
- Appropriate application of modern technologies in public administration to assess the effectiveness of governance;
- Identifying, studying and proposing solutions for complex problems in the field of professional training, as well as anticipating the effects expected from applying the proposed solutions;
- Improving grouping techniques by developing interpersonal communication skills and taking responsibility for decision-making.

2.2.4 Semester 4

During the 4th semester courses will be studied: specialty - 62.5%, socio-humanistic orientation - 25% and general culture - 12.5% in accordance with the provisions of the Framework Plan.

The total hourly workload for the 4th semester is 900 hours (direct contact - 450 hours and individual study - 450 hours). The direct contact hours are broken down by type of activity: lecture - 195 hours, seminar - 165 hours, specialty internship I + semestrial project - 90 hours.

The table below shows the course units studied during the fourth semester, indicating the number of credits, the form of assessment and the brief description of each course unit. Also in this table the specialty internship I and the semestrial project is described.

Course unit / module name	Number of ECTS credits	Assessment form	Brief description of the correlation / integration of the course unit with / in the study programme
Control of the administrative act	5	E	The specialty course unit will familiarize students with the legal mechanisms for organizing and conducting the control over the administrative acts issued by the central and local public administration authorities as well as the entire administrative system.
Civil procedural law	6	E	The study of this course unit aims at familiarizing students with the judicial activity and its tangency with the administrative activity.
The right of social protection / European Union's social protection law	4	E	Elective / free choice course units are intended to interpret social protection regulations, methods and instruments for achieving the social policy of the state, and to highlight the particularities of community social security systems by countering the national social protection system.
Management psychology	3	E	The course unit will familiarize students with the interaction between personal and situational factors in the management process, and explore the processes and responsibilities associated with leadership in public institutions.
Market economy principles / Project management	4	E	Elective / free choice course units are intended to familiarize students with the bases of the functioning and development of the market economy, as well as the procedure for the design and implementation of the projects as ways of implementing the institutional strategy.
Ethics and professional deontology	2	E	The compulsory general education course unit is aimed at developing professional skills based on moral principles and norms; the orientation of the student youth towards the control of passions, the development of eternal moral values and virtues, in the spirit of ensuring and promoting the principles of the rule of law, stability of democratic institutions,

			respect for human rights, guaranteeing quality public services, ensuring economic and social progress.
Specialty internship I	6	E	In the process of realization of the (specialty) internship I , the students aim to familiarize themselves with the basics of the future specialty, obtaining primary skills for their professional training, being a first confrontation of the theoretical knowledge accumulated in the courses and seminars with the realities in the field.
Semester project			The project will be elaborated individually within the specialty internship according to the research theme, combining the theoretical and the practical aspect.

Objectives planned for semester IV:

- Using the knowledge gained in the fundamental disciplines for explaining and interpreting concepts and processes in the field of public administration.
- Perceiving the fundamental principles of organization and functioning of administrative structures.
- Argumentation of the need to take up modern technologies within public administration bodies.
- Studying problems in the field of public administration according to the legal provisions in force.
- Rigorous, efficient, responsible and timely implementation of professional tasks in a spirit of initiative and in accordance with ethical principles and professional deontology:
- Realization of individual projects focused on current and relevant issues in the field of training.

The promotion of students from one year of study to another is based on the order of the rector, according to points 1.1.-1.20, *Chapter III. Academic evaluation and promotion* of the Regulation on the assessment of students' learning outcomes of the USARB.

Students who, during the academic year, have accumulated the full number of compulsory credits (60 ECTS) provided in the educational plan for that year are promoted in the next year of study. In the first cycle, full-time education, the promotion in the next year of study is conditioned by the accumulation of at least 40 credits at the compulsory course units / modules provided in the annual study contract.

2.2.5 Semester 5

During the semester 5, 100% specialty courses will be studied, which corresponds to the provisions of the Framework Plan.

The total hourly workload for the 5th semester is 900 hours (direct contact - 450 hours and individual study - 450 hours). The direct contact hours are broken down by type of activity: lecture - 150 hours, seminar - 120 hours, specialty internship II + semester project - 180 hours.

The table below shows the course units studied during the 5th semester, indicating the number of credits, the form of assessment and the brief description of each course unit. Also in this table the specialty internship II and semester project is described.

Course unit / module name	Number of ECTS credits	Assessment form	Brief description of the correlation / integration of the course unit with / in the study programme
Legal liability of the civil servant	3	E	The special course unit will familiarize the students with the forms of legal liability of the civil servants: administrative, criminal, civil, disciplinary and material, in order to highlight the particularities of the civil servants' accountability and the directions for streamlining the administration of the Republic of Moldova.
Public service management / Human resources management in public administration	4	E	Elective / free choice courses are designed to characterize public sector management and public services as well as key aspects of human resource management in public administration.
E-governing / E-service in public administration	4	E	The elective / free choice course units aim at forming an integral vision of the authorities created exclusively in the field of e-governing by analyzing the digitization process of public services, by creating a single government portal and other sub-portals; electronic signature; electronic document circulation; legal regulation of networks and domain names; creating webpages on the Internet of public authorities, etc. At the same time, the students will be familiar with the procedure for implementing the e-service systems, which have been partly taken over by the Republic of Moldova in the strategic technological modernization programme of the government.
Land law and real estate advertising / Urbanism and landscaping	4	E	Elective / free choice course units are designed to familiarize students with the land law system, the realities of real estate advertising, as well as the national and

			community approach to the urbanization and landscaping process.
Environmental law / Customs law	3	E	The study of the course units at the free choice is aimed at knowing the normative acts regarding the legal protection of the environment, developing the consciousness of environmental protection in the context of a sustainable development. At the same time, the students will be familiar with the national customs system, analyzing the import / export rights, the origin of the goods, the customs valuation, the non-tariff measures for regulating the external economic activity, the procedure for customs clearance and customs documents, etc.
Specialty internship II	12	E	Specialty internship II is of a higher degree of complexity and may, in addition to the application of acquired knowledge and aspects of the direct involvement in the activity of the internship placement institution, within the limits allowed by the management of the internship institution and under the supervision of the internship mentor. This type of internship aims at developing the practical skills needed to prepare for independent professional activity.
Semester project			The project will be elaborated individually within the specialty internship according to the research theme, combining the theoretical and the practical aspect.

The academic progress of the students and the expected outcomes depend on the achievement of the expected **learning objectives** for the 5th semester:

- Understanding the fundamental principles of organizing and operating administrative structures for the purpose of their subsequent transposition into professional activity in public and / or private institutions.
- Analyzing the forms and methods of control of the evaluation of the administrative activity and formulating the proposals for its efficiency.
- Applying rules for the interpretation of legal norms to concrete practical situations.
- Identifying the existing problems in the field of public administration and propose effective solutions for their removal.

- Strategic planning of current professional and staff work, with a view to developing institutional and medium-term perspectives.
- Identifying the resources and modalities of personal and professional development in order to integrate and adapt to the requirements of the labor market.

2.2.6 Semester 6

During the 6th semester, 100% of specialized courses will be studied, which corresponds to the provisions of the Framework Plan.

The overall hourly workload for the 6th semester is 900 hours (direct contact - 450 hours and individual study - 450 hours). The direct contact hours are allocated by type of activity: lecture - 150 hours, seminar - 90 hours, research internship - 120 hours, bachelor's degree thesis - 90 hours.

The table below shows the course units studied during the sixth semester, indicating the number of credits, the form of assessment and the brief description of each course unit. At the same time, the research internship, the purpose and the objectives of the bachelor's degree thesis are described.

Course unit / module name	Number of ECTS credits	Assessment form	Brief description of the correlation / integration of the course unit with / in the study programme
Public procurement management	4	E	The specialty course unit provides students with information on the procurement procedure, such as: negotiation in public procurement procedures; elaboration of specialized documents in the field of public procurement; analyzing and enforcing legislation specific to procurement procedures; providing specialized consultancy; planning procurement procedures; carrying out and finalizing procurement procedures.
Central public administration	3	E	The specialty course unit aims to analyze the central public administration institutions, such as: the Presidency of the Republic of Moldova, the Government of the Republic of Moldova and the specialized central public administration.
Local public administration	3	E	Within this course the students will become acquainted with the administrative-territorial organization of the Republic of Moldova, the ways of forming the local public administration bodies and their attributions, the control of the activity of the local public administration bodies.

Legal regulation of entrepreneurial activity / Administrative contracts	3	E	Studying course units at free choice aim to know the legal procedure for regulating entrepreneurial activity and subjects who can practice entrepreneurship. At the same time, familiarizing students with the regulations in the field of administrative contracts, with the methods and instruments for realizing the public policies of the state through administrative contracts.
Office equipment, correspondence and secretarial techniques / Techniques for drawing up administrative documents	3	E	Within these course units, at the free choice, the students will become familiar with the rules, methods and forms of writing letters and official documents. At the same time, the students will be trained in the process of elaborating administrative documents and adopting decisions that can favor a positive dynamics of the relationship: public administration - citizen.
Research internship	14	E	The research internship aims at developing the necessary practical skills and applying the theoretical knowledge to the independent professional activity and carrying out the research, documenting and collecting the information for the realization of the bachelor's degree thesis. The student, in agreement with the coordinator teacher of the bachelor's degree thesis and the mentor responsible for the internship will operationalize the content of the internship based on the research theme.
Bachelor's degree thesis			<p>The bachelor's degree thesis is an essential part of the student's activity assessment. It tests the skills to conceive and conduct independent research under the guidance of the leader, as well as to prepare the research according to the rules of the scientific community.</p> <p>The purpose of the bachelor's degree thesis is to systematize and deepen students' theoretical knowledge and practical skills, as well as to develop the competence to solve the methodological and research problems in accordance with the subject of the bachelor's degree thesis</p>

			and with the tasks assigned to the student by the scientific supervisor. The subject of the bachelor's degree thesis is elaborated by the responsible department and is disseminated to the students during the fourth semester of studies. The subject of the bachelor's degree thesis and the scientific supervisors are approved at the meeting of the Council of the Faculty of Law and Social Sciences. The public endorsement of the bachelor's degree thesis takes place in front of the Bachelor's degree Committee
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Objectives planned for semester 6:

- Defining notions and concepts, interpreting theories and applying them to typical public administration situations.
- Identification of existing problems in the field of public administration and proposing efficient solutions for their removal, in a cooperative and flexible manner.
- Strategic planning of current professional and staff work, with a view to developing institutional and medium-term perspectives.
- Use of decision-making methods in administrative work for different situations.
- Analysis of the draft decisions of the central and local public administration institutions in order to assess their legality.
- Rigorous, efficient, responsible and timely implementation of professional tasks in a spirit of initiative and in accordance with ethical principles and professional deontology.

Studies in the specialty 0400.1 Public Administration finalize with the bachelor's degree examination which is limited to the public defense of the thesis. To the defense of the bachelor's degree thesis are admitted the graduates who have fully realized the provisions of the educational plan and have successfully defended the preventive presentation of the bachelor's degree thesis in front of the Commission designated by the head of the responsible department. The promotional version / overview of the study programme is reflected in [Annex 4].

3 CONCLUDING REMARKS

At present, the legal framework allows us to implement PBL as a teaching method. In order to achieve the 50 to 50 ratio between classical teaching and the project, it is necessary to make some changes to the legal framework, which would result in some institutional reforms. Certain changes to the framework plan could result in staff cuts due to the decrease in hours in certain disciplines, a situation that is not wanted by the project team. The road-map [Annex 5] sets out the legal rules that need to be modified and will facilitate the implementation of PBL and other student-centered methods. These changes will make it possible to strengthen the principle of academic autonomy, and will not have a negative impact on the number of USARB personnel.

Using PBL under the bachelor's degree programme in Public Administration allows us to affirm that students will be able to develop the skills they need for the labor market, such as critical thinking, leadership, communication, and problem solving. In the context of traditional teaching, activities that should lead to the development of competencies described above are insufficiently or formally conducted (e.g. student internship).

It is, however, noteworthy that the transition from traditional to problem-based education is particularly difficult for students because of uncertainty about their role in the teaching process. To ease this transition, teachers in the Public Administration bachelor's degree programme inform students about the PBL and present information from the PBLMD project experience. However, some advantages in the formation of students' competencies due to the reconceptualization of the bachelor's degree programme in Public Administration can be observed:

1. Working with potential employers and their participation in the study programme, and due to this it will have a relevant impact in society due to the direct collaboration and involvement of external organizations;
2. Students will be motivated to study the theoretical aspects of the disciplines in order to identify the relevant institutions to solve the problem;
3. The role of the teacher is more a facilitator than an instructor, education is really centered on the learner: Less us and more of them! PBL encourages students to think for themselves, to obtain faster results on critical thinking development and analytical skills. Thus, the concept of RBL-research based learning becomes more and more accessible. Teachers are able to discuss on the basis of their research and obtain feedback from students on them;
4. Students will be committed to continuously improving their own learning, constructive critique and impartial analysis of their own failures;
5. Academic staff will become more prominent outside the university community due to their active involvement in determining the external organizations they will work with;
6. The PBL-based study programme leads to the training of better graduates. The main benefit for society is that such graduates are more analytical and better qualified as a result of developing the ability to think for themselves during their studies in higher education, preparing them for the labor market realities.

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2. The Education Code of the Republic of Moldova, no. 152 of July 17, 2014
3. The framework plan for higher education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by the Order of the Minister of Education no. 1045 of 29.10
4. Regulation on the initiation, approval, monitoring and periodic evaluation of higher education programmes at the USARB, approved at the USARB Senate meeting of 24.02.2016
5. Regulation on the evaluation of academic outcomes of students at the USARB, approved at the USARB Senate on March 16, 2011

Annex 1: Our Vision on the bachelor's degree programme in Public Administration - The flowchart of interdisciplinary links of the components of the pilot project in the specialty 0400.1 Public Administration

Credited components	Course units / modules	Semester projects	Year, semester of study		Nr. of credits	Percentage share
			Full-time	Part-time		
Fundamental course units (F)	General theory of law		I/1	I/1	6	32,22%
	Constitutional law and political institutions		I/1	I/2	6	
	Module: 1. Theory of public administration 2. History of public administration		I/1	I/1	6	
	Politology	Project	I/1	I/1	4	
	International public law		I/1	I/1	4	
	Administrative law I	Project	I/2	II/3	6	
	Civil law		I/2	II/3	5	
	Criminal law		I/2	II/3	4	
	Institutional law of the European Union		I/2	I/2	3	
	Administrative Law II *	Interdisciplinary project	II/3	II/4	6	
	Financial and fiscal law *		II/3	III/5	4	
	Family and civil status law		II/3	II/4	4	
Total			-	-	58	
Course units for the training of general skills and competences (G)	English / French / German I		I/1	I/1	4	7,78%
	Physical education I		I/1	-	-	
	Information and communication technologies		I/2	I/2	4	

	English / French / German II		I/2	I/2	4	
	Physical education II		I/2	-	-	
	Ethics and professional deontology		II/4	II/4	2	
Total			-	-	14	
Course units of socio-humanistic orientation (U)	European construction / European civilization		I/2	I/2	4	6,67%
	Philosophy. Philosophical issues of the domain / Philosophy and history of science		II/3	II/3	4	
	Principles of market economy / Project Management		II/4	II/4	4	
Total			-	-	12	
Course units focusing on the basic specialty (S)	Information law		II/3	II/4	4	35,56%
	Cotraventional law *	Interdisciplinary project	II/3	II/4	4	
	Control of the administrative act		II/4	III/6	7	
	Civil procedural law		II/4	III/5	6	
	Administrative contracts		II/4	III/5	3	
	Legal liability of the civil servant		III/5	IV/7	3	
	Public procurement management		III/6	IV/7	4	
	Central public administration		III/6	IV/7	3	
	Local public administration		III/6	IV/7	3	
	Legal regulation of entrepreneurial activity		III/6	III/6	3	
	Labor law /		II/3	II/3	4	

	Labor law of the European Union					
	The right of social protection / The right to social protection of the European Union		II/4	III/5	4	
	Public service management / Human resources management in public administration		III/5	III/6	4	
	E-governing / E-service in public administration		III/5	III/5	4	
	Land law and real estate advertising / Urbanism and landscaping		III/5	III/6	4	
	Environmental law / Customs law		III/5	III/6	3	
	Office supplies, correspondence and secretarial techniques / Techniques for drawing up administrative documents		III/6	IV/7	3	
Total			-	-	64	
Internships	Specialty internship I	Project	II/4	III/6	6	10%
	Specialty internship I	Project	III/5	IV/8	12	
Total					18	
Bachelor's degree thesis	Research internship		III/6	IV/8	8	7,78%
	Defense of the bachelor's degree thesis		III/6	IV/8	6	
Total			-	-	14	

Annex 2: Bachelor's degree programme in Public Administration, Romanian version

Ministerul Educației al Republicii Moldova
Universitatea de Stat „Alec Russo” din Bălți



PLAN DE ÎNVĂȚĂMÂNT

ciclul I (studii superioare de licență)

Nivelul calificării	Nivelul 6 ISCED
Domeniul general de studiu	040 Științe administrative
Domeniul de formare profesională	0400 Științe administrative
Specialitatea	0400.1 Administrație publică
Numărul total de credite de studiu	180
Titlul obținut la finele studiilor	Licențiat în științe politice
Baza admiterii	Diploma de bacalaureat sau un act echivalent de studii; diploma de studii superioare
Limba de instruire	Limba română
Forma de organizare a învățământului	Învățământ cu frecvență
Modificări	Modificat la 30.05.2017, aplicat de la 01.09.2017

CALENDARUL UNIVERSITAR

Anul de studii	Activități didactice		Sesiune de examinare		Stagii de practică	Vacanțe		
	sem. I	sem. II	iarnă	vară		iarnă	primăvară	vară
I	01.09.2017-16.12.2017	05.02.2018-26.05.2018	18.12.2017-23.12.2017; 09.01.2018-27.01.2018	28.05.2018-23.06.2018		25.12.2017-08.01.2018; 29.01.2018-04.02.2018	17.04.2018-24.04.2018	25.06.18-31.08.18
II	03.09.2018-15.12.2018	04.02.2019-25.05.2019	17.12.2018-24.12.2018; 09.01.2019-26.01.2019	27.05.2019-22.06.2019	29.04.2019-25.05.2019	25.12.2018-08.01.2019; 28.01.2019-02.02.2019	29.04.2019-06.05.2019	24.06.2019-31.08.2019
III	02.09.2019-14.12.2019	10.02.2020-16.05.2020	16.12.2019-24.12.2019; 09.01.2020-31.01.2020	18.05.2020-30.05.2020; 01.06.2020-19.06.2020 (Teza de licență)	04.11.2019-14.12.2019; 10.02.2020-16.05.2020	25.12.2019-08.01.2020; 01.02.2020-08.02.2020	20.04.2020-27.04.2020	

Repartizarea unităților de curs / modulelor în planurile de învățământ pe ani de studii
Anul I, semestrul 1 (15 săptămâni de studii)

Cod	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
F.01.O.001	Teoria generală a dreptului	180	90	90	44	46	-	E	6
F.01.O.002	Drept constituțional și instituții politice	180	90	90	44	46	-	E	6
F.01.O.003	Modul: 1. Teoria administrației publice 2. Istoria administrației publice	180	60 30	60 30	30 16	30 14	-	E	6
F.01.O.004	Drept internațional public	120	60	60	30	30	-	E	4
F.01.O.005	Politologie+proiect	120	60	60	30	14	16	E	4
G.01.O.006	Limba engleză / franceză / germană I	120	60	60	-	-	60	E	4
Total ore:		900	450	450	194	180	76	6	30
						450			
G.01.O.007	Educația fizică I	60	30	30	-	30	-	C	

Anul I, semestrul 2 (15 săptămâni de studii)

Cod	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
F.02.O.008	Drept administrativ I + proiect	180	90	90	44	22	24	E	6
F.02.O.009	Drept civil	150	75	75	45	30	-	E	5
F.02.O.010	Drept penal	120	60	60	30	30	-	E	4
F.02.O.011	Drept instituțional al Uniunii Europene	90	45	45	30	15	-	E	3
U.02.A.012 / U.02.A.013	Construcție europeană / Civilizație europeană	120	60	60	30	30	-	E	4
G.02.O.014	Tehnologii informaționale și comunicaționale	120	60	60	14	-	46	E	4
G.02.O.015	Limba engleză / franceză / germană II	120	60	60	-	-	60	E	4
Total ore:		900	450	450	193	127	130	7	30
						450			
G.02.O.016	Educația fizică II	60	30	30	-	30	-	C	

Anul II, semestrul 3 (15 săptămâni de studii)

Cod	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
F.03.O.017	Drept administrativ II *	180	90	90	44	22	24	E	6
F.03.O.018	Drept financiar și fiscal*	120	60	60	30	14	16	E	4
F.03.O.019	Dreptul familiei și stare civilă	120	60	60	30	30	-	E	4
S.03.O.120	Drept informațional	120	60	60	30	30	-	E	4
S.03.O.121	Drept contravențional*	120	60	60	30	14	16	E	4
S.03.A.122 / S.03.A.123	Dreptul muncii / Dreptul muncii al Uniunii Europene	120	60	60	30	30	-	E	4
U.03.A.024 / U.03.A.025	Filosofia. Probleme filosofice ale domeniului / Filosofia și istoria științei	120	60	60	30	30	-	E	4
Total ore:		900	450	450	224	170	56	7	30
					450				

* Proiect interdisciplinar elaborat la unități de curs indicate.

Anul II, semestrul 4 (15 săptămâni de studii)

Cod	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
S.04.O.126	Controlul actului administrativ	150	75	75	45	30	-	E	5
S.04.O.127	Drept procesual civil	180	90	90	44	46	-	E	6
S.04.A.128 / S.04.A.129	Dreptul protecției sociale / Dreptul protecției sociale al Uniunii Europene	120	60	60	30	30	-	E	4
S.04.O.130	Psihologia conducerii	90	45	45	30	15	-	E	3
U.04.A.031 / U.04.A.032	Principiile economiei de piață / Managementul proiectelor	120	60	60	30	30	-	E	4
G.04.O.033	Etica și deontologia profesională	60	30	30	16	14	-	E	2
	Practica de specialitate I + proiect	180	90	90	-	-	-	E	6
Total ore:		900	450	450	195	165	-	7	30
					360				

Anul III, semestrul 5 (15 săptămâni de studii)

Cod	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
S.05.O.134	Răspunderea juridică a funcționarului public	90	45	45	30	15	-	E	3
S.05.A.135 / S.05.A.136	Managementul serviciilor publice / Managementul resurselor umane în administrația publică	120	60	60	30	30	-	E	4
S.05.A.137 / S.05.A.138	E-guvernare / E-service în Administrația Publică	120	60	60	30	30	-	E	4
S.05.A.139 / S.05.A.140	Drept funciar și publicitate imobiliară/ Urbanism și amenajarea teritoriului	120	60	60	30	30	-	E	4
S.05.A.141 / S.05.A.142	Dreptul mediului / Drept vamal	90	45	45	30	15	-	E	3
	Practica de specialitate II + proiect	360	180	180	-	-	-	E	12
	Total ore:	900	450	450	150	120	-	6	30
					270				

Anul III, semestrul 6 (15 săptămâni de studii)

Cod	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
S.06.O.143	Managementul achizițiilor publice	120	60	60	30	30	-	E	4
S.06.O.144	Administrația publică centrală	90	45	45	30	15	-	E	3
S.06.O.145	Administrația publică locală	90	45	45	30	15	-	E	3
S.06.A.146 / S.06.A.147	Reglementarea juridică a activității de întreprinzător/ Contracte administrative	90	45	45	30	15	-	E	3
S.06.A.148 / S.06.A.149	Birocrația, corespondență și tehnici de secretariat / Tehnici de elaborare a documentelor administrative	90	45	45	30	15	-	E	3
	Practica de cercetare	240	120	120	-	-	-	E	14
	Teza de licență	180	90	90	-	-	-	E	
	Total ore:	900	450	450	150	90	-	7	30
					240				

Stagiile de practică

Nr. crt.	Stagiile de practică	Sem.	Durata nr. săpt./ore	Perioada	Număr de credite
1.	Practica de specialitate I	4	3/180	29.04.2019-25.05.2019	6
2.	Practica de specialitate II	5	6/360	04.11.2019-14.12.2019	12
	Total				18

Teza de licență

Nr. crt.	Denumirea activității	Sem.	Durata nr. săpt./ore	Perioada	Număr de credite	
1.	Elaborarea și susținerea tezei de licență: documentare, investigare, cercetare, experimentare, redactare, elaborarea prezentării, susținere publică	Practica de cercetare	VI	13/240	10.02.2020-16.05.2020 (8 ore/săpt.)	14
		Susținerea tezei de licență	VI	3/180	01.06.2020-19.06.2020	

Minimul curricular inițial pentru un alt domeniu la ciclul II – studii superioare de master (la libera alegere)

Nr. crt.	Denumirea unității de curs / modulului	Anul	Semestrul	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
				Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
1.	Teoria generală a dreptului	I	I	180	90	90	44	46	-	E	6
2.	Drept constituțional și instituții politice	I	I	180	90	90	44	46	-	E	6
3.	Modul: 1. Teoria administrației publice 2. Istoria administrației publice	I	I	180	60	60	30	30	-	E	6
					30	30	16	14	-		
4.	Drept administrativ I	I	II	180	90	90	44	46	-	E	6
5.	Drept administrativ II	II	III	180	90	90	44	46	-	E	6
	Total			900	450	450	222	228	-	5	30
							450				

Unități de curs la liberă alegere

Nr. crt.	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
1.	Bazele culturii informației	30	10	20	-	10	-	C	-
2.	Cultura comunicării	60	30	30	-	-	30	C	2
3.	Securitatea muncii. Protecția civilă	30	15	15	15	-	-	C	-
4.	Guvernare modernă și integrare europeană	90	45	45	30	15	-	E	3
5.	Regionalizarea administrativă	90	45	45	30	15	-	E	3
6.	Protecția juridică a drepturilor omului	90	45	45	30	15	-	E	3
7.	Teoria sondajelor în administrația publică	90	45	45	30	15	-	E	3
8.	Sociologia conducerii	90	45	45	30	15	-	E	3
9.	Metodologia cercetărilor științifice	60	30	30	14	-	16	C	2

Modulul psihopedagogic (la libera alegere)									
Nr. crt.	Denumirea unității de curs / modulului	Total ore			Numărul de ore pe tipuri de activități			Forma de evaluare	Număr de credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
1.	Pedagogie	120	60	60	30	30	-	E	4
2.	Psihologie	120	60	60	30	30	-	E	4
3.	Psihologia vârștelor. Stresul în mediul educațional	150	75	75	45	30	--	E	5
4.	Dirigenție. Educație incluzivă	150	75	75	45	30	--	E	5
5.	Didactica științelor administrative	180	90	90	46	44	-	E	6
6.	Management educațional	120	60	60	30	30	-	E	4
7.	Etica pedagogică	60	30	30	16	14	-	E	2
8.	Practica de inițiere în pedagogie*	30	15	15	-	-	15	-	1
9.	Practica de inițiere în psihologie**	30	15	15	-	-	15	-	1
10.	Practica pedagogică	480	240	240	-	-	-	E	16
11.	Practica de specialitate I	120	60	60	-	-	-	E	4
12.	Practica de specialitate II	240	120	120	-	-	-	E	8
Total		1800	900	900	242	208	30	10	60

*se evaluează în cadrul unității de curs Pedagogie

**se evaluează în cadrul unității de curs Psihologie

Descrierea finalităților de studii și a competențelor

Competențe profesionale:

CP1. Operarea cu noțiunile, conceptele, teoriile și metodele de bază ale științei administrației în activitatea profesională.

CP2. Interpretarea principiilor fundamentale de organizare și funcționare a structurilor administrative în scopul transpunerii ulterioare a acestora în activitatea profesională în instituții publice și/sau private.

CP3. Identificarea, analiza și rezolvarea problemelor din domeniul administrației publice în conformitate cu prevederile legale, în mod cooperant, flexibil și eficient.

CP4. Elaborarea, examinarea și adoptarea deciziilor privind activitatea administrativă.

CP5. Planificarea strategică a activității profesionale curente și de personal, în scopul dezvoltării instituționale pe termeni medii și de perspectivă.

CP6. Utilizarea tehnologiilor moderne, diverselor forme și metode de control a evaluării activității administrative și formularea propunerilor de eficientizare a acesteia.

Competențe transversale:

CT1. Executarea riguroasă, eficientă, responsabilă și în termen, a sarcinilor profesionale, în spirit de inițiativă și în concordanță cu principiile etice și deontologia profesională.

CT2. Aplicarea tehnicilor de relaționare în grup, deprinderea și exercitarea rolurilor specifice în munca de echipă, prin dezvoltarea abilităților de comunicare interpersonală și prin asumarea responsabilității pentru luarea deciziilor.

CT3. Autoevaluarea nevoii de formare profesională și identificarea resurselor și modalităților de dezvoltare personală și profesională, în scopul inserției și adaptării la cerințele pieței muncii.

Matricea corelațiilor dintre competențele profesionale și transversale și unitățile de curs incluse în planul de învățământ

Codul	Unitatea de curs	Sem.	Nr. credite	Competențe profesionale						Competențe transversale		
				CP1	CP2	CP3	CP4	CP5	CP6	CT1	CT2	CT3
F.01.O.001	Teoria generală a dreptului	I	6	+	+	+				+		
F.01.O.002	Drept constituțional și instituții politice	I	6	+	+	+	+			+	+	
F.01.O.003	Modul: 1. Teoria administrației publice	I	6	+	+	+	+	+	+		+	
	2. Istoria administrației publice			+	+	+		+			+	
F.01.O.004	Drept internațional public	I	4	+	+	+		+		+	+	+
F.01.O.005	Politologia + proiect	I	4	+	+	+	+				+	
G.01.O.006	Limba engleză / franceză / germană I	I	4						+	+	+	+
F.02.O.008	Drept administrativ I + proiect	II	6	+	+	+	+	+		+	+	+
F.02.O.009	Drept civil	II	5	+	+	+					+	+
F.02.O.010	Drept penal	II	4	+	+	+			+	+	+	
F.02.O.011	Drept instituțional al Uniunii Europene	II	3	+	+	+		+		+	+	
U.02.A.012 / U.02.A.013	Construcție europeană / Civilizație europeană	II	4	+	+					+	+	
G.02.O.014	Tehnologii informaționale și comunicaționale	II	4						+	+	+	+
G.02.O.015	Limba engleză / franceză / germană II	II	4						+	+	+	+
F.03.O.017	Drept administrativ II*	III	6	+	+	+	+	+	+	+	+	+
F.03.O.018	Drept financiar și fiscal*	III	4	+	+	+		+	+	+	+	+
F.03.O.019	Dreptul familiei și stare civilă	III	4	+	+	+				III	+	+
S.03.O.120	Drept informațional*	III	4			+	+	+	+	+	+	+
S.03.O.121	Drept contravențional	III	4	+	+	+	+			+		
S.03.A.122 / S.03.A.123	Dreptul muncii / Dreptul muncii al Uniunii Europene	III	4	+	+	+	+	+		+		+
	+			+	+	+	+		+		+	
U.03.A.024 / U.03.A.025	Filosofia. Probleme filosofice ale domeniului / Filosofia și istoria științei	III	4	+					+	+	+	+
+							+	+	+	+		
S.04.O.126	Controlul actului administrativ	IV	5			+	+	+	+	+	+	
S.04.O.127	Drept procesual civil	IV	6	+	+	+	+			+		
S.04.A.128 / S.04.A.129	Dreptul protecției sociale / Dreptul protecției sociale al Uniunii Europene	IV	4	+	+	+	+	+		+		+
	+			+	+	+	+		+		+	
S.04.A.130	Psihologia conducerii	IV	3		+				+		+	+
U.04.A.031 / U.04.A.032	Principiile economiei de piață / Managementul proiectelor	IV	4	+					+	+	+	+
	+							+	+	+	+	
G.04.O.033	Etica și deontologia profesională	IV	2					+		+		+
S.05.O.134	Răspunderea juridică a funcționarului public	V	4			+	+	+	+	+		+
S.05.A.135 / S.05.A.136	Managementul serviciilor publice / Managementul resurselor umane în administrația publică	V	4			+		+	+	+	+	+
					+		+	+	+	+	+	
S.04.A.137 / S.04.A.138	E-guvernare / E-service în Administrația Publică	V	4			+	+	+	+	+	+	
					+	+	+	+	+	+		
S.05.A.139 / S.05.A.140	Drept funciar și publicitate imobiliară / Urbanism și amenajarea teritoriului	V	4	+	+	+	+			+		
	+			+	+	+			+			
S.05.A.141 / S.05.A.142	Dreptul mediului / Drept vamal	V	3	+	+	+				+		
	+			+	+			+				

S.06.A.143	Managementul achizițiilor publice	VI	4			+	+	+	+		+	+
S.06.A. 144	Administrația publică centrală	VI	3			+	+	+	+	+		+
S.06.O. 145	Administrația publică locală	VI	3			+	+	+	+	+		+
S.06.A.146 / S.06.A.147	Reglementarea juridică a activității de întreprinzător / Contracte administrative	VI	3	+	+	+	+		+	+	+	+
S.06.A.148 / S.06.A.149	Birocrația, corespondență și tehnici de secretariat / Tehnici de elaborare a documentelor administrative	VI	3				+	+	+		+	+
							+	+	+		+	+

NOTĂ EXPLICATIVĂ

1. Generalități

Planul de învățământ, la specialitatea *Administrație publică*, este documentul care cuprinde un sistem de activități de formare profesională și de cercetare științifică al specialiștilor în domeniul administrației publice. Titlul obținut la finele ciclului I, studii superioare de licență este de *licențiat în științe politice*.

Planul de învățământ cuprinde:

- I. planul de învățământ propriu-zis;
- II. nota explicativă la planul de învățământ.

Planul de învățământ a fost racordat la obiectivele proiectului ERASMUS+ „Introducerea învățării bazate pe probleme în Moldova: Spre consolidarea competitivității și șanselor de angajare ale studenților / Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability”, fiind elaborat în conformitate cu prevederile:

1. Codului educației al Republicii Moldova, nr. 152 din 17 iulie 2014;
2. Legii pentru aprobarea Clasificatorului unic al funcțiilor publice, nr.155 din 21.07.2011;
3. Planului-cadru pentru studii superioare (ciclul I - Licență, ciclul II - Master, studii integrate, ciclul III - Doctorat), aprobat prin ordinul Ministerului Educației nr. 1045 din 29 octombrie 2015;
4. Hotărârii Guvernului cu privire la aprobarea Nomenclatorului domeniilor de formare profesională și al specialităților în învățământul superior, nr.482 din 28.06.2017;
5. Regulamentului de organizare a studiilor în învățământul superior în baza Sistemului Național de Credite de Studiu, aprobat prin ordinul Ministerului Educației nr. 1046 din 29 octombrie 2015;
6. Cadrului Național al Calificărilor al Republicii Moldova și Cadrului Național al Calificărilor pentru învățământul superior pe domenii de formare profesională, aprobate prin Ordinul Ministerului Educației nr. 934 din 29 decembrie 2010.

2. Concepția formării specialistului

a. Scop și caracteristici

Scopul programului-pilot este trecerea de la învățământul clasic (teoretizat), unde profesorul este furnizor de informații, iar studentul receptorul informației, la PBL (învățământ axat pe problemă), ceea ce ar permite formarea specialiștilor competitivi pe piața muncii, calificați în domeniul de formare profesională *0400 Științe administrative, specialitatea 0400.1 Administrație publică*.

Caracteristicile distinctive ale programului constau în asigurarea unei pregătiri profesionale de calitate tuturor celor care doresc să-și construiască o carieră în structurile administrației centrale și locale, precum și în departamentele de specialitate din cadrul companiilor publice. Formarea profesională este axată pe însușirea: fundamentelor științifice și normative ale teoriei constituției; principiilor generale ale

sistemului politic și diverselor mecanisme de administrare; dezvoltarea abilităților și formarea deprinderilor practice în domeniul administrației publice.

b. Angajabilitate

Absolvenții ciclului I, studii de licență, specialitatea Administrație publică, pot ulterior activa în calitate de funcționar public în funcții de execuție; specialist în domeniul organizării activității administrative; specialist în domeniul resurselor umane; specialist în domeniul relațiilor publice; specialist în domeniul organizării și prestării serviciilor publice; specialist în domeniul documentării administrative; manager de proiecte în administrația publică; consilier în administrația publică; referent în probleme administrative; expert în domeniul administrației publice.

c. Formare ulterioară

Formarea inițială la ciclul I, studii superioare de licență, constituie o premisă necesară pentru continuarea studiilor la ciclul II, studii superioare de masterat, în domeniul *31 Științe politice* sau *38 Drept*.

3. Finalități de studiu preconizate

a. Finalitățile formării:

- a forma funcționari în administrația publică capabili să stăpânească problemele de specialitate la nivel național și european, oferindu-le cunoștințe și abilități necesare începerii unei cariere în profesia dată;
- a forma specialiști în domeniul administrației publice în vederea asigurării managementului public autohton;
- a forma funcționari publici în spiritul eficacității manageriale;
- a dezvolta spiritul de echipă în contextul luării deciziilor administrative;
- a pregăti manageri publici, cu aptitudini și cunoștințe în domeniul leadership-ului;
- a dezvolta capacități de instrumentare a actelor și procedurilor administrative;
- a dezvolta capacități de valorificare a limbajul specific administrației publice;
- a forma abilități de înțelegere a realităților mediului administrativ;
- a forma capacități de analiză și sinteză a proceselor și fenomenelor social-economice prin elaborarea și implementarea strategiilor manageriale;
- a dezvolta abilități de comunicare, motivare și antrenare a viitorilor specialiști în administrația publică;
- a cultiva capacități decizionale și de gestionare a schimbărilor în administrația publică;
- a consolida capacitățile de asumare a riscurilor și responsabilităților profesionale;
- a dezvolta capacități de inițiere a strategiilor privind dezvoltarea și diversificarea activității din administrația publică centrală și locală;
- a asigura un corp de funcționari publici instruiți în domeniul managementului resurselor umane;
- a cultiva abilități de colaborare cu specialiști din alte domenii și de a acționa în contextul managementului schimbării.

b. Finalitățile programului de studii exprimate prin competențele profesionale și competențele transversale:

Competențe profesionale	CP1	CP2	CP3	CP4	CP5	CP6
Descriptori de nivel ai elementelor structurale ale competențelor profesionale	Operarea cu noțiunile, conceptele, teoriile și metodele de bază ale științei administrației în activitatea profesională.	Interpretarea principiilor fundamentale de organizare și funcționare a structurilor administrative în scopul transunerii ulterioare a acestora în activitatea profesională în	Identificarea, analizarea și rezolvarea problemelor din domeniul administrației publice în conformitate cu prevederile legale, în mod cooperant,	Elaborarea, examinarea și adoptarea deciziilor privind activitatea administrativă.	Planificarea strategică a activității profesionale curente și de personal, în scopul dezvoltării instituționale pe termeni medii și de perspectivă.	Utilizarea tehnologiilor moderne, diverselor forme și metode de control a evaluării activității administrative și formularea propunerilor de

		instituții publice și/sau private	flexibil și eficient			eficientizare a acestora.
CUNOȘTINȚE						
1. Cunoașterea, înțelegerea conceptelor, teoriilor și metodelor de bază ale domeniului și ale ariei de specializare; utilizarea lor adecvată în comunicarea profesională	CP1.1 Cunoașterea, înțelegerea și utilizarea noțiunilor, conceptelor, teoriilor din domeniul administrației publice	CP2.1 Explicarea și perceperea principiilor fundamentale de organizare și funcționare a structurilor administrative	CP3.1 Identificarea, înțelegerea și utilizarea eficientă a metodelor din domeniul administrației publice, în scopul încadrării legale a stărilor de fapt	CP4.1 Cunoașterea exigențelor de elaborare a proiectelor de decizii administrative pentru diverse situații de fapt	CP5.1 Distingerea strategiilor fundamentale de planificare a activităților profesionale și de personal curente în domeniul administrației publice	CP6.1 Perceperea necesității aplicării tehnologiilor moderne în activitatea administrației publice
2. Utilizarea cunoștințelor de bază pentru explicarea și interpretarea unor variate tipuri de concepte, situații, procese, proiecte etc. asociate domeniului	CP1.2 Utilizarea cunoștințelor achiziționate în cadrul disciplinelor fundamentale pentru explicarea și interpretarea conceptelor și proceselor din domeniul administrației publice	CP2.2 Interpretarea diverselor modele administrative în vederea soluționării unor probleme tipice din domeniul administrației publice	CP3.2 Analiza și încadrarea legală a rezolvării situațiilor și modelării proceselor din sfera administrației publice	CP4.2 Utilizarea criteriilor și exigențelor de elaborare a proiectelor de decizii administrative pentru diverse situații de fapt	CP5.2 Cunoașterea strategiilor fundamentale de planificare a activităților profesionale și de personal pe termen mediu în administrația publică	CP6.2 Identificarea formelor și metodelor de control a evaluării activității administrative
ABILITĂȚI						
3. Aplicarea unor principii și metode de bază pentru rezolvarea de probleme / situații bine definite, tipice domeniului în condiții de asistență calificată	CP1.3 Aplicarea metodelor de bază pentru soluționarea situațiilor de fapt în procesul formării profesionale	CP2.3 Raportarea principiilor fundamentale pentru soluționarea situațiilor concrete relevante administrației publice	CP3.3 Aplicarea normelor legale în scopul identificării situațiilor pentru situațiile de fapt modelate din domeniul administrației publice	CP4.3 Implementarea principiilor metodologice de luare a deciziilor în domeniul administrativ în condiții de asistență calificată	CP5.3 Aplicarea principiilor și metodelor de identificare a strategiilor de planificare a activităților profesionale și de personal în administrația publică	CP6.3 Aplicarea diferitor mecanisme și forme de control administrativ aferente domeniului profesional
4. Utilizarea adecvată de criterii și metode standard de evaluare, pentru a aprecia calitatea unor procese, programe, proiecte, concepte, metode și teorii	CP1.4 Utilizarea adecvată de criterii și metode standard de evaluare, aplicate în cadrul disciplinelor fundamentale, pentru recunoașterea și estimarea problemelor din domeniul administrației publice	CP2.4 Aplicarea corespunzătoare a principiilor fundamentale pentru evaluarea cantitativă și calitativă a proceselor din domeniul administrației publice	CP3.4 Utilizarea criteriilor și metodelor standard de evaluare, în scopul aprecierii eficienței soluțiilor pentru situațiile de fapt modelate din domeniul administrației	CP4.4 Analiza proiectelor de decizii administrative în vederea evaluării legalității acestora	CP5.4 Utilizarea diverselor criterii și metode standard de evaluare, pentru estimarea necesității planificării activităților profesionale și de personal	CP6.4 Utilizarea adecvată a tehnologiilor moderne în administrația publică, în vederea evaluării eficienței actului de guvernare
5. Elaborarea de proiecte profesionale cu utilizarea unor principii și metode consacrate în domeniu	CP1.5 Elaborarea de proiecte în domeniul administrației publice cu întrebuintarea principiilor și metodelor consacrate de disciplinele fundamentale	CP2.5 Redactarea proiectelor specifice administrației publice cu utilizarea principiilor și metodelor consacrate de disciplinele de specialitate	CP3.5 Elaborarea propunerilor de modificare și amendare a legislației în domeniul administrației publice	CP4.5 Elaborarea proiectelor de decizii administrative pentru situații concrete și previziunea efectelor scontate	CP5.5 Elaborarea unui plan managerial instituțional	CP6.5 Elaborarea proiectelor de transformare a administrației publice
Standarde minimale de performanță pentru evaluarea competenței:	Definirea noțiunilor, interpretarea conceptelor și teoriilor, precum și aplicarea acestora în situații tipice din domeniul administrației	Soluționarea unor situații de caz de complexitate medie, care necesită modelarea și simularea unor procese și fenomene specifice administrației publice	Încadrarea legală a situațiilor modelate specifice administrației publice	Redactarea unor proiecte decizionale în domeniul administrației publice	Proiectarea unui plan strategic managerial în domeniul administrației publice	Cunoașterea cerințelor standard pentru tehnologiile moderne de comunicare în administrația publică

Descriptorii de nivel ai competențelor transversale	Competențe transversale	Standarde minimale de performanță pentru evaluarea competenței
6. Executarea responsabilă a sarcinilor profesionale, în condiții de autonomie restrânsă și asistență calificată	CT1 Executarea riguroasă, eficientă, responsabilă și în termen, a sarcinilor profesionale, în spirit de inițiativă și în concordanță cu principiile etice și deontologia profesională.	Elaborarea și susținerea în cadrul unităților de curs a proiectelor planificate, tezelor de an, tezelor de licență în conformitate cu rigorile metodice
7. Familiarizarea cu rolurile și activitățile specifice muncii în echipă și distribuirea de sarcini pentru nivelurile subordonate	CT2 Aplicarea tehnicilor de relaționare în grup, deprinderea și exercitarea rolurilor specifice în munca de echipă, prin dezvoltarea abilităților de comunicare interpersonală și prin asumarea responsabilității pentru luarea deciziilor.	Realizarea proiectelor / sarcinilor de grup de complexitate medie, axate pe probleme actuale și relevante domeniului de formare, care necesită abordare interdisciplinară și care permit de a dezvolta spiritul de echipă, planificarea activității în grup, repartizarea rolurilor în echipă, diversitatea în cooperare, nivelul înalt de studiu
8. Conștientizarea nevoii de formare continuă; utilizarea eficientă a resurselor și tehnicilor de învățare, pentru dezvoltarea personală și profesională	CT3 Autoevaluarea nevoii de formare profesională și identificarea resurselor și modalităților de dezvoltare personală și profesională, în scopul inserției și adaptării la cerințele pieței muncii.	Identificarea necesității de dezvoltare personală și profesională continuă în concordanță cu necesitățile pieții muncii și utilizarea în acest sens a diverselor resurse și tehnici de învățare.

4. Termenul de studii și structura anilor de studii

În corespundere cu cerințele Planului-cadru pentru studii superioare (ciclul I - Licență, ciclul II Master, studii integrate, ciclul III - Doctorat), aprobat prin ordinul Ministerului Educației nr. 1045 din 29 octombrie 2015, durata studiilor superioare de licență (ciclul I), învățământ cu frecvență la zi este de 3 ani, respectiv 180 credite ECTS.

Anul de studii este divizat în două semestre a câte 15 săptămâni fiecare. Numărul total de ore de studiu prevăzute în plan - 5400, dintre care: ore de contact direct - 2700; numărul orelor de lucru independent – 2700, ceea ce este echivalent cu 180 de credite.

Ponderea creditelor a unităților de curs în Planul de învățământ este următoarea:

1. Componenta de discipline *fundamentale (F)* în plan îi revin *58 de credite* ECTS.
2. Pentru componenta de formare a abilităților și competențelor *generale (G)* planul prevede *14 credite* ECTS.
3. Pentru componenta de orientare *socio-umanistică (U)* planul prevede *12 credite* ECTS.
4. Pentru componenta de *orientare spre specialitatea de bază (S)* planul prevede *64 de credite* ECTS.
5. Practica de specialitate I, Practica de specialitate II, Practica de cercetare *26 credite* ECTS.
6. Susținerea tezei de licență *6 credite* ECTS.

5. Proiectele semestriale

Proiectul din sem. I va fi elaborat în cadrul unității de curs fundamentale *Politologie*. În cadrul orelor de curs planificate pentru proiectul din sem. I vor fi predate elemente de metodologia cercetărilor științifice, în scopul familiarizării studenților cu condițiile de fond și formă care trebuie respectate în procesul elaborării unui proiect de cercetare.

În sem. II proiectul se va elabora în cadrul unității de curs fundamentale - *Drept administrativ I*, iar în sem. III va fi elaborat un proiect interdisciplinar la unitățile de curs: *Drept administrativ II, Drept financiar și fiscal, Drept contravențional*.

În sem. IV-V proiectele vor fi elaborate în cadrul practicii de specialitate, iar studenții vor elabora proiectul în corespundere cu tema de cercetare, îmbinând aspectul teoretic cu cel practic. Proiectul din sem. VI va fi teza de licență.

Proiectele din sem. I-III vor fi elaborate în grup, iar în sem. IV-VI vor fi proiecte de cercetare individuale.

Scopul proiectelor de grup constă în cooperarea axată pe diversitate și găsirea unui numitor comun pentru soluționarea problemelor cercetate, axată pe studierea problemei la un înalt nivel logistic, creativ și

multiaspectual. De asemenea, prin intermediul proiectelor vor fi formate la studenți capacitățile de documentare și analiză critică a informației, expunerii succinte (adnotării) articolelor științifice de specialitate, analizei și perfectării unei bibliografii tematice. Tematica proiectelor semestriale oferă posibilitatea studentului de a-și continua cercetarea prin elaborarea tezei de licență.

Tematica proiectelor propuse spre cercetare va fi actuală, importantă și relevantă, iar pentru elaborarea acestora studenții, vor fi grupați câte 3-5, fiind ghidați spre o analiză profundă și consistentă a problemei cercetate.

Temele pentru proiectele semestriale vor fi stabilite, de comun acord, de către cadrele didactice titulare și studenți, la începutul fiecărui semestru, iar susținerea publică a acestora va avea loc cu cel puțin o săptămână până la începerea sesiunii de examene în fața unei comisii constituite din două sau mai multe cadre didactice, numite de către șeful catedrei de resort.

6. Organizarea practicii studenților

Obiectivele practicii de specialitate rezidă în familiarizarea studenților cu particularitățile specialității, achiziționarea deprinderilor profesionale inițiale. *Practica de specialitate I + proiectul semestrial* se promovează în sem. IV, cu durata de 4 săptămâni și se creditează cu 240 de ore, 8 credite. *Practica de specialitate II + proiectul semestrial* se promovează în sem V, cu durată de 6 săptămâni și se creditează cu 420 de ore, 14 credite.

Practica de cercetare are drept scop dezvoltarea abilităților practice necesare și aplicarea cunoștințelor teoretice la activitatea profesională independentă și efectuarea cercetărilor, documentarea și colectarea informației pentru realizarea proiectului tezei de licență. Studentul, de comun acord cu cadrul didactic conducător al tezei de licență și mentorul responsabil de practică va operaționaliza conținutul stagiului de practică în funcție de tema de cercetare.

Practica de cercetare se promovează în sem VI, cu durată de 8 ore săptămânal și se creditează cu 240 de ore, 8 credite.

La evaluarea finală, stagiile de practică se apreciază cu note de către o comisie creată de Catedra responsabilă, ținând cont de referința mentorului din cadrul unității-bază de practică despre activitatea stagiului, calitatea susținerii publice a raportului, rezultatele realizării sarcinii individuale, aprecierea conducătorului de practică. Notele obținute pentru stagiul de practică se includ în rezultatele sesiunii respective de examinare, se iau în considerare la calculul mediei reușitei academice a studentului.

Evaluarea practicii de licență se face de către o comisie cu privire la susținerea practicii de licență, desemnată de către șeful Catedrei responsabile, în două etape, în dependență de activitatea studentului în procesul de elaborare a proiectului tezei de licență și de referința conducătorului tezei de licență.

7. Evaluarea studenților

Planul de învățământ prevede următoarele tipuri și modalități de evaluare a finalităților de studii:

- evaluarea curentă (test, eseu, referat, studiu de caz, proiect, raport, prezentări etc.) La evaluarea curentă se utilizează tehnologiile informaționale (platformele de învățare MOODLE etc.)

- evaluarea finală a unităților de curs / modul (examen oral/ scris, examen combinat, evaluare asistată de calculator (on-line pe platforme de învățare) etc.

8. Teza de licență

Studiile se finalizează cu examenul de licență care se rezumă la susținerea publică a tezei de licență. La susținerea tezei de licență sunt admiși absolvenții care au realizat integral prevederile planului de învățământ și care au susținut cu succes prezentarea preventivă a tezei de licență în fața comisiei desemnate de către șeful Catedrei responsabile.

Teza de licență reprezintă o componentă esențială a evaluării activității studentului. Aceasta testează abilitățile de a concepe și a realiza o cercetare independentă, sub tutela conducătorului, precum și a de a redacta cercetarea conform regulilor comunității științifice. Scopul tezei de licență constă în sistematizarea și aprofundarea cunoștințelor teoretice și deprinderilor practice ale studenților, precum și formarea competențelor de rezolvare a problemelor metodice și de cercetare, în conformitate cu tema tezei de licență și cu sarcinile puse în fața studentului de către conducătorul științific.

Tematica tezelor de licență este elaborată de catedra responsabilă și este difuzată studenților pe parcursul semestrului IV de studii. Tematica tezelor de licență și conducătorii științifici sunt aprobați la ședința Consiliului Facultății de Drept și Științe Sociale.

Teza de licență este însoțită de avizul conducătorului științific.

Susținerea publică a tezei de licență are loc în fața Comisiei de Licență.

9. Creditele

Creditele se alocă pe unități de curs, stagii de practică și teza de licență care sunt evaluate independent. Un credit se alocă pentru 30 ore de studiu. Creditele reflectă cantitatea de muncă investită de student pentru însușirea unei unități de curs / modul, sub toate aspectele (prelegeri (curs), seminare, ore practice, lucrări de laborator, studii individuale, stagii de practică, elaborarea proiectelor, susținerea probelor de evaluare). Creditele acordate unei discipline au valori întregi cuprinse între 2 și 6 credite de studiu. Prin acordarea de credite se certifică faptul că pentru rezultatul obținut la evaluare a fost realizat volumul preconizat de muncă.

10. Specialitatea

Planul prevede formarea la o mono-specialitate 0400.1 Administrație publică.

11. Actualizarea planului de învățământ

Planul de învățământ pentru specialitatea 0400.1 Administrație publică este analizat și, după necesitate, actualizat. În fiecare an, în luna mai, se organizează chestionarea studenților și absolvenților programului în vederea determinării punctelor tari și slabe ale programului. Responsabilul de program monitorizează administrarea chestionarelor.

În acest scop sunt elaborate chestionare pentru studenții de la ciclul I, licență, care pot să-și exprime opinia după audierea cursurilor. Chestionarea se face în condiție de anonim.

În vederea îmbunătățirii planului de învățământ se încheie acorduri de colaborare cu facultăți/universități din țară și peste hotare, cu autoritățile administrației publice și organizații obștești de specialitate. În cadrul acestor parteneriate se pune accent pe eficientizarea, uniformizarea și acomodarea planului de învățământ la necesitățile actuale de reformare a sistemului autorităților publice din Republica Moldova.

În urma analizei chestionarelor și în rezultatul propunerilor înaintate de mediul academic din alte universități și funcționari din sistemul administrativ, precum și a celor înaintate de cadrele didactice implicate în acest program de studii, se actualizează planul de învățământ, introducându-se cursuri opționale / module de studii noi, se revede numărul de credite ECTS la discipline și repartizarea lor pe semestre.

Modificarea planului de învățământ se realizează de catedra responsabilă și se aprobă de consiliul facultății. Revizuirea / actualizarea planurilor de învățământ este validată de Senatul USARB și prezentată, o dată la 5 ani, spre coordonare, Ministerului Educației.

Planul de învățământ a fost aprobat la ședințele Catedrei de drept public, proces-verbal nr.11 din 17.05.2016; Consiliului Facultății de Drept și Științe Sociale, proces-verbal nr.10 din 26.05.2016;

Senatului Universității de Stat „Alec Russo” din Bălți, proces-verbal nr.16 din 01.06.2016 și coordonat cu Ministerul Educației al Republicii Moldova, nr. de înregistrare ISL-18011 din 12.09.2016.

Actualizarea planului de învățământ în anul 2017 a fost condiționată de necesitatea racordării la obiectivele proiectului ERASMUS+ „Introducerea învățării bazate pe probleme în Moldova: Spre consolidarea competitivității și șanselor de angajare ale studenților / Introducing Problem Based Learning in Moldova: Toward Enhancing Students’ Competitiveness and Employability”.

Modificările care le-a suportat planul sunt legate de introducerea proiectelor semestriale, prin care vor fi valorificate mai eficient orele de studiu individual. În scopul familiarizării studenților cu metodologia cercetării în domeniul științelor administrative, unitățile de curs la libera alegere, au fost completate cu un curs de *Metodologia cercetărilor științifice*, creditat cu 2 credite, unde studenții vor studia care sunt condițiile de fond și formă ce trebuie respectate în procesul elaborării unui proiect de cercetare.

În sem. 1 la unitatea de curs fundamentală *Politologie* - 30 ore de seminar au fost divizate în 14 ore seminar și 16 ore laborator.

În sem. 2 la unitatea de curs fundamentală *Drept administrativ I* - 46 ore de seminar au fost divizate în 22 ore seminar și 24 ore laborator.

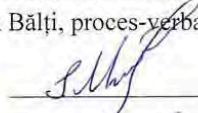
În sem. 3 orele de seminar la unitățile de curs nominalizate au fost divizate, după cum urmează: *Drept administrativ II* (seminar - 22 ore și laborator - 24 ore); *Drept financiar și fiscal* (seminar - 14 ore și laborator - 16 ore); *Drept contravențional* (seminar - 14 ore și laborator - 16 ore).

Unitatea de curs S.04.O.130 *Contracte administrative* a fost înlocuită cu *Psihologia conducerii*, iar unitatea de curs *Contracte administrative* a fost introdusă ca unitate de curs opțională cu codul S.06.A.147 în semestrul 6.

Modificările la planul de învățământ au fost discutate și aprobate la ședințele Catedrei de drept privat, proces-verbal nr.10 din 12.05.2017; Catedrei de drept public, proces-verbal nr.11 din 17.05.2017; Consiliului Facultății de Drept și Științe Sociale, proces-verbal nr.10 din 26.05.2017; Senatului Universității de Stat „Alec Russo” din Bălți, proces-verbal nr.21 din 30.05.2017.

Corelarea specialităților ciclului I, studii superioare de licență conform Nomenclatorului domeniilor de formare profesională și al specialităților în învățământul superior, aprobat prin Hotărârea Guvernului nr.482 din 28.06.2017 s-a realizat în temeiul Ordinului Ministerului Educației nr.670 din 01.08.2017 și Hotărârii Senatului Universității de Stat „Alec Russo” din Bălți, proces-verbal nr.1 din 30.08.2017.

Șeful Catedrei de drept public



dr., lect. sup. univ.,
Mariana SPATARI

Șeful Catedrei de drept privat



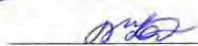
dr., conf. univ.,
Ina ODINOKAIA

Decanul Facultății de Drept și Științe Sociale



dr., conf. univ.,
Vitalie RUSU

Prim-prorector pentru activitate didactică



dr., conf. univ.,
Natalia GAȘIȚOI

Annex 3: Bachelor's degree programme in Public Administration, English Translation

**Ministry of Education of the Republic of Moldova
Balti State University "Alec Russo"**

APPROVED

at the Law and Social Science
Faculty Council meeting of
Balti State University "Alec
Russo"

Dean _____ (stamp)
Minutes no. 10 of 26 May 2017



APPROVED

at the Senate meeting of
Balti State University "Alec
Russo"

Rector _____ (stamp)
_____ 2012,
Minutes no. 21 of 30 May 2017

CURRICULUM

Cycle I (Licentiate/Bachelor's Degree)

Level of Qualification	ISCED-6
General field of study	040 Administrative Science
Field of professional study	0400 Administrative Science
Specialty/ Major	0400.1 Public Administration
Total number of credits	180
Degree obtained upon the completion of studies	Licentiate in Political Science/Bachelor's Degree
Basis for Admission	High school diploma or an equivalent education document; higher education diploma
Language of instruction	Romanian
Form of education	Full-time attendance
Amendments	Amended on 30.05.2017, applied as of 01.09.2017

ACADEMIC CALENDAR

Academic year	Teaching activities		Examination period		Internships	Vacations		
	Semester I	Semester II	winter	summer		winter	spring	summer
I	01.09.2017-16.12.2017	05.02.2018-26.05.2018	18.12.2017-23.12.2017; 09.01.2018-27.01.2018	28.05.2018-23.06.2018		25.12.2017-08.01.2018; 29.01.2018-04.02.2018	17.04.2018-24.04.2018	25.06.18-31.08.18
II	03.09.2018-15.12.2018	04.02.2019-25.05.2019	17.12.2018-24.12.2018; 09.01.2019-26.01.2019	27.05.2019-22.06.2019	29.04.2019-25.05.2019	25.12.2018-08.01.2019; 28.01.2019-02.02.2019	29.04.2019-06.05.2019	24.06.2019-31.08.2019
III	02.09.2019-14.12.2019	10.02.2020-16.05.2020	16.12.2019-24.12.2019; 09.01.2020-31.01.2020	18.05.2020-30.05.2020; 01.06.2020-19.06.2020 (Licentiate Thesis)	04.11.2019-14.12.2019; 10.02.2020-16.05.2020	25.12.2019-08.01.2020; 01.02.2020-08.02.2020	20.04.2020-27.04.2020	

Allocation of Course Units/Modules within the Curricula by the Academic Years

Year I, Semester 1 (15 weeks)

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
F.01.o.001	General Theory of Law	180	90	90	44	46	-	E	6
F.01.o.002	Constitutional Law and Political Institutions	180	90	90	44	46	-	E	6
F.01.o.003	Module: 1. Theory of Public Administration 2. History of Public Administration	180	60	60	30	30	-	E	6
			30	30	16	14	-		
F.01.o.004	International Public Law	120	60	60	30	30	-	E	4
F.01.O.005	Politolology + Project	120	60	60	30	14	16	E	4
G.01.o.006	English / French / German I	120	60	60	-	-	60	E	4

Total number of hours:		900	450	450	194	180	76	6	30
					450				
G.01.o.007	Physical training I	60	30	30	-	30	-	C	

Year I, Semester 2 (15 weeks)

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
F.02.O.008	Administrative Law I + Project	180	90	90	44	22	24	E	6
F.02.o.009	Civil Law	150	75	75	45	30	-	E	5
F.02.o.010	Criminal Law	120	60	60	30	30	-	E	4
F.02.O.011	Institutional Law of the European Union	90	45	45	30	15	-	E	3
U.02.A.012/ U.02.A.013	European construction / European civilisation	120	60	60	30	30	-	E	4
G.02.o.014	Information and Communication Technologies	120	60	60	14	-	46	E	4
	English / French / German II	120	60	60	-	-	60	E	4
Total number of hours:		900	450	450	193	127	130	7	30
					450				
G.02.o.016	Physical training II	60	30	30	-	30	-	C	

Year II, Semester 3 (15 weeks)

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
F.03.O.017	Administrative Law II *	180	90	90	44	22	24	E	6
F.03.O.018	Financial and Tax Law*	120	60	60	30	14	16	E	4
F.03.O.019	Family Law and Civil Status	120	60	60	30	30	-	E	4
S.03.O.120	Information Law	120	60	60	30	30	-	E	4
S.03.O.121	Contravention Law*	120	60	60	30	14	16	E	4
S.03.A.122/ S.03.A.123	Labour Law / Labour Law of the European Union	120	60	60	30	30	-	E	4
U.03.A.024 / U.03.A.025	Philosophy. Field-related Philosophical Issues / Philosophy and Science History	120	60	60	30	30	-	E	4
Total number of hours:		900	450	450	224	170	56	7	30
					450				

* Cross-disciplinary project developed for the stated course units.

Year II, Semester 4 (15 weeks)

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
S.04.O.126	Control of Administrative Act	150	75	75	45	30	-	E	5
S.04.O.127	Civil Procedural Law	180	90	90	44	46		E	6
S.04.A.128 S.04.A.129	Social Protection Law / Social Protection Law of the European Union	120	60	60	30	30	-	E	4

S.04.O.130	Managerial Psychology	90	45	45	30	15	-	E	3
U.04.A.031 / U.04.A.032	Principles of Market Economy / Project Management	120	60	60	30	30	-	E	4
G.04.O.033	Ethics and Professional Deontology	60	30	30	16	14	-	E	2
	Specialty Internship I + Project	180	90	90	-	-	-	E	6
Total number of hours:		900	450	450	195	165	-	7	30
						360			

Year III, Semester 5 (15 weeks)

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
S.05.O.134	Civil Servant Liability	90	45	45	30	15	-	E	3
S.05.A.135 / S.05.A.136	Management of Public Services / Management of Human Resources in Public Administration	120	60	60	30	30	-	E	4
S.05.A.137/ S.05.A.138	E-Government / E-services in Public Administration	120	60	60	30	30	-	E	4
S.05.A.139 S.05.A.140	Land Law and Real Estate Advertising/ Urbanism and Spatial Planning	120	60	60	30	30	-	E	4
S.05.A.141 / S.05.A.142	Environmental Law / Customs Law	90	45	45	30	15	-	E	3
	Specialty Internship II + Project	360	180	180	-	-	-	E	12
Total number of hours:		900	450	450	150	120	-	6	30
					270				

Year III, Semester 6 (15 weeks)

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
S.06.O.143	Public Procurement Management	120	60	60	30	30	-	E	4
S.06.O.144	Central Public Administration	90	45	45	30	15	-	E	3
S.06.O.145	Local Public Administration	90	45	45	30	15	-	E	3
S.06.A.146/ S.06.A.147	Legal Regulation of Entrepreneurial Activity/ Administrative Contracts	90	45	45	30	15	-	E	j
S.06.A.148/ S.06.A.149	Office, Correspondence and Secretarial Techniques / Administrative Document Development Techniques	90	45	45	30	15	-	E	3
	Research Internship	240	120	120	-	-	-	E	14
	Licentiate Thesis	180	90	90	-	-	-	E	
Total number of hours:		900	450	450	150	90	-	7	30
					240				

Internships

Criterion #	Internships	Semester	Duration, number of weeks/hours	Period	Number of credits
1.	Specialty Internship I	4	3/180	29.04.2019-25.05.2019	6
2.	Specialty Internship II	5	6/360	04.11.2019-14.12.2019	12
	Total				18

Licentiate Thesis

Criterion #	Name of Activity		Semester	Duration, number of weeks/hours	Period	Number of credits
1.	Developing and defending the Licentiate Thesis: documentation, investigation, research, experimenting, writing, preparing the presentation, public defense	Research Internship	VI	13/240	10.02.2020-16.05.2020 (8 hours per week)	14
		Defense of Licentiate Thesis	VI	3/180	01.06.2020-19.06.2020	

Initial Curricular Minimum for another area, Cycle II – Master’s Degree (free choice)

Criterion #	Name of the Course Unit/Module	Year		Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
				Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
1.	General Theory of Law	I	I	180	90	90	44	46	-	E	6
2.	Constitutional Law and Political Institutions	I	I	180	90	90	44	46	-	E	6
3.	Module: 1. Theory of Public Administration	I	I	180	60	60	30	30	-	E	6
				30	30	16	14	-			
4.	Administrative Law I	I	II	180	90	90	44	46	-	E	6
5.	Administrative Law II	II	III	180	90	90	44	46	-	E	6
Total				900	450	450	222	228	-	5	30
							450				

Course Units (free choice)

Criterion #	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
1.	Bases of Information Culture	30	10	20	-	10	-	C	-
2.	Communication Culture	60	30	30	-	-	30	C	2
3.	Occupational safety. Civil Protection	30	15	15	15	-	-	C	-
4.	Modern Governance and European Integration	90	45	45	30	15	-	E	3
5.	Administrative Regionalisation	90	45	45	30	15	-	E	3
6.	Legal Protection of Human Rights	90	45	45	30	15	-	E	3
7.	Theory of Opinion Polls in Public Administration	90	45	45	30	15	-	E	3
8.	Managerial Sociology	90	45	45	30	15	-	E	3
9.	Research Methodology	60	30	30	14	-	16	C	2

Psycho-pedagogical Module (free choice)

Criterion #	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity			Type of final assessment	Number of credits
		Total	Direct instruction	Individual work	Lecture	Seminar	Laboratory		
1.	Pedagogy	120	60	60	30	30	-	E	4
2.	Psychology	120	60	60	30	30	-	E	4
3.	Psychology of Ages. Stress in the Educational Environment	150	75	75	45	30	--	E	5
4.	Tutoring. Inclusive Education	150	75	75	45	30	--	E	5
5.	Didactics of Administrative Science	180	90	90	46	11	-	E	6
6.	Educational Management	120	60	60	30	30	-	E	4
7.	Pedagogical Ethics	60	30	30	16	14	-	E	2
8.	Initiation Internship in Pedagogy*	30	15	15	-	-	15	-	1
9.	Initiation Internship in Psychology**	30	15	15	-	-	15	-	1
10.	Pedagogical Internship	480	240	240	-	-	-	E	16
11.	Specialty Internship I	120	60	60	-	-	-	E	4
12.	Specialty Internship II	240	120	120	-	-	-	E	8
Total		1800	900	900	242	208	30	10	60

*subject to assessment under the course unit Pedagogy.

** subject to assessment under the course unit Psychology.

Description of Study Objectives and of Professional Competences:

CP1. Operating with basic notions, concepts, theory and methods of Administration Science in the professional activity.

CP2. Interpreting the fundamental principles for organizing and functioning of administrative structures in order to transpose them afterwards in the professional activity in public and/or private organisations.

CP3. Identifying, analysing and addressing public administration issues in compliance with the legal provisions in a cooperating, flexible and efficient manner.

CP4. Developing, considering and adopting decisions on administrative activity.

CP5. Strategic planning of current professional and staff activity aimed at ensuring midterm and long-term institutional development.

CP6. Using modern technologies, various control forms and methods of administrative activity and formulating proposals aimed to improve its efficiency.

Crosscutting Competences:

CT1. Carrying out the professional tasks in a rigorous, efficient, responsible and timely manner, in the spirit of initiative and compliance with the ethic principles and professional deontology.

CT2. Applying group relation techniques, getting used to and exercising specific roles of team work through the development of interpersonal **communication skills and by assuming commitments for decision-making.**

CT3. Self-assessing the need for professional education and identifying the resources and ways of personal and professional development in order to enter and adapt to the labour market requirements.

Correlation Matrix between professional and crosscutting competences and course units included in the Curriculum.

Code	Course Unit	Semester	Number of credits	Professional Competences						Crosscutting Competences		
				CP1	CP2	CP3	CP4	CP5	CP6	CT1	CT2	CT3
F.01.O.001	Law General Theory	I	6	+	+	+						
F.01.O.002	Constitutional Law and Political Institutions	I	6	+	+	+	+			+	+	
F.01.O.003	Module: 1.Theory of Public Administration 2. History of Public Administration	I	6	+	+	+	+	+	+		+	
					+	+	+					
F.0LO.004	International Public Law	I	4	+				+		+	+	+
F.01.O.005	Politology + Project	I	4	+	+	+	+				+	
G.01.O.006	English / French / German I	I	4						+	+	+	+
F.02.O.008	Administrative Law + Project	II	6	+	+		+	+		+	+	+
F.02.O.009	Civil Law	II	5	+	+	+					+	+
F.02.O.010	Criminal Law	II	4	+	+	+			+	+	+	
F.02.O.011	Institutional Law of the European Union	II	3	+	+	+		+		+	+	

U.02.A.012/ U.02.A.013	European construction / European civilisation	II	4	+	+					+	+		
G.02.O.014	Information and communication technologies	II	4							+	+	+	+
G.02.O.015	English / French / German II	II	4							+	+	+	
F.03.O.017	Administrative Law II*	III	6	+	+	+	+	+	+	+	+	+	+
F.03.O.018	Financial and Tax Law*	III	4	+	+	+		+	+	+	+	+	+
F.03.O.019	Family Law and Civil Status	III	4	+	+	+						+	
S.03.O.120	Information Law*	III	4			+	+	+	+	+	+	+	+
S.03.O.121	Contravention Law	III	4		+	+	+				+		
S.03.A.122 /	Labour Law / Labour Law of the European Union	III	4	+	+	+	+	+			+		+
S.03.A.123					+	+	+	+	+			+	
U.03.A.024 / U.03.A.025	Philosophy. Domain Philosophic Issues / Philosophy and Science History	III	4	+						+	+	+	+
				+						+	+	+	+
S.04.O.126	Control of Administrative Act	IV	5			+	+	+	+	+	+	+	
S.04.O.127	Civil Procedural Law	IV	6	+	+	+	+				+		
S.04.A.128 /	Social Protection Law / Social Protection Law of the European Union	IV	4	+	+	+	+	+			+		+
S.04.A.129					+	+	+	+	+			+	
S.04.A.130	Managerial Psychology	IV	3		+					+		+	+
U.04.A.031	Principles of Market Economy /	IV		+						+	+	+	+
U.04.A.032	Project Management		4	+						+	+	+	+
G.04.O.033	Ethics and Professional Deontology	IV	2						+		+		+
S.05.O.134	Civil Servant Liability	V	4			+	+	+	+	+			+

S.05.A.135/	Management of Public Services /	V	4			+		+	+	+	+	+
S.05.A. 136	Management of Human Resources in Public Administration					+		+	+	+	+	+
S.04.A.137/	E-Government / E-services in Public Administration							+	+	+	+	+
S.04.A.138		V	4					+	+	+	+	+
S.05.A.139/	Land Law and Real Estate Advertising /	V	4	+	+	+	+				+	
S.05.A.140	Urbanism and Spatial Planning			+	+	+	+				+	
S.05.A.141 /	Environmental Law / Customs Law	V		+	+	+					+	
S.05.A.142			3	+	+	+					+	
S.06.A.143	Public Procurement Management	VI	4			+	+	+	+			+
S.06.A. 144	Central Public Administration	VI	3			+	+	+	+	+		+
S.06.O. 145	Local Public Administration	VI	3			+	+	+	+	+		+
S.06.A.146/ S.06.A.147	Legal Regulation of Entrepreneurial Activity / Administrative Contracts	VI	3	+	+	+	+			+	+	+
S.06.A.148/ S.06.A.149	Office, Correspondence and Secretarial Techniques /	VI	3					+	+	+		+
	Administrative Document Development Techniques							+	+	+		+

EXPLANATORY NOTE

1. General Provisions

The Curriculum for *Public Administration* Specialty is the document containing a system of professional education and research activities of professionals in the area of public administration. Upon the completion of Cycle I, the graduates shall be awarded the Licentiate/Bachelor's Degree in *Political Science*.

The Curriculum comprises:

- I. The Curriculum itself;
- II. The Explanatory Note to the Curriculum.

The Curriculum has been aligned with the ERASMUS⁺ Project titled “Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability”, being developed in compliance with the provisions referred to in the following pieces of legislation:

1. The Code of Education of the Republic of Moldova, No. 152 of 17 July 2014;
2. The Law on approving the Single Classifier of Public Functions, No.155 of 21 July 2011;
3. The Higher Education Framework Plan (Cycle I - Licentiate/Bachelor, Cycle II - Master, integrated studies, Cycle III - PhD), approved by the Ministry of Education Order No. 1045 of 29 October 2015;
4. The Government Decision approving the Nomenclature of professional education areas and of higher education specialties, No.482 of 28 June 2017;
5. Regulation on organising higher education studies on the basis on the National Credit Transfer and Accumulation System, approved by the Ministry of Education Order No. 1046 of 29 October 2015;
6. The National Framework of Qualifications of the Republic of Moldova and the National Framework of Qualifications for higher education by areas of professional education, approved by the Ministry of Education Order No. 934 of 29 December 2010.

2. Concept of Professional's Training

a. Goal and Features

The goal pursued by the Pilot Programme is to ensure transition from classical education (based on theoretical approach), where the teacher is the source of information, while the student is the information receiver towards problem based learning (PBL), which enables training of professionals who are competitive on the labour market, qualified in the area of professional education *0400 Administrative Science, Specialty 0400.1 Public Administration*.

The Programme distinct features are as follows: ensure high-quality professional education to all those who aspire to build their career in the Central and Local Public Administration structures, as well as in specialist divisions of public companies. Professional education is focused on learning: scientific and regulatory foundations of the constitutional theory; general political system principles and different administration mechanisms; development of skills and acquiring practical skills in Public Administration.

b. Employability

Graduates of Cycle I, Licentiate/Bachelor, Major in Public Administration, may work afterwards as civil servants, holding executive functions; as professionals in organising administrative activity; professionals in the area of human resources; professionals in the area of public relations; professionals in the area of organising and providing public services; professionals in administrative documentation; as project managers in public administration; advisers in public administration; referents/secretaries in administrative issues; experts in public administration.

c. Subsequent Education

The initial education in Cycle I, licentiate/Bachelor, is a prerequisite for further learning in Cycle II, Master's Degree, in the area of *31 Political Science or 38 Law*.

3. Foreseen Study Objectives

a. Training Objectives:

- to train future civil servants in Public Administration capable of handling field-related issues at the national and European levels, providing them with the knowledge and skills necessary to start a career in this area;
- to train professionals in Public Administration in order to ensure public management in the country;
- to train civil servants in the spirit of managerial effectiveness;
- to develop the spirit of team in the context of taking administrative decisions;
- to prepare public managers with leadership skills and knowledge;
- to ensure capacity building for handling administrative acts and procedures;
- to ensure capacity building for harnessing the language specific for public administration;
- to train skills for understanding the administrative environment realities;
- to train analytical capacity to summarise social and economic processes via developing and implementing managerial strategies;
- to develop communication skills, to motivate and engage future professionals in Public Administration;
- to ensure capacity building in terms of decision making and managing the changes in Public Administration;
- to strengthen the capacity of taking the risks and professional responsibilities;
- to ensure capacity building aimed at launching strategies for the development and diversification of activity within the Central and Local Public Administration;
- to ensure a pool of civil servants trained in the area of human resources management;
- to develop collaborative skills with professionals from other areas and act in the context of change management.

b. Curriculum Objectives expressed via Professional and Crosscutting Competences

PROFESSIONAL COMPETENCES	CP1	CP2	CP3	CP4	CP5	CP6
Level descriptors for the structural elements of professional competences.	Operating with basic notions, concepts, theory and methods of Administration Science in the professional activity.	Interpreting the fundamental principles for organizing and functioning of administrative structures in order to transpose them afterwards in the professional activity in public and/or private organisations.	Identifying, analysing and addressing public administration issues in compliance with the legal provisions in a cooperating, flexible and efficient manner.	Developing, considering and adopting decisions on administrative activity.	Strategic planning for current professional and staff activity aimed at ensuring midterm and long-term institutional development.	Using modern technologies, various control forms and methods of administrative activity and formulating proposals aimed to improve its efficiency.
KNOWLEDGE						
1. Knowledge, understanding of basic concepts, theories and methods of the general and specialist areas; their appropriate use in professional communication.	CP1.1 Knowledge, understanding and using basic notions, concepts, and theories in the area of Public Administration.	CP2.1 Explanation and perception of fundamental principles of organisation and operation of administrative structures.	CP3.1 Identifying, understanding and using appropriately the methods pertaining to Public Administration aimed at legal employment of states of affairs.	CP4.1 Knowledge of requirements for drafting administrative decisions for different states of affairs.	CP5.1 Distinguishing fundamental strategies for planning current professional and staff activities in the area of Public Administration.	CP6.1 Perception of the need to apply modern technologies in the Public Administration activity.
2. Using basic knowledge to explain and interpret various types of concepts, situations, processes, projects, etc. associated with the area of Public Administration.	CP1.2 Using the knowledge acquired while studying fundamental subjects to explain and interpret various types of concepts and processes in the area of Public Administration.	CP2.2 Interpreting various administrative models aimed at addressing certain issues typical for Public Administration.	CP3.2 Analysing and ensuring legal employment of situation resolution and modelling Public Administration processes.	CP4.2 Using criteria and requirements set for drafting administrative decisions for various states of affairs.	CP5.2 Knowledge of fundamental strategies for planning midterm professional and staff activities in the area of Public Administration.	CP6.2 Identifying control forms and methods for evaluating the administrative activity.
SKILLS						
3. Applying certain basic principles and methods for addressing well-defined issues/situations typical for the area under circumstances of qualified support.	CP1.3 Applying basic methods for addressing statuses of affairs in the process of professional education.	CP2.3 Reporting the fundamental principles for addressing situations specific for Public Administration.	CP3.3 Applying legal arrangements to identify solutions for the modelled statuses of affairs in the area of Public Administration.	CP4.3 Implementing the methodological principles of decision-making in the administrative area under circumstances of qualified support.	CP5.3 Applying the principles and methods to identify strategies for planning professional and staff activities in the area of Public Administration.	CP6.3 Applying different mechanisms and forms of administrative control afferent to the professional area.
	CP1.4	CP2.4	CP3.4	CP4.4	CP5.4	CP6.4

4. Appropriate use of standard evaluation criteria and methods to appraise the quality of certain processes, programmes, projects, concepts, methods and theories.	Appropriate use of standard evaluation criteria and methods applied within fundamental subjects to recognise and appraise the issues in the area of Public Administration.	Appropriate use of fundamental principles for qualitative and quantitative appraisal of processes in the area of Public Administration.	Appropriate use of standard evaluation criteria and methods to appraise the efficiency of solutions for the modelled statuses of affairs in the area of Public Administration.	Analysing the draft administrative decisions to assess their lawfulness.	Using various standard evaluation criteria and methods to estimate the needs for planning professional and staff activities.	Appropriate use of modern technologies in Public Administration to evaluate the efficiency of governance.
5. Developing professional projects, using enshrined field-related principles and methods.	CP1.5 Developing projects in the area of Public Administration, using principles and methods enshrined in fundamental subjects.	CP2.5 Developing projects specific for Public Administration, using principles and methods enshrined in specialty fundamental subjects.	CP3.5 Developing proposals for making amendments and addenda in the legislation related to the area of Public Administration.	CP4.5 Drafting administrative decisions for specific situations and estimating the expected results/impact.	CP5.5 Developing an institutional managerial plan.	CP6.5 Developing e-transformation projects for Public Administration.
Minimum Competency Standards:	Defining the notions, interpreting the concepts and theories, and applying thereof in circumstances typical for Public Administration.	Addressing certain circumstances of medium complexity that require modelling and simulating certain processes and phenomena typical for Public Administration.	Legal employment of modelled circumstances typical for Public Administration.	Drafting decisions in the area of Public Administration.	Drafting a strategic managerial plan in the area of Public Administration.	Knowledge of standard requirements regarding modern communication technologies in the area of Public Administration.
Level descriptors for crosscutting competences.	Crosscutting Competences			Minimum Competency Standards		
6. Carrying out professional tasks with due diligence under limited autonomy and qualified support.	CT1 Carrying out the professional tasks in a rigorous, efficient, responsible and timely manner, in the spirit of initiative and compliance with the ethic principles and professional deontology.			Developing and defending the planned projects, year thesis, graduation theses during the course units in compliance with the methodical requirements.		
7. Getting acquainted with team work specific roles and activities and assigning the tasks to subordinated levels.	CT2 Applying group relation techniques, getting used to and exercising specific roles of team works through the development of interpersonal communication skills and by assuming commitments for decision-making.			Implementation of group projects / tasks of medium complexity focused on topical issues relevant for the area of education, which require cross-subject approach and enable developing a team spirit; planning the team activity, assigning the roles within the team; diversity in cooperation, high level of studies.		
8. Acknowledging the need for continuous education; efficient use of resources and learning techniques for personal and professional development.	CT3 Self-assessing the need for professional education and identifying the resources and ways of personal and professional development in order to enter and adapt to the labour market requirements.			Identifying the needs for continuous personal and professional development in compliance with the labour market requirements and using various resources and learning techniques to this end.		

4. Length of studies and structure of academic years.

In compliance with the requirements referred to in the Higher Education Framework Curriculum (Cycle I – Licentiate/Bachelor studies, Cycle II – Master studies, integrated studies, Cycle III – Doctoral studies), approved by the Ministry of Education Order No. 1045 of 29 October 2015, the length of studies for Cycle I, full-time attendance, is three years (180 ECTS credits).

The academic year is divided into two semesters, each of them comprising 15 weeks. The total number of training hours contained in the Curriculum is 5400, of which 2700 hours of direct instruction; 2700 hours of independent work, which is equivalent to 180 credits.

The credits are allocated among the Curriculum course units as follows:

1. Component of *fundamental subjects (F)* – 58 ECTS credits are allocated.
2. Component of *general skills and competences (G)* – 14 ECTS credits are allocated.
3. Component of *socio-humanistic subjects (U)* – 12 ECTS credits are allocated.
4. Component of *major subjects (S)* – 64 de ECTS credits are allocated.
5. For Specialty Internship I, Specialty Internship II, and Research Internship 26 ECTS credits are allocated.
6. For defending the Licentiate Thesis 6 ECTS credits are allocated.

5. Semestrial Projects

The project planned for Semester I shall be developed within the fundamental course unit *Politology. Elements of research methodology will be taught during the training hours planned for this project so that students get acquainted with general requirements and format to be complied with during the development of a research project.*

The project envisaged for Semester II shall be developed under the fundamental course unit *Administrative Law I. A cross-subject project is planned for Semester III, comprising the following course units: Administrative Law II, Financial and Tax Law, Contravention Law.*

The projects for Semesters IV and V shall be developed during the Specialty Internship in compliance with the research topic, combining theory and practice. The project planned for Semester VI is the Licentiate Thesis.

The projects planned for Semesters I-III shall be developed in groups/teams, while those planned for Semesters IV-VI are individual research projects.

The goal of group projects is to promote cooperation focused on diversity, finding common solutions to address the research issues aimed at tackling the issue at a high logistic, creative and multi-aspect levels. Likewise, while carrying out the projects, students shall learn how to document and critically analyse the information, making brief narrations (annotation) of specialist research articles, how to analyse and prepare topical bibliographies. The topics of semestrial projects shall enable the students to continue the research through the development of Licentiate Thesis.

The themes of projects suggested for research shall be topical, important and relevant. The groups created to develop such projects will comprise 3-5 students, being guided to perform in-depth and consistent analysis of the issue subject to research.

Themes for semestrial projects shall be determined by relevant faculty members together with students at the beginning of each semester. At least one week before the examination period begins, students are expected to publicly defend their projects in front of a commission composed of two or more faculty members appointed by the corresponding head of department.

6. Organising Students' Internships

The objectives of specialist practical training are to familiarize the students with the peculiarities of their specialty, to acquire initial professional skills. The *Specialty Internship I + semestrial project* are planned for Semester IV, with the duration of four weeks, and are credited with 240 hours or 8 credits. *Specialty Internship II + semestrial project* are planned for Semester V, with the duration of six weeks, and are credited with 420 hours or 14 credits.

Research Internship pursues the goal to develop the necessary practical skills and to apply the theoretical knowledge in independent professional activity and in doing research, documenting and collecting the data to be used for the Licentiate Thesis. The student along with the faculty member who has been appointed as Licentiate Thesis Adviser and the mentor responsible for internship shall devise the content of practical training depending on the research theme.

Research Internship is planned for Semester VI, with the duration of 8 hours per week and is credited with 240 hours or 8 credits.

Upon final evaluation, the internship shall be graded by a commission established by the responsible department, taking into account the reference of the Internship Mentor about the student practical training, the quality of final Internship Report, the outcomes of individual task, and the grading of the Internship Mentor. The marks obtained for internships shall be included in the corresponding examination period or be taken into consideration while computing the student's Grade-Point Average (GPA).

Evaluation of Licentiate Internship shall be carried out in two stages by a commission established to this end by the head of the responsible department, depending on the student activity in the process of developing the final paper and on the reference made by final paper Adviser.

7. Students Evaluation

The Curriculum provides for two types and ways of evaluating the study objectives:

- Current evaluation (test, essay, synopsis, case study, project, report, presentations, etc.). Information technologies (MOODLE learning platforms, etc.) shall be used for current evaluation of students;
- Final evaluation of course units / module (verbal/written exam, combined exam, computer-assisted evaluation (on-line using learning platforms)) etc.

8. Licentiate Thesis

The studies shall end with the Licentiate final exam – public defense of Licentiate Thesis. Students who have met all the Curriculum provisions and successfully passed the Licentiate Thesis preliminary presentation in front of a commission established by the head of responsible department shall be designated as licentiate-candidates to defend their thesis.

The Licentiate Thesis represents an essential component of student activity evaluation. It shall test the ability to design and carry out an independent research, under the Mentor's/Adviser's guidance, as well as to develop a research paper as per the requirements of the scientific community. The purpose of the Licentiate Thesis is to systematize and enhance the theoretical and practical knowledge of students, as well as to develop competences for addressing methodical and research issues in compliance with the Licentiate Thesis theme and with the tasks assigned to students by the Research Adviser.

The themes for Licentiate Thesis shall be devised by the responsible department and disseminated among students during Semester IV. The themes for Licentiate Thesis and Research Advisers shall be approved during the meeting held by the Law and Social Science Faculty Council.

The Licentiate Thesis shall be accompanied by the Research Adviser review.

Public defense of the Licentiate Thesis shall take place in front of a Licence Commission.

9. Credits

Credits shall be allocated by course units, internships and Licentiate Thesis, which are evaluated independently. One credit shall be allocated for 30 hours of training. As a rule, credits show the amount of work invested by students to learn a course unit / module, under all aspects, i.e. lectures, practical hours, laboratory work, individual study, internships, project development, passing the evaluation exams. The number of credits for a subject may vary within the range of 2 - 6. By granting the credits it is certified that the whole amount of work has been carried out for the result obtained during evaluation.

10. Specialty/Major

The Curriculum shall provide training for a mono-specialty 0400.1 Public Administration.

11. Updating the Curriculum

The Curriculum for Specialty 0400.1 Public Administration shall be subject to review, being updated as appropriate. Each year, in May, students and programme graduates are asked about the programme strengths and weaknesses. The programme responsible person shall oversee the administration of questionnaires.

To this end, questionnaires for Cycle I students are prepared, who are required to express their opinion following the completion of courses. All questionnaires are anonymous.

In order to improve the Curriculum, collaboration agreements are concluded with local and foreign faculties/universities, with public administration authorities and with profile public organizations. These partnerships are aimed to make the Curriculum more efficient, uniform and tailored to meet the current needs that are required to reform the system of public authorities of the Republic of Moldova.

Following the analysis of questionnaires and based on the proposals submitted by Academia from other universities and by administrative system employees, as well as on the proposals lodged by faculty members involved in this study programme, the Curriculum shall be updated, by introducing new optional courses/modules, the number of ECTS credits allocated per each subject per Semester being also revised.

The Curriculum is amended by the responsible department and is approved by the Faculty Council. The Curriculum revision/update shall be endorsed by the Senate of Balti State University “Alecu Russo” and every five years it shall be submitted to the Ministry of Education for coordination.

The Curriculum was approved at the meeting held by Public Law Department, Minutes No.11 of 17.05.2016; by Law and Social Sciences Faculty Council, Minutes No.10 of 26.05.2016;

The Curriculum was endorsed by the Senate of Balti State University “Alecu Russo”, Minutes No.16 of 01.06.2016 and coordinated with the Ministry of Education of the Republic of Moldova, Registration No. ISL-18011 of 12.09.2016.

The 2017 Curriculum update was conditioned by the need to align it with the objectives of ERASMUS+ Project titled “Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability”.

The changes operated in the Curriculum are related to the introduction of Semestrial projects aimed to enhance the efficiency of individual hours of studies. In order to familiarise the students with research methodology in the area of Administrative Science, the free choice course units have been supplemented with the course on *Research Methodology*, credited with two credits, where students shall learn about the general requirements and format to be complied with in the process of developing a research project.

Semester 1, fundamental course unit *Politology* - 30 seminar hours were split into 14 seminar hours and 16 laboratory hours.

Semester 2, fundamental course unit *Administrative Law I* - 46 seminar hours were split into 22 seminar hours and 24 laboratory hours.

Semester 3, seminar hours for the aforementioned course units were split as follows: *Administrative Law II* (seminar - 22 hours and laboratory - 24 hours); *Financial and Tax Law* (seminar - 14 hours and laboratory - 16 hours); *Contravention Law* (seminar - 14 hours and laboratory - 16 hours).

Course units S.04.O.130 *Administrative Contracts* was replaced by *Managerial Psychology*, while the course unit *Administrative Contracts* was introduced as an optional course unit with the Code S.06.A.147 in Semester 6.

The changes operated in the Curriculum were discussed and approved at the meeting held by Private Law Department, Minutes No.10 of 12.05.2017; Public Law Department, Minutes No. 11 of 17.05.2017; Law and Social Sciences Faculty Council, Minutes No.10 of 26.05.2017; Senate of Balti State University “Alecu Russo”, Minutes No.21 of 30.05.2017.

Correlation of Cycle I specialties as per the Nomenclature of professional education areas and of higher education specialties, approved by Government Decision No.482 of 28.06.2017, was carried out on the basis of Ministry of Education Order No.670 of 01.08.2017 and of the Decision issued by the Senate of Balti State University “Alecu Russo”, Minutes No. 1 of 30.08.2017.

Head of Public Law Department

Dr., Superior University Lecturer,
Mariana SPATARI

Head of Private Law Department

Dr., Associate Professor,
Ina ODINOKAIA

Dean of Law and Social Science Faculty

Dr., Associate Professor,
Vitalie RUSU

Prime-Prorector for Teaching Activity

Dr., Associate Professor,
Natalia GASITOI

Annex 4: The advertising flyer of the study programme, 2017

PERSPECTIVE PROFESIONALE

Absolvenții programului vor putea activa în calitate de:

- funcționari publici;
- specialiști în domeniul organizării activității administrative;
- specialiști în domeniul resurselor umane;
- specialiști în domeniul relațiilor publice;
- specialiști în domeniul organizării și prestării serviciilor publice;
- specialiști în domeniul documentării administrative;
- manageri de proiecte în administrația publică;
- consilieri în administrația publică;
- referenți în probleme administrative;
- experți în domeniul administrației publice.

OPORTUNITĂȚI DE FORMARE ULTERIOARĂ

- ➔ ciclul II, studii superioare de master, în domeniul Științe politice
- ➔ programe de colaborare cu alte universități



PROIECTUL:

561884-EPP1-2015-

1-DK-EPPKA2-CBHE-JP

PUBLIC ADMINISTRATION

Program de studii re-proiectat în cadrul proiectului PBLMD - „Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability”
<http://www.pblmd.aau.dk>

AALBORG UNIVERSITY
COPENHAGEN

Research problem



UNIVERSITATEA DE STAT
„ALECU RUSSO” DIN BĂLȚI
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FACULTATEA DE DREPT
ȘI ȘTIINȚE SOCIALE

ADMINISTRAȚIE
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NEW!!!
PUBLIC
ADMINISTRATION

DESPRE PROGRAM

Caracteristicile distinctive ale planului de învățământ la specialitatea 313.1 **Administrație publică** constau în asigurarea unei pregătiri profesionale de calitate tuturor celor care doresc să-și construiască o carieră în structurile administrației centrale și locale, precum și în departamentele de specialitate din cadrul companiilor publice

LIMBA DE INSTRUIRE:
română / engleză

DURATA STUDIILOR:
3 ani / 6 semestre

CREDITE DE STUDIU
180 ECTS

TITLUL OBȚINUT
Licențiat în științe politice

BAZA ADMITERII
Diploma de bacalaureat sau un act echivalent de studii;
diploma de studii superioare



METODE DE PREDARE-ÎNVĂȚARE

Programul de studii este bazat pe noile metode de predare-învățare centrate pe student, inclusiv, învățarea bazată pe probleme (PBL), proiecte, lucru în echipă, e-Learning, co-predare cu profesori din universități străine.

OPORTUNITĂȚI DE PRACTICĂ

Programul de studii prevede stagii de practică în anul II, proiect de semestru interdisciplinar în grup (studenți de la 6 universități) și un stagiu de elaborare a tezei de licență în anul III.

OPORTUNITĂȚI DE STUDIU ÎN STRĂINĂTATE

15 studenți, cu rezultate academice bune, vor beneficia în anul II de posibilitatea de a studia pe parcursul unui semestru în cadrul unei universități europene. Mobilitatea va fi finanțată din cadrul proiectului ERASMUS+ „Introducerea învățării bazate pe probleme în Moldova: Spre consolidarea competitivității și șanselor de angajare ale studenților / Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability”.

CONȚINUTUL PROGRAMULUI

- Drept constituțional și instituții politice
- Teoria administrației publice
- Istoria administrației publice
- Politologie
- Drept administrativ
- Structuri politice în statele europene
- Drept financiar și fiscal
- Drept contravențional
- Controlul actului administrativ
- Psihologia conducerii
- Principiile economiei de piață
- Managementul proiectelor publice
- Etica și deontologia funcționarului public
- Răspunderea juridică a funcționarului public
- E-guvernare
- Urbanism și amenajarea teritoriului
- Managementul serviciilor publice
- Managementul resurselor umane în administrația publică
- Managementul achizițiilor publice
- Tehnici de elaborare a documentelor administrative etc.

FINALITĂȚILE PROGRAMULUI DE STUDIU

La finele ciclului I absolventul va fi capabil:

- să aplice cunoștințele obținute într-un mediu profesional determinat;
- să soluționeze situații specifice administrației publice, prin aplicarea metodei studiului de caz;
- să demonstreze creativitate în instrumentarea actelor și procedurilor administrative în procesul de învățare, cercetare și de muncă;
- să manifeste spirit de echipă în contextul luării deciziilor administrative;
- să valorifice limbajul specific administrației publice, precum și a metodologiei specifice, în realizarea proiectelor semestriale;
- să analizeze și sintetizeze procesele și fenomenele social-economice prin elaborarea și implementarea strategiilor manageriale;
- să consolideze capacități decizionale și de gestionare a schimbărilor în administrația publică, prin estimarea riscurilor și asumarea responsabilităților profesionale;
- să-și cultive abilitățile de colaborare cu specialiști din alte domenii în contextul managementului schimbării.

➔ Pentru mai multe informații vizitați sit-ul nostru:
<http://www.usarb.md/relatiinternationale/>
programe-europene/

Annex 5: Roadmap (regulatory changes required to be operated)

Normative act	Provision	Proposals
Framework plan for higher education, art. 9.	For one module, it is recommended to allocate 4-6 study credits	To exclude the limitation of the number of credits allocated to a module
Framework plan for higher education, art. 9.	In cycles I and II, the course unit / discipline can be achieved through auditorial didactic activity (direct contact): course / lecture hours, seminars, laboratory works, practical works, design works, teaching, clinical internships and other forms of approved by the Senate	To assign to the auditorial didactic activity the supervision of the team activity of the students, and the text to be in the following variant: In cycles I and II, the course unit / discipline can be achieved through auditorial didactic activity (direct contact): course / lecture hours, seminars, laboratory works, practical works, design works, teaching, clinical internships, team activity supervision of students and other forms approved by the Senate
Framework plan for higher education, art. 28, e)	A physical education course for students of the first / second year, which is not quantified with credits, but whose assessment with the "admitted" rating is a prerequisite for admission to the graduation exam	To exclude the compulsoriness of the Physical Education course.
Regulation on the organization of studies based on SNCS, art. 82	For programmes of 180 credits, an annual thesis shall be elaborated in the second year of study. For study programmes of 240 credits, an annual thesis shall be elaborated in the second and third year of studies. The type of theses / projects is determined by the related profile chair / department according to the specifics of the study programme.	To exclude the limitation to a single project with the following clarifications: <ul style="list-style-type: none"> ✓ It can be a fundamental or specialized course unit provided in the educational plan in semesters I-V / VII; ✓ It provides students with the ability to document and critically analyze information, to solve a problem from the reality, to summarize the scientific articles, to analyze and to make a bibliography on a topic, etc. ✓ The theme of the project offers the student the opportunity to continue the research in the elaboration of the bachelor's degree thesis. ✓ Project themes are determined by the respective chair / department, they are included at the proposal of the labor market representatives, other employers' representatives or can be proposed by the students themselves. To enable the allocation of ECTS credits for each project, even if they do not represent the cumulative result of several disciplines.



561884-EPP-1-2015-1-DK-EPPKA2-CBHE-JP

**Introducing Problem Based Learning in
Moldova: Toward Enhancing Students'
Competitiveness and Employability**

www.pblmd.aau.dk

„Business and Administration” at CSU Cahul State University „Bogdan Petriceicu Haşdeu”

Work Package 4

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Chisinau, 2018

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1 INTRODUCTION

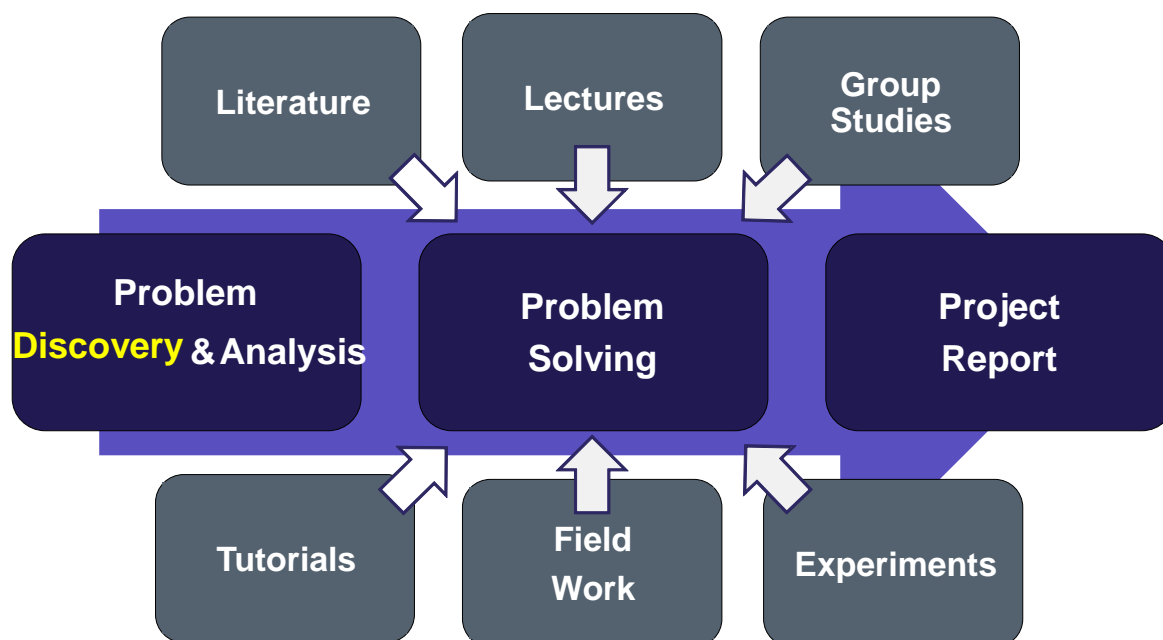
The purpose of this Work Package - WP4 - is to develop the *Business and Administration* study programme, based on the implementation of PBL [Annex 1], student-centered active teaching and learning at the *State University „B.P.Hasdeu” of Cahul*. Specifically, this report will propose an innovative bachelor’s degree study programme based on PBL *Business and Administration* implemented since September 1, 2017 [Annex 2].

In this report, we rely on the findings outlined in WP2 and WP3 that we have developed in 2015-2017. We also rely on the experience we have accumulated during our study visits and staff mobility at EU partner universities as well as the experience gained during the PBL training sessions offered by EU project partners in Chisinau.

1.1 KEY ASSUMPTIONS

There is no PBL model suitable for all purposes. However, PBL-based models are mainly based on two key assumptions. The first assumption is that work on the project is in the *centre*, at the basis, consisting of discovery and problem analysis, problem solving and project report (Figure 1). The second assumption assumes that other teaching and learning (face-to-face) activities such as literature, lectures, group studies and tutorials are designed to *support* work on the project. These two assumptions will also be at the base of our PBL, the bachelor’s degree study programme *Business and Administration* based on PBL, student-centered active teaching and learning.

Figure 1: PBL Model at AAU: An example

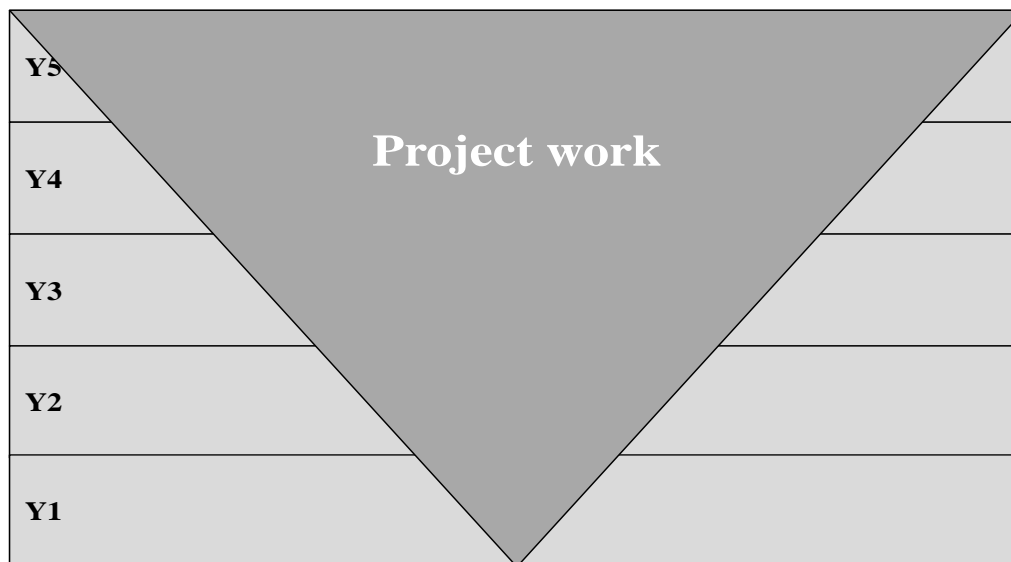


Source: AAU, 2017 (the word 'Discovery' is introduced by Romeo V. Turcan)

Another assumption relates to the relationship between work on the project and face-to-face activities. In the context of this report, wholly based on PBL, this means a study programme in which there is a 50:50 sharing between student work on the project and face-to-face activities (such as lectures, seminars, workshops, laboratories and experiments). An example of progression is presented in Figure 2. Of course,

there are many ways to distribute the relationship between work on the project and face-to-face activities during the semesters; the main purpose is to achieve an approximate 50:50 time sharing for the duration of the study programme.

Figure 2: An example of 50:50 time sharing between project work and face-to-face activities



Source: Louise Faber, PBLMD 2016

1.2 EXPECTED OUTCOMES

The implementation of the PBL methodology within the „Business and Administration” pilot study programme [Annex 2] will allow the focusing of learning / evaluation activities on the student. It is expected that this methodology will be introduced over the next two years in other faculty programmes, so that in up to three years all specialties (8 in number) of this faculty will be based on the PBL methodology.

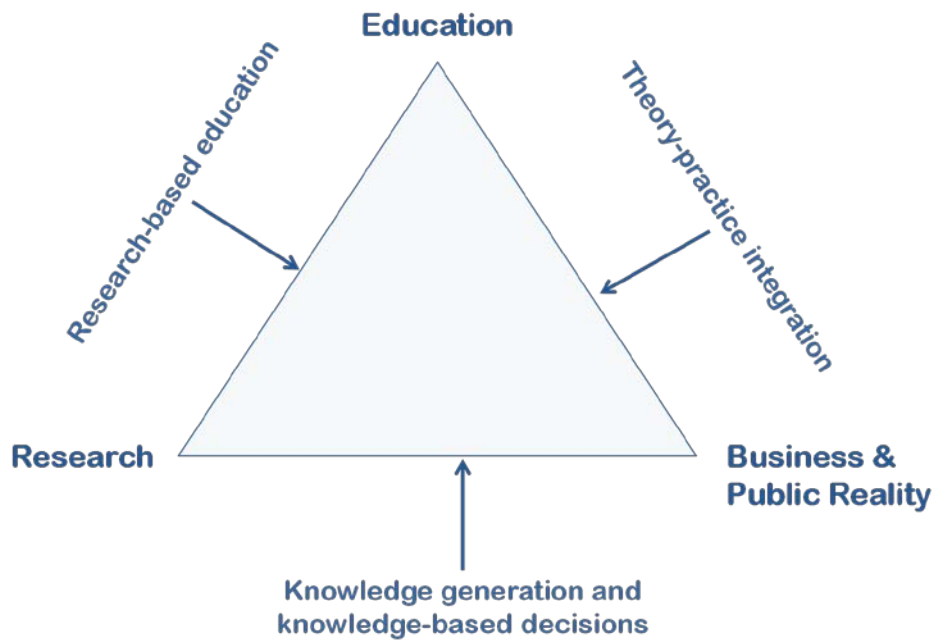
The benefits from implementing this methodology would be for both students, didactic and scientific staff, and the entire university. As far as students are concerned, the implementation of this method will allow a better adjustment of students’ knowledge, skills and abilities to the needs of the labor market. Collaboration between university and business and group project development involves better student training and better preparedness to work collectively. Once again, this methodology will help identify problems and formulate solutions for any type of activity with varying degrees of risk.

An advantage for teachers would be the enrichment of the personal portfolio with modern methods and techniques, the more frequent use of information technologies during lessons. Using the Moodle platform in teaching and evaluating student knowledge would make it easier for students training and increase objectivity in assessing their knowledge.

And as to the benefits at university level, here we should mention the increase of the university’s competitiveness and attractiveness. By developing relations of collaboration with the entrepreneurial environment, the importance of the university at the regional level will be stated.

Tripartite collaboration between the university, the business environment and the Local Public Administration will be stepped up.

Figure 3. Socially committed university



Source: Olav J. Sorensen, 2015

2 OUR VISION ON THE BACHELOR'S DEGREE PROGRAMME BASED ON PBL - BUSINESS AND ADMINISTRATION

2.1 OVERVIEW

The mission and **objectives of the study programme** [Annex 2] fit into the mission and objectives of the University, as set out in the CSU Charter and the Institutional Development Strategy for the period 2017-2021, which in turn is rallied to national strategies, realities and trends in the field.

Thus, the programme [Annex 2] is carried out in accordance with the purpose of the institution that promotes education and research in accordance with the requirements of a knowledge-based society and continuous education and integration in the European and world circuit, contributing to local, regional and national development from the social, economic, and cultural point of view, through a strong involvement in community life.

The study programme „Business and Administration” [Annex 2] aims at the formation of specialists in the field of *Economic Sciences*, being trained for organizing and managing the activity at the level of economic agents, with different forms of ownership (state, private or mixed), as well as at national level: specialists able to think strategically and creatively, adopt quality decisions, leaders oriented to improve the performance of the organization towards quality and continuous improvement. Training within this programme finishes with awarding the graduate the title of Bachelor in Economic Sciences.

In order to fulfill the mission of the field the Business and Administration study programme [Annex 2] falls into, the following objectives are set and achieved: curriculum compatibility for a closer correlation with the curricula of similar national and European study programmes for the purpose of widespread application of the European system of transferable credits, equivalence and recognition of diplomas; orientating the content of disciplines to provide students / graduates with the necessary skills to integrate into the national and European labor market; the development of educational modules in partnerships in the country and in Europe, through the mutual mobility of the teaching staff of the University and the partner institutions.

In drawing up the educational plans (for full-time and part-time education) for the Business and Administration programme [Annex 2], we focused on the requirements of student-centered education aimed at acquiring the learning outcomes and skills training provided by the **National Qualifications Framework**, on the **European Qualifications Framework**, on cycles and on the general field of study and on the field of professional training. The accentuation of the pragmatic character of the formative content of the course units included in the educational plan leads to the achievement of the learning outcomes and the training of the competences for the concerned professional training field. The outcomes system is presented in the Study Programme and the Diploma Supplement, the title awarded to the graduates corresponds to the objectives of the requirements and of the outcomes established for the specialties in the field of professional training 36. Economic Sciences, approved in the Nomenclature of Professional Education and Training in higher education institutions, cycle I, approved by Law no. 142 of 07.07.2005.

The **educational plan** of the university study programme at "Business and Administration" [Annex 2] has been elaborated in accordance with the legislation in force existing at national level and the level of the CSU institution. The educational plan for the study programme is also developed in accordance with the competences that define the qualification. The Educational Plan [Annex 1] has been linked to the objectives of the ERASMUS + project "Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability" drawn up in accordance with the provisions:

1. Of the Education Code of the Republic of Moldova, no. 152 of July 17, 2014;
2. Of the Law on the Approval of the Nomenclature of Professional Training Fields and Specialties for the Training of Staff in Higher Education Institutions, Cycle I, no. 142-XVI of 07 July 2005;
3. Of the Framework Plan for Higher Education (cycle I - Bachelor, cycle II - Master, integrated studies, cycle III - Doctorate), approved by Order of the Ministry of Education no. 1045 of October 29, 2015;
4. The Regulation for organization of studies in higher education based on the National Study Credits Transfer System, approved by Order of the Ministry of Education no. 1046 of October 29, 2015;
5. The National Qualifications Framework of the Republic of Moldova and the National Qualifications Framework for Higher Education on Professional Training Fields, approved by the Order of the Ministry of Education.

The purpose of the pilot programme [Annex 2] is to move from classical education (where the teacher is an information provider and the student is the information receiver) to a PBL-based education (problem-oriented study), which would allow the training of specialists competitive on the labor market and skilled in the field of training 363. Business and administration, Specialty: 363.1. Business and administration.

All disciplines are divided into modules (cycles) as follows:

- Module of fundamental disciplines (code F) - 63 credits;
- Module of disciplines generating general skills and competences (code G) - 16 credits;
- Module of disciplines of socio-humanistic orientation (code U) - 17 credits;
- Module for specialization orientation (code S) - 57 credits.

The educational plan for the "Business and Administration" [Annex 2] specialty is based on the Framework plan for Higher Education, based on the European Credit Transfer System, and includes categories of fundamental disciplines, specialized disciplines and complementary training disciplines: course units / modules for the development of general skills and competences, socio-humanistic orientation course units / modules. The plan contains several optional disciplines, continuous, depending on the dynamic evolution of the field, so that each student has the opportunity to assimilate the knowledge he / she wants, correlated with market requirements.

The list of compulsory and optional course units / modules, the number of hours to study them, the types of internships and the free-choice course units have been established according to the specifics of the general field of study (36. Economic Sciences), the field of training (363.1 Business and Administration) in line with the National Qualifications Framework and the European

Qualifications Framework. The correlation between the number of hours and credits corresponds to the provisions of the Framework Plan.

The drawing up of the educational plan was based on the main objectives of the Framework Plan: general, specific and concrete. The training under the "Business and Administration" study programme [Annex 2] follows the Educational Plan, for a three-year **full-time education** and four-year **part-time education** (based on high school, special and higher education degrees).

The number of hours for each discipline is provided in the educational plan (course, seminars, practical works, internships). The correlation between course, seminar, direct contact and individual work is 1: 1, which corresponds to formal and formative requirements. The year of study is divided into 2 semesters with a duration of 30-week study process including practical internships, which are an important step in the training of specialists.

Each course unit / module in the educational plan of the "Business and Administration" study programme [Annex 2] is assigned a rating of knowledge - with grades (from 10 to 1, the minimum grade being 5) and study credits (1 credit for 30 hours of contact and individual work). Through the European Credit Transfer System (ECTS) and the National Study Credits System (SNCS), the competences accumulation function and the record of the results of the students (registered at USC), as well as the transfer function in the student mobility process both within the institution, as well as on a national or international inter-university level are carried out. Study credits are full, indivisible numeric values that are allocated to all educational components of the study programme. Each course unit / module includes current and final assessments (exams, checking, etc.). In order to deepen the practical knowledge of the students and to familiarize them with the methodology of the elaboration of the bachelor thesis, the theses of the year are provided for the specialty disciplines.

The use of the ECTS / SNCS system in combination with the requirements set out in the National Qualifications Framework favors the transparency of the learning process and the qualifications obtained in the Business and Administration study programme and facilitates the recognition of the qualifications obtained.

Learning outcomes: The graduate obtains the title of Bachelor of Economic Sciences as a result of the full compliance with the educational plan, the promotion of the assessment tests, including the bachelor's examination, according to the grading system in the Republic of Moldova ranging from 1 to 10 points, the promotion grades being 5 to 10, and the accumulation of 180 transferable credits under the European Credit Transfer System (ETS).

The study programme was based on the objectives and requirements of the National Qualifications Framework and involves the following outcomes:

1. Demonstrate functional knowledge in the following areas:
 - 1.1. Economic theory - genesis, essence, methodology and method, economic laws.
 - 1.2. Management - the evolution of management science, the main contents, processes and managerial functions.
 - 1.3. Marketing - development and realization of the company's marketing policy.
 - 1.4. Markets - the study, operation and development of resource, goods and services markets.

- 1.5. Customers - factors of influence, purchasing and consumption processes, consumption models.
 - 1.6. Law - knowledge of legislation on entrepreneurship and business, small business, consumer protection, advertising in the Republic of Moldova.
 - 1.7. Finance - finance management, accounting and other financial systems.
 - 1.8. Information systems - development and exploitation of information systems with impact on the achievement of managerial functions in the organization.
2. Start a business.
 3. Know how to identify business ideas and evaluate opportunities.
 4. Possess methods to assess and minimize business risks.
 5. Ensure that activities are carried out in accordance with established laws and regulations.
 6. Adjust the organization's work to the requirements of the environment.
 7. Make optimal decisions under conditions of certainty, uncertainty, risk.
 8. Develop the organizational structure of the organization.
 9. Evaluate and improve the efficiency and effectiveness of the organization's activities.
 10. Self-motivate and increase the efficiency of their own activities.
 11. Form teams and develop collaboration.
 12. Motivate and create productive labor relations.
 13. Apply quality management systems.
 14. Communicate convincingly and effectively.
 15. Ensure and manage the efficient use of material, financial and informational resources.
 16. Organize the business and administration research process.
 17. Draw up an applicative paper dealing with solving a problem in the field of business administration.
 18. Develop and coordinate project implementation.
 19. Know the competence and involvement area of managers at different hierarchical levels.
 20. Develop judgments based on the knowledge of the social and ethical issues that arise in work or study.

The set of didactic methods and procedures used in the training process will be both the traditional methods (lectures and seminars), modified and completed according to the objectives proposed, as well as the modern, interactive methods aimed at cultivating the interest, motivation, activism, social collaboration, organization spirit, initiative, inventiveness and creativity.

The study process will focus on active-participative (interactive) methods, which increase the intellectual potential of beneficiaries by engaging in a personal effort in the process of learning and training of students for an active and creative professional life. Flexible and diversified forms of organization specific to the nature of content and work with adults will be used to provide a formative, operational, developmental learning focusing on the formation of operational capacities, mental processes, skills, attitudes, beliefs, values, ideals and aspirations, changes in mentalities (lectures, seminars, computer aided training, laboratories and workshops, etc.). They will specifically combine, for different situations, methods and processes such as: case study, role play, heuristic conversation, debates, brainstorming, problem-solving, investigation, project, multiple-angle exploration, panel discussion, argumentation and counter argumentation, independent academic learning, etc.

The personal support of each student will be provided by the tutoring system.

The assessment will focus on the effectiveness of educational activities in terms of the relationship between the projected objectives and the results obtained by the students in the learning activity. It will be done by teachers and will not only focus on knowledge but also on skills, abilities and attitudes. In the context of PBL some projects will be developed, which will constitute 60% of the final grade, and the exam (which will include questions from the elaborated project) will constitute 40%. The advantage of this model is the combination of group work, problem solving, holistic approach (problem-theory-methodology), reflection, communication and abilities. We will also opt for the use of innovative assessment forms, eg: computer exam, video exam, peer evaluation through Moodle platform.

The assessment will have a complex pedagogical function:

- a) from the perspective of the assessed one - stimulating, strengthening the results, building skills, raising awareness of one's own possibilities, positive professional orientation;
- b) from the perspective of the assessor - assessing the efficiency of its activities and of the changes necessary for the full realization of the objectives.

2.2 SEMESTERS

2.2.1 Semester 1

The theme of the semester: Competitiveness of the National Product in the South Development Region

The first semester is considered a general one, because students will be able to accumulate the general and humanistic component by attending courses of economic mathematics, economics and business communication, informational communication technologies, foreign business language.

Economic Theory I (Microeconomics) is a fundamental course that allows students to have a good start in economic science.

The basics of the management is a specialized course that will allow the initiation in the chosen specialty through the knowledge gained during the course, but also the development of the skills to work in a team, to highlight certain problems in the science of business management and to search at an early stage certain solutions. A project will be developed within this course.

Learning objectives and outcomes:

- Studying the elements of the internal and external environment of the enterprise and adjusting the organization's activity to the requirements of the environment;
- Demonstrating functional knowledge in microeconomics: genesis, essence, methodology and method, economic laws;
- Knowing the evolution of management science, the main contents, managerial processes and functions;
- Awareness of the role, development and exploitation of information systems with impact on the achievement of managerial functions in the organization;
- Making optimal decisions under conditions of certainty, uncertainty, risk;

- Self-motivating and increasing the efficiency of their own activities;
- Forming teams and developing collaboration;
- Motivating and creating productive labor relations;
- Communicating convincingly and effectively;
- Ensuring and managing the efficient use of material, financial and informational resources;
- Organizing business and administration research;
- Elaborating an applicative paper dealing with the solution of a problem in the field of business administration;
- Developing and coordinating project implementation;
- Knowing the competence and involvement of managers at different hierarchical levels;
- Developing judgments based on the knowledge of the social and ethical issues that arise in work or study.

Year I, semester I

	Module	ECTS	Assessment form
1.	<i>Principles of learning through the Problem Based Learning (PBL) method</i>	2	E
2.	<i>Economic Theory I (microeconomics)</i>	6	E+P
3.	<i>The basics of management</i>	6	E+P
4.	<i>Economic Informatics and Business Communication:</i>	6	E
5.	Foreign Language I	2	E
6.	Information communication technologies	2	E
7.	Economic mathematics	6	E
TOTAL		30	

Bachelor's degree studies correspond to a number of 180 (for programmes with a duration of 3 years under full-time education) and 240 (for programmes with a duration of 4 years under part-time education) of compulsory transferable credits (ECTS), 30 credits for each semester. In the 1st cycle of higher education (bachelor), the academic year consists of two relatively equal semesters, which include two sessions of exams, practical internships and two holidays. The duration of a semester is 15 weeks of direct contact with students.

Student learning activity, including individual activity, as well as the learning outcomes and competences acquired by the student are verified and appreciated during the semesters through current assessments as well as during examination sessions through final / summative assessments in accordance with the educational plans.

In the semester there are one or two current assessment sessions, allocated proportionally during the semester, which totalizes the intermediate situation of the student's success. The results of the success of the current assessment sessions are recorded in the academic group register and are taken into account in the final semestrial assessments.

Within this semester an interdisciplinary project will be developed (for the disciplines: Economic theory, the Basics of management). Students are offered a general research theme and

several areas where research can be done. Students choose the field of research and with the help of teachers formulate themes for mini-projects, based on the general theme.

These projects are defended orally in the presence of a committee made up of teachers and evaluated by the teachers - the holders of the disciplines at which the project is being developed. These projects are designed as the individual student study guided by the teacher.

Semestrial final assessments can be held orally, in writing, assisted by computer or combined. Admission to the exam is only for students who have an average grade of admission, consisting of the average of the grades gained in the seminars, current assessment and individual work.

The form of examination is determined by the faculty council, at the proposal of the profile chair and announced to the students at the beginning of the semester, may be in writing or orally.

Assessment of learning outcomes is done with grades from „10” to „1”. The grades from „5” to „10” obtained as a result of the course unit / module evaluation allow obtaining the credits allocated to them according to the educational plan. The grade of the student’s current assessment on the semester and the grade on the exam are expressed in integers. The final grade at the course unit / module is calculated based on the semester grade and examination grade and is expressed in two decimal digits. The student who gets less than „5” on the current assessment is not allowed in the final assessment.

ECTS éivalent GRADE:

9,01-10,0 A	6,01-7,00 D
8,01-9,00 B	5,00-6,00 E
7,01-8,00 C	3,01-4,99 FX
1,00-3,00 F	

EXAMPLE: General theme: **Competitiveness of the national product in the South Development Region**

Fields of research:

- vegetables and fruits;
- dairy products and homogeneous products;
- winemaking and grape products.

Research and analysis themes:

- Branch analysis: history, current situation, problems, trends.
- The activity environment and its impact on the business activity.
- The economic and social utility of the activity and the product.
- Analysis of the supply market (offer).
- Analysis of the sales market (demand).
- Cost of production and ways of management, optimization.
- Product price and economic efficiency

In relation to product competitiveness

2.2.2 Semester 2

The theme of the semester: Economic Fluctuations and Risks in Contemporary Agriculture

Based on this theme during the semester, two mini-projects will be elaborated on 4 disciplines (one project on two disciplines: the first project: Economic Theory II (Macroeconomics) and Basics of Entrepreneurship and the second project: Economic Statistics and Basis of Accounting).

For each project, the specific working method will be chosen, depending on the areas of research and the content of the courses.

Year I, semester II

	Module	ECTS	Assessment form
1.	<i>Economic Theory II (macroeconomics)</i>	6	<i>E+P(I)</i>
2.	<i>The Basics of Entrepreneurship</i>	6	<i>E+P(I)</i>
3.	<i>Economic statistics</i>	6	<i>E+P(II)</i>
4.	<i>Basis of Accounting</i>	6	<i>E+P(II)</i>
5.	Foreign Language II	2	E
6.	Ethics and professional culture	4	E
	TOTAL	30	

Research objectives and outcomes:

- to know and decipher macroeconomic concepts and phenomena;
- to know the particularities of the functioning of the markets of the national economy;
- to know the legislation on entrepreneurship and businesses, small business, consumer protection, advertising in the Republic of Moldova;
- to analyze and address an entrepreneurial business at the enterprise level and in terms of its positioning on the market (macroeconomic);
- to analyze and propose ways of improving the economic performance of the economic unit;
- to be able to perform the primary processing of statistical information;
- to analyze and interpret the results obtained from statistical studies and to test the assumptions regarding the future trend of phenomena and statistical processes;
- to analyze the primary accounting documents and to extract the necessary data from them;
- to address accounting information in dynamics for 5 years;
- to address entrepreneurial concepts and to conduct a broad analysis of the enterprise based on the indicators that characterize its activity.

The assessment of the students, the methods used in the assessment, the assessment types, the grading system, the monitoring of the student activity are identical to the information presented for the semester I.

Promotion of the year of study and enrollment in the following year shall be in accordance with the USC Regulation on the Promotion of the Year of Study. The student who has accumulated during the whole academic year the number of compulsory study credits provided in the educational plan for the respective year is promoted in the following year of study. Student enrollment in the following year of study is conditional upon the accumulation of minimum 40 (30 for part-time education) points of study credits at the compulsory course units / modules provided in the Annual Education Contract for the current academic year and the accumulation of the total number of credit points, provided by the educational plan for previous years of studies, as well as for the year of graduation of the university studies.

2.2.3 Semester 3

The theme of the semester: Industrial Development as a Factor National Wealth

Based on this theme during the semester an interdisciplinary project will be developed based on the following subjects: Production Management; Methods and Management Techniques; Enterprise Finance; Business Law.

Project - Group work of 3-5 students of the research problem related to all (fundamental and /or specialty) course units in the semester. The passing of the exam and the awarding of study credits is conditional on the MANDATORY defense of the Project.

Year II, semester III

	Module	ECTS	Assessment form
1.	<i>Production Management</i>	6	<i>E+P</i>
2.	<i>Management methods and techniques</i>	6	<i>E+P</i>
3.	<i>Business finance</i>	6	<i>E+P</i>
4.	<i>Business law</i>	6	<i>E+P</i>
5.	Foreign language	2	E
6.	Economic doctrines	4	E
	TOTAL	30	

Learning objectives and outcomes: at the end of the semester students shall:

- know the content of the main processes and managerial functions;
- be familiar with finance management, accounting and other financial systems;
- know how to identify business ideas and evaluate opportunities;
- have management methods and techniques;
- make optimal decisions under conditions of certainty, uncertainty, risk;
- evaluate and improve the efficiency and effectiveness of the organization's activities;
- elaborate an applicative paper dealing with the solution of a problem in the field of business administration;
- know and apply methods of managing financial resources and analyze alternatives for the mobilization and placement of financial resources in order to choose the optimal option;
- perform a comparative study on the theoretical positions and the methodological approaches of the economic sphere elaborated by the main representatives of philosophy;
- know the legislation on entrepreneurship and businesses, small business, consumer protection, advertising in the Republic of Moldova;
- ensure that activities are carried out in accordance with established laws and regulations
- know the main processes within industrial enterprises;
- propose managerial methods and techniques for streamlining the business management of enterprise subdivisions.

The workload of students in project-based teams continues to increase during this semester. We believe that based on the experience gained in the previous projects and the disciplines studied in this semester, students will be able to carry out a larger work. Within this project, students will show the spirit of observation and analysis on several aspects of the operation of the enterprise.

2.2.4 Semester 4

The theme of the semester: Planning of the Competitive Entrepreneurial Activity

An interdisciplinary semestrial project will be developed within the disciplines: Entrepreneurship Management, Human Resource Management and Marketing.

By conducting a market study and analyzing the potential of human resources, students will propose business ideas and develop projects for these businesses.

Learning objectives and outcomes. At the end of the semester students shall:

- Develop and implement enterprise marketing policies;
- Know the content of the main processes and managerial functions;
- Know how to identify business ideas and evaluate opportunities;
- Adjust the organization's work to the requirements of the environment;
- Know and monitor the factors of the marketing environment, investigate the real and potential market characteristics, be able to identify the possible ways of market growth;
- Know the particularities of the functioning of marketing policies;
- Strengthen management theoretical competences in the real economic environment of a company / institution, finding the appropriate methods for improving the performance of the company's business;
- Know the particularities of the human resources management;
- Identify staffing needs, analyze human resource demand and supply;
- Develop the recruitment and selection plan for employees;
- Identify and understand entrepreneurial actions, identify the entrepreneur's skills and his / her own skills; know the process of initiation and development of small and medium enterprises (own and third parties); identify sources of funding;
- Know how to ensure the launching and running of entrepreneurial activities in accordance with established laws and regulations; adopting optimal decisions in the process of launching and developing the business; analysis of the internal and external environment of the business; adjusting the activity to customer requirements in order to increase the efficiency and effectiveness of entrepreneurial activities;
- Form teams and develop collaboration;
- Motivate and create productive labor relations;
- Develop and coordinate project implementation.

Year II, semester IV

	Module	ECTS	Assessment form
1.	<i>Entrepreneurial project management</i>	6	<i>E + P</i>
2.	<i>Marketing</i>	6	<i>E + P</i>
3.	<i>Human resources management</i>	6	<i>E+P</i>
4.	Foreign language	2	E
5.	Leadership	4	E
6.	Oratory Art	3	E
7.	Specialty internship	3	E
	TOTAL	30	

In the fourth semester, the project will be a more complex one, which will also be based on student internships within a company. Students will have to demonstrate good knowledge of all processes in the enterprise, the interdependence of the business functions, and a broad analysis of its work.

2.2.5 Semester 5

The theme of the semester: Management of the Performance/Success of Entrepreneurial Business

Learning objectives and outcomes:

- Start a business;
- Know how to identify business ideas and evaluate opportunities;
- Have methods to assess and minimize business risks;
- Ensure that activities are carried out in accordance with established laws and regulations;
- Adjust the organization’s work to the requirements of the environment;
- Make optimal decisions under conditions of certainty, uncertainty, risk;
- Evaluate and improve the efficiency and effectiveness of the organization’s activities;
- Organize business and administration research;
- Know the competence and involvement of managers at different hierarchical levels;
- Develop appropriate strategies and policies in a changing environment;
- Develop skills to assess and minimize entrepreneurial risks;
- Define the concepts of economic activity under conditions of risk and uncertainty;
- Establish the functional correlation between risk level and economic outcome;
- Acquire the main concepts, principles and functions of quality management;
- Develop skills for applying quality management methods and standards for the quality management system;
- Use the quality management system documents.

Year III, semester V

	Module	ECTS	Assessment form
1.	Economic and financial analysis *	6	E+P
2.	Risk management *	6	E +P
3.	Supply management **	6	E+P
4.	Quality management **	3	E+P
5.	Entrepreneurial development project ***	3	E+P
6.	European economic integration	3	E
7.	Intellectual property law	3	E
	TOTAL	30	

In this semester three mini-projects will be developed, two of which are interdisciplinary: The first project in the Economic and Financial Analysis and Risk Management disciplines; the second in the Supply Management and Quality Management disciplines. And for the Entrepreneurial Development Project discipline, where students will have the opportunity to choose a research enterprise in a group, they will analyze all the functions of the enterprise, identify the existing

problems, and for one of these problems they will develop solutions to overcome it and even increase the performance of the enterprise.

All three projects will be based on improving the performance of the enterprise, either by identifying and minimizing risks, or by increasing the quality (raw material, processes, production).

2.2.6 Semester 6

The theme of the semester: Contemporary Methods of Business Management

Learning objectives and outcomes:

- Ensure that activities are carried out in accordance with established laws and regulations
- Adjust the organization's work to the requirements of the environment
- Be able to identify comparative advantages of the national management system and other states;
- Identify business innovation activities, the need for innovation, and the company's innovation policy.
- Ensure and manage the efficient use of material, financial and informational resources
- Apply quality management systems
- Organize business and administration research

Year III, semester VI

	Module	ECTS	Assessment form
1.	<i>Comparative management</i>	3	<i>E</i>
2.	<i>Innovative management</i>	3	<i>E</i>
3.	<i>Practica de specialitate (producție)</i> <i>Specialty (production) internship</i>	6	<i>E</i>
4.	Practica de cercetare (licență) Research (bachelor) internship	9	E
5.	Bachelor exam	9	E
	TOTAL	30	

The project in the semester VI will be developed as a bachelor thesis. According to the REGULATION on the organization of the examination for the completion of the Bachelor's degree studies ¹, and of ORDER no. 07-008 of December 23, 2015², the bachelor's exam of the Business and Administration study programme consists of: integrator exam: Economics and Business Management and the defense of the bachelor's thesis (project).

The bachelor titles are awarded to graduates who:

- demonstrate advanced knowledge and skills in a field of study;
- can professionally apply the knowledge gained in a field of study;
- demonstrate the ability to argue and solve problems in the field of study;

¹ http://usch.md/wp-content/uploads/2015/12/Reg.-USC_Ex.Licenta-2015.pdf

² http://usch.md/wp-content/uploads/2015/12/Metodologia-Ex.-Licenta_2016.pdf

- have the ability to collect, analyze and interpret relevant data (typically from the own studies) as well as formulate reasoning on relevant social, scientific or ethical issues;
- can communicate information, ideas, problems and solutions to both the specialist audience and the non-specialists;
- have developed those skills that are needed to continue their studies with an increased self-training degree.

Through the bachelor project (thesis) graduates' skills to conduct research, to apply theoretical knowledge in the development of practical solutions specific to training or carrying out case studies are assessed.

The defense of the bachelor projects / theses is public.

Bachelor exam tests and project / thesis are assessed separately with grades based on the grading scale of 10 to 1, with the minimum promotion grade being 5. Converting the grades into the ECTS grading scale will be done according to the recommendations of the Guide on the implementation of the National Study Credits System.

3 CONCLUDING REMARKS

The implementation of Problem Based Learning (PBL) in USC, as a pilot programme in the Business and Administration bachelor's degree study programme [Annex 2], involves a revolution in the process of study at this programme, both in terms of working methodologies and approach in general. Thus, the programme acquires an orientation towards the initiation and development of regional entrepreneurship. Drawing on the experience of European countries, we aim to be a Classic Regional University, whose purpose is to analyze regional problems and solve them by involving students, and also to train qualified staff to cover vacancies in all organizations, enterprises in the social, economic, and legal areas. Activities that should lead to the creation of skills and competences (case studies, projects, internships) are currently more formal and have no real impact (e.g. students' internships).

We propose ourselves that, by implementing this methodology, we should bring students closer to the real life of economic agents, to involve students in identifying and solving the real problems of enterprises in the region, both industrial, commercial and agricultural. Thus, as through learning, involvement and practical training, in the last year of study, students will be able to identify the needs of the region and set up their own business.

It is a fact that in order to achieve these objectives, it takes time and effort first of all from the teachers, as well as from the university, but also from the economic agents, which we propose to involve in the training / evaluation activity through various activities carried out jointly. We believe it is necessary to develop the involvement of economic agents in such activities as student internships, student research activities, case studies, projects, round tables, seminars and scientific conferences, project defense / exams and other activities included in the study programme. By implementing this project we aim to increase the competitiveness of the university, but also to modernize university education [Annex 2].

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Annex 1: Our vision on the bachelor's degree programme *Business and Administration*

Year of study I, semester I

<i>Code</i>	<i>Course unit / module name</i>	<i>Total hours</i>	<i>Assessment form</i>	<i>Nr. credits</i>
G.01.O.001	Foreign Language I	60	E	2
G.01.O.002	Information communication technologies	60	E	2
G.01.O.049	Principles of Learning through the Problem Based Learning (PBL) method	60	E	2
F.01.O.003	Economic Theory I (microeconomics) *	180	E	6
F.01.O.006	Basics of Management *	180	E	6
F.01.O.050	<i>Module: Economic Informatics and Business Communication:</i>	180	E	6
S.01.O.005	Economic Informatics	90		
	Correspondence and business communication	90		
F.01.O.004	Economic Mathematics	180	E	6
	Total hours with the awarding of the study credits	900	6E	30
G.01.O.007	Physical education	30	adm	-
	TOTAL HOURS PER SEMESTER I	930	6 E	30

Year of study I, semester II

<i>Code</i>	<i>Course unit / module name</i>	<i>Total hours</i>	<i>Assessment form</i>	<i>Nr. credits</i>
G.02.O.008	Foreign Language II	60	E	2
G.02.O.009	Ethics and professional culture	120	E	4
F.02.O.010	Economic Theory II (macroeconomics) *	180	E	6
F.02.O.011	The Basics of Entrepreneurship *	180	E	6
F.02.O.012	Economic statistics**	180	E	6
F.02.O.013	Basis of Accounting **	180	E	6
	TOTAL HOURS PER SEMESTER II	900	6E	30

* A joint mini-project will be developed for both disciplines (for each semester). Mini-project - group work (3-5 students) of the research problem related to a group of related course units. Passing of the exam and awarding study credits is conditional upon the COMPULSORY defense of the reasearch mini-project.

** A joint mini-project will be developed for both disciplines (for each semester). Mini-project - group work (3-5 students) of the research problem related to a group of related course units. Passing of the exam and awarding of study credits is conditional upon the COMPULSORY defense of the reasearch mini-project.

Year of study II, semester III

<i>Code</i>	<i>Course unit / module name</i>	<i>Total hours</i>	<i>Assessment form</i>	<i>Nr. credits</i>
G.03.O.014	Foreign Language III	60	E	2
U.03.A.015	Economic doctrines	120	E	4
U.03.A.016	Philosophy and logics of economic and engineering activity			
S.03.A.017	Production Management *	180	E	6
F.03.O.019	Management Methods and Techniques *	180	E	6
S.03.A.020	Enterprise Finance *	180	E	6
S.03.A.022	Business law *	180	E	6
TOTAL HOURS PER SEMESTER III		900	6E	30

Year of study II, semester IV

<i>Code</i>	<i>Course unit / module name</i>	<i>Total hours</i>	<i>Assessment form</i>	<i>Nr. credits</i>
G.04.O.024	Foreign Language IV	60	E	2
U.04.A.025	Leadership	120	E	4
U.04.A.026	Initiation in the human capital economy			
*G.04.O.027	Communication techniques (for groups of speakers of other languages)	90	E	3
*U.04.A.028	Oratory Art (except for groups of speakers of other languages)			
*U.04.A.029	Communication techniques (except for groups of speakers of other languages)			
S.04.A.051	Entrepreneurial project management *	180	E	6
S.04.A.030	Planning systems			
S.04.A.031	Business Planning			
F.04.O.032	Marketing*	180	E	6
F.04.O.033	Human resources management *	180	E	6
	Specialty (initiation) internship *	90	E	3
TOTAL HOURS PER SEMESTER IV		900	7E	30

* An interdisciplinary semestrial project will be developed (for each separate semester). Project - Group work of 3-5 students of the research problem related to all (Fundamental and / or Specialty) course units in the semester. Passing of the exam and awarding of study credits is conditional upon the COMPULSORY defense of the project.

Year of study III, semester V

<i>Code</i>	<i>Course unit / module name</i>	<i>Total hours</i>	<i>Assessment form</i>	<i>Nr. credits</i>
U.05.A.034	European economic integration	90	E	3
U.05.A.035	Community Regional Development Policies			
U.05.A.036	Intellectual property law	90	E	3
U.05.A.037	Legal initiation in copyright and related rights			
S.05.O.038	Economic and financial analysis *	180	E	6
S.05.O.039	Risk Management *	180	E	6
S.05.A.040	Supply Management **	180	E	6
S.05.A.041	Sales techniques			
S.05.A.042	Quality management **	90	E	3
S.05.A.043	Quality management systems			
S.05.O.044	Entrepreneurial development project ***	90	E	3
TOTAL HOURS PER SEMESTER V		900	7E	30

* A joint mini-project will be developed for both disciplines.

** A joint mini-project will be developed for both disciplines.

*** A mini-project will be developed. Mini - project - group work (3-5 students) of the research problem related to a group of related course units. Passing of the exam and awarding of study credits is conditional upon the COMPULSORY defense of the research mini-project.

Year of study III, semester VI

<i>Code</i>	<i>Course unit / module name</i>	<i>Total hours</i>	<i>Assessment form</i>	<i>Nr. credits</i>
S.06.A.045	Comparative Management *	90	E	3
S.06.A.046	Management of International Trade			
S.06.A.047	Innovative Management *	90	E	3
S.06.A.048	Merchandising			
	Specialty (production) internship*	180	E	6
	Research (bachelor) internship	270	E	9
	Bachelor exam	270	E	9
TOTAL HOURS PER SEMESTER VI		900	5 E	30

Annex 2: Bachelor's degree programme Business and Administration ro

MINISTERUL EDUCAȚIEI AL REPUBLICII MOLDOVA
 INSTITUȚIA PUBLICĂ UNIVERSITATEA DE STAT „BOGDAN PETRICEICU HASDEU” DIN CAHUL

PLANUL DE ÎNVĂȚĂMÂNT

APROBAT

Ciclul I, Licență

Senatul Universității de Stat
 „Bogdan Petriceicu Hasdeu”
 din Cahul,

Contextul: ISCED - 6

Domeniul general de studiu: **041. Științe Economice**

Domeniul de formare profesională: **0413. Business și administrare**

Denumirea programului de studii: **0413.1 Business și administrare**

Numărul total de credite de studii: **180**

Titlul obținut: **Licențiat în științe economice**

Baza admiterii: **BAC, Colegiu, Studii superioare**

Limba de instruire: **română**

Forma de organizare a învățământului: **Cu frecvență**

Proces-verbal nr. 08
 din 27 aprilie 2017

Președintele Senatului
 Dr.hab., Prof.univ.

Popa Andrei



CALENDARUL UNIVERSITAR / GRAFICUL PROCESULUI DE STUDIU

Anul de studii	Activități didactice		Sesiuni de examene		Stagiul de practică	Vacanțe		
	Sem. I	Sem. II	Sem. I	Sem. II		Iarnă	Primăvară	Vară
I	01.09-15.12 (15 săptămâni)	01.02-20.05 (15 săptămâni)	16.12-29.01 (4 săptămâni)	23.05-23.06 (4 săptămâni)	-	31.12-10.01 21.01-31.01 (2 săptămâni)	Paște (1 săptămână)	25.06-31.08 (9 săptămâni)
II	01.09-15.12 (15 săptămâni)	01.02-11.05 (13,5 săptămâni)	16.12-29.01 (4 săptămâni)	23.05-23.06 (4 săptămâni)	12.05-22.05 <i>Practica de specialitate (înțiere)</i> (1,5 săptămâni)	31.12-10.01 21.01-31.01 (2 săptămâni)	Paște (1 săptămână)	25.06-31.08 (9 săptămâni)
III	01.09-15.12 (15 săptămâni)	01.02-21.02 (3 săptămâni)	16.12-29.01 (4 săptămâni)	14.03-20.03 (2 săptămâni)	22.02-13.03 <i>Practica de specialitate (de producție)</i> (3 săptămâni) 21.03-20.04 <i>Practica de cercetare de licență</i> (4,5 săptămâni)	31.12-10.01 21.01-31.01 (2 săptămâni)	Paște (1 săptămână)	-

ANUL I de STUDIU

SEMESTRUL I

Cod	Denumirea unității de curs/modulului	Total ore			Număr de ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	C	S	L/P		
G.01.O.001	Limba străină I	60	30	30	-	10	20	E	2
G.01.O.002	Tehnologii de comunicare informațională	60	30	30	10	-	20	E	2
G.01.O.049	Principii de studiu prin metoda „Învățarea prin Cercetarea Problemei” (PBL – Problem Based Learning)	60	30	30	10	-	20	E	2
F.01.O.003	Teoria economică I (microeconomia)	180	90	90	45	45	-	E	6
F.01.O.004	Matematică economică	180	60	120	30	30	-	E	6
F.01.O.050	<i>Modul: Informatică economică și comunicare în afaceri:</i>	180	60	120	30	15	15	E	6
S.01.O.005	Informatică economică	90	30	60	15	15	-	E	6
S.01.O.005	Correspondența și comunicarea în afaceri	90	30	60	15	15	-	E	6
F.01.O.006	Bazele managementului	180	60	120	30	30	-	E	6
	Total ore cu acordare creditelor de studii	900	360	540	155	130	75	6E	30
G.01.O.007	Educația fizică	30	30	-	-	-	30	adm	-
	TOTAL ORE PE SEMESTRUL I	930	390	540	155	130	105	6 E	30

ANUL I de STUDIU

SEMESTRUL II

Cod	Denumirea unității de curs/modulului	Total ore			Număr de ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	C	S	L/P		
				Total					
G.02.O.008	Limba străină II	60	30	30	-	10	20	E	2
G.02.O.009	Etică și cultura profesională	120	60	60	30	30	-	E	4
F.02.O.010	Teoria economică II (macroeconomia)	180	90	90	45	45	-	E	6
F.02.O.011	Bazele antreprenoriatului*	180	90	90	45	45	-	E	6
F.02.O.012	Statistica economică**	180	60	120	30	30	-	E	6
F.02.O.013	Bazele contabilității**	180	60	120	30	30	-	E	6
	TOTAL ORE PE SEMESTRUL II	900	390	510	180	190	20	6E	30

* Se va elabora un mini - proiect comun pentru ambele discipline (pentru fiecare semestru în parte). Mini - proiect – lucrare în grup (3-5 studenți) a problemei de cercetare referitoare la un grup de unități conexe de curs. Susținerea examenului și atribuirea creditelor de studii este condiționată de susținerea OBLIGATORIE a Mini - Proiectului de cercetare.

** Se va elabora un mini - proiect comun pentru ambele discipline. Mini - proiect – lucrare în grup (3-5 studenți) a problemei de cercetare referitoare la un grup de unități conexe de curs. Susținerea examenului și atribuirea creditelor de studii este condiționată de susținerea OBLIGATORIE a Mini - Proiectului de cercetare.

ANUL II de STUDIU

SEMESTRUL III

Cod	Denumirea unității de curs/modulului	Total ore			Număr de ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	C	S	L/P		
G.03.O.014	Limba străină III	60	30	30	-	10	20	E	2
U.03.A.015	Doctrină economică	120	60	60	30	30	-	E	4
U.03.A.016	Filosofia și logica activității economico-ingenerești								
S.03.A.017	Managementul producției *	180	90	90	45	45	-	E	6
S.03.A.018	Tehnologia și merceologia								
F.03.O.019	Metode și Tehnici de Management *	180	90	90	45	45	-	E	6
S.03.A.020	Finanțele întreprinderii *	180	60	120	30	30	-	E	6
S.03.A.021	Finanțe								
S.03.A.022	Dreptul afacerilor *	180	60	120	30	30	-	E	6
S.03.A.023	Drept comercial internațional								
TOTAL ORE PE SEMESTRUL III		900	390	510	180	190	20	6E	30

ANUL II de STUDIU

SEMESTRUL IV

Cod	Denumirea unității de curs/modulului	Total ore			Număr de ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	C	S	L/P		
G.04.O.024	Limba străină IV	60	30	30	-	10	20	E	2
U.04.A.025	Leadership	120	60	60	30	30	-	E	4
U.04.A.026	Inițiere în economia capitalului uman								
*G.04.O.027	Tehnici de comunicare (pentru grupele alolingve)	90	45	45	15	-	30	E	3
*U.04.A.028	Arta oratorică (cu excepția grupelor alolingve)								
*U.04.A.029	Tehnici de comunicare (cu excepția grupelor alolingve)	180	90	90	45	45	-	E	6
S.04.A.051	Managementul proiectelor antreprenoriale*								
S.04.A.030	Sisteme de planificare	180	60	120	30	30	-	E	6
S.04.A.031	Planificarea afacerii								
F.04.O.032	Marketing*	180	60	120	30	30	-	E	6
F.04.O.033	Managementul resurselor umane *	180	60	120	30	30	-	E	6
	Practica de specialitate (inițiere)*	90	-	45	1,5 săptămâni			E	3
TOTAL ORE PE SEMESTRUL IV		900	345	510	150	145	50	7E	30

* Se va elabora un proiect semestrial interdisciplinar (pentru fiecare semestru aparte). Proiect - Lucrare în grup de 3-5 studenți a problemei de cercetare referitoare la toate unitățile (Fundamentale și/sau de Specialitate) de curs din semestru. Susținerea examenului și atribuirea creditelor de studii este condiționată de susținerea OBLIGATORIE a Proiectului.

ANUL III de STUDIU

SEMESTRUL V

Cod	Denumirea unității de curs/modulului	Total ore			Număr de ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	C	S	L/P		
U.05.A.034	Integrare economică europeană	90	45	45	20	25	-	E	3
U.05.A.035	Politici comunitare de dezvoltare regională								
U.05.A.036	Dreptul proprietății intelectuale	90	45	45	20	25	-	E	3
U.05.A.037	Inițiere juridică în dreptul de autor și drepturile conexe								
S.05.O.038	Analiza economico-financiară *	180	90	90	45	45	-	E	6
S.05.O.039	Managementul riscurilor *	180	90	90	45	45	-	E	6
S.05.A.040	Managementul aprovizionării**	180	60	120	30	30	-	E	6
S.05.A.041	Tehnici de vânzări								
S.05.A.042	Managementul calității **	90	30	60	15	15	-	E	3
S.05.A.043	Sisteme de management al calității	90	30	60	-	-	30	E	3
S.05.O.044	Proiect antreprenorial de dezvoltare***								
TOTAL ORE PE SEMESTRUL V		900	390	510	175	185	30	7, E	30

** Se va elabora un mini - proiect comun pentru ambele discipline.

*** Se va elabora un mini - proiect comun pentru ambele discipline.

**** Se va elabora un mini - proiect. Mini - proiect - lucrare în grup (3-5 studenți) a problemei de cercetare referitoare la un grup de unități conexe de curs. Susținerea examenului și atribuirea creditelor de studii este condiționată de susținerea OBLIGATORIE a Mini - Proiectului de cercetare.

ANUL III de STUDIU

SEMESTRUL VI

Cod	Denumirea unității de curs/modulului	Total ore			Număr de ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	C	S	L/P		
S.06.A.045	Managementul comparat *	90	45	45	22,5	22,5	-	E	3
S.06.A.046	Managementul comerțului internațional								
S.06.A.047	Managementul inovațional*	90	45	45	22,5	22,5	-	E	3
S.06.A.048	Mercendaising								
	Practica de specialitate (producție) *	180	-	180	3 săptămâni			E	6
	Practica de cercetare (licență)	270	-	270	4,5 săptămâni			E	9
	Examenul de licență	270	-	270	-	-	-	E	9
TOTAL ORE PE SEMESTRUL VI		900	90	810	45	45	0	5 E	30

* Se va elabora un proiect. Proiect - lucrare în grup de 3-5 studenți a problemei de cercetare referitoare la toate unitățile (Fundamentale și/sau de Specialitate) de curs din semestru. Susținerea examenului și atribuirea creditelor de studii este condiționată de susținerea OBLIGATORIE a Proiectului de cercetare.

Notă: Orele prevăzute (în toate semestrelor) pentru Seminar, Lucrări de laborator și Studiu individual se vor realiza cu utilizarea Metodei bazate pe Cercetarea Problemelor ("Problem Based Learning - PBL"). Studenții vor realiza Proiecte de cercetare elaborate de grup (3-5 persoane) sub ghidarea cadrelor științifico-didactice ce țin cursurile din modulul Proiectului.

Modulul de formare psihopedagogică

Codul	Denumirea activității didactice	Total ore			Număr de ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator/ practice		
Modulul pedagogic									
F.01.O.001	Pedagogie generală și etică pedagogică	180	90	90	45	45	-	Examen	6
F.02.O.002	Teoria și metodologia instruirii	120	60	60	30	30	-	Examen	4
F.03.O.003	Educație incluzivă	60	30	30	15	15	-	Examen	2
Modulul psihologic									
F.04.O.004	Fundamentele psihologiei: generală și vârstelor	180	90	90	45	45	-	Examen	6
F.05.O.005	Psihologie educațională și conflictologie	180	90	90	45	45	-	Examen	6
Didactica disciplinei									
S.06.O.006	Didactica disciplinei (monospecialitate)	180	90	90	45	45	-	Examen	6
S.06.O.007	Didactica disciplinei A								
S.07.O.008	Didactica disciplinei B								
Total:		900	450	450	225	225	-	5 E	30
Stagiul de practică									
	Practica de inițiere (psihopedagogică)	60	-	60	-	-	-	Examen	2
	Practica de specialitate 1	420	-	420	-	-	-	Examen	14
	Practica de specialitate 2	420	-	420	-	-	-	Examen	14
Total:		900		900				3E	30

Minimum curricular inițial pentru admiterea la ciclul II, studii superioare de Master

Nr.	Denumirea disciplinei	Total ore			Numărul de ore pe săptămână			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	Curs	Seminar	Laborator		
1	Teorie economică I (Microeconomic)	180	30	150	8	7	-	E	6
2	Teoria economică II (Macroeconomic)	180	30	150	8	7	-	E	6
3	Bazele managementului	180	30	150	8	7	-	E	6
4	Bazele contabilității	120	20	100	4	4	2	E	4
5	Finanțele întreprinderii	120	20	100	5	5	-	E	4
6	Matematica superioară	120	20	100	8	7	-	E	4
	TOTAL:	900	150	750	41	37	2	6E	30

Stagiile de practică

Stagiile de practică		Sem.	Nr. săpt./ ore	perioada	Nr. de credite
1.	Practica de specialitate:	4	1,5/90	Mai	3
	• - inițiere • - producție				
2.	Practica de cercetare de licență	6	4,5/270	Mai	9
	(de cercetare, documentare, redactare finală a tezei de licență)				

Discipline facultative (la libera alegere)

Nr. d/o	Denumirea disciplinei	Anul	Semestrul	Număr de ore pe tipuri de activități			Evaluări	Nr. de credite
				C	S	L/P		
1.	Protecția civilă	I	II	15	15	-	E	2
2.	Principiile generale de orientare în carieră	I	II	15	15	-	E	2
3.	Limba străină pentru începători	I	II	-	45	-	E	3
4.	Limba străină pentru începători	II	III	-	45	-	E	3
5.	Securitatea muncii	II	III	15	15	-	E	2
6.	Bazele voluntariatului	II	III	15	15	-	E	2
7.	Protecția și planificarea familiei	III	V	15	15	-	E	2
8.	Dezvoltarea inovativă a carierei	III	V	15	15	-	E	2

Examenul de licență

Nr. d/o	Denumirea activității	Perioada	Credite
1.	Examen integrator: Economia și Managementul afacerilor	23.05 -31.05	4
3.	Susținerea tezei de licență	23.05 -31.05	5

Total

Cr. crt.	Componentele	Număr de credite
1.	1. Disciplinele fundamentale	63
	II. Discipline de creare a abilităților și competențelor generale	16
	III. Discipline de orientare socio-umanistică	17
	IV. Discipline de orientare spre specializare	57
2.	Stagii de practică	18
3.	Examenul de licență	9
	TOTAL	180
4.	Modulul de formare psihopedagogică	60

Matricea corelării finalităților de studiu a programului cu cele ale unităților de curs

Competențe generice	Unitățile de curs	Numărul de credite ECTS	Codul unității de curs	Competențe specifice																			
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Cunoștințe de bază în domeniu	Teoria economică (micro –și macroeconomia)	12	F.01.O.004 F.02.O.010	+																			
	Limba străină (I, II, III, IV)	8	G.01.O.001 G.02.O.008 G.03.O.014 G.04.O.024	+																			
2. Capacitatea de analiză și sinteză	Tehnologii de comunicare informațională	4	G.01.O.002	+																			
	Principii de studiu prin metoda „Învățarea prin Cercetarea Problemei” (PBL – Problem Based Learning)	4	G.01.O.049	+																			
3. Capacitatea de a învăța	Matematică economică	6	F.02.O.004	+																			
	Modul: Informatică economică și comunicare în afaceri:	6	F.01.O.050 S.01.O.005	+																			
4. Capacitatea de comunicare (inclusiv utilizând o limbă străină)	Correspondența și comunicarea în afaceri	6	F.01.O.006	+																			
	Etica și cultura profesională	4	G.02.O.009																				
5. Spirit de inițiativă și antreprenoriat	Bazele antreprenoriatului	6	F.02.O.011	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	Statistica economică	6	F.02.O.012	+																			
6. Capacitatea de lucru în echipă	Bazele contabilității	6	F.02.O.013	+																			
	Doctrină economică	4	U.03.A.015	+																			
7. Creativitate	Filosofia și logica activității economico-ingenieresti	4	U.03.A.016	+																			
	Managementul producției	6	S.03.A.017	+																			
8. Capacitatea de operare cu tehnologii informaționale	Tehnologia și merceologia	6	S.03.A.018																				
	Metode și Tehnici de Management	6	F.03.O.019	+																			
9. Capacitatea de adaptare la culturile și obiceiurile	Finanțele întreprinderii	6	S.03.A.020	+																			
	Finanțe	6	S.03.A.021	+																			
9. Capacitatea de adaptare la culturile și obiceiurile	Dreptul afacerilor	6	S.03.A.022	+																			
	Drept comercial internațional	6	S.03.A.023	+																			
	Managementul proiectelor	6	S.04.A.051	+	+																		

Nota explicativă

Domeniul general de studiu: **041. Științe Economice**
Domeniul de formare profesională: **0413. Business și administrare**
Denumirea programului de studii: **0413.1 Business și administrare**
Numărul total de credite de studiu: **180**
Titlul obținut: **Licențiat în științe economice**

Domeniul *Business și Administrare* are ca scop de a pregăti specialiști pentru activități de administrare a afacerilor, precum și conducerea diferitor subdiviziuni ale organizațiilor. La nivel de întreprindere specialistul din domeniul *Business și Administrare* este cel care trebuie să asigure buna desfășurare a tuturor activităților: achiziționarea resurselor economice, producerea / prestarea serviciilor; vânzările; formarea și perfecționarea structurii organizatorice a firmei, planificarea activității economice; dezvoltarea sistemului informațional; gestionarea resurselor umane. Totodată, absolvenții domeniului de formare Business și Administrare sînt potențialii antreprenori care vor crea locuri de muncă și noi perspective pentru progresul socio-economic.

La ciclul I (Licență) se vor instrui specialiști în domeniul *Business și administrare* fiind pregătiți pentru organizarea și gestionarea activității afiș la nivel de agenți economici, cu diferite forme de proprietate (de stat, privată sau mixtă), cit și la nivel național: specialiști capabili să gîndească strategic și creativ, să adopte decizii calitative, lideri orientați spre îmbunătățirea performanțelor organizației, spre calitate și perfecționare continuă.

Pregătirea la această specialitate îi asigură titlul de Licențiat în științe economice. Ocupațiile tipice pentru absolvenții în domeniul Business și Administrare sunt:

- antreprenor
- manager/administrator
- economist
- agent de achiziții
- funcționar ocupat cu dispecerizarea producției
- agent comercial
- specialist în activități comerciale
- funcționar ocupat cu evidența,
- recepția și livrarea mărfurilor.

Planul de învățămînt a fost racordat la obiectivele proiectului ERASMUS* „Introducerea învățării bazate pe probleme în Moldova: Spre consolidarea competitivității și șanselor de angajare ale studenților / Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability”, fiind elaborat în conformitate cu prevederile:

1. Codului educației al Republicii Moldova, nr. 152 din 17 iulie 2014;
2. Legii privind aprobarea Nomenclatorului domeniilor de formare profesională și al specialităților pentru pregătirea cadrelor în instituțiile de învățămînt superior, ciclul I, nr. 142-XVI din 07 iulie 2005;
3. Hotărîrea Guvernului Nr. 482 din 28.06.2017 cu privire la aprobarea Nomenclatorului domeniilor de formare profesională și al specialităților în învățămîntul superior.

4. Planului-cadru pentru studii superioare (ciclul I - Licență, ciclul II - Master, studii integrate, ciclul III - Doctorat), aprobat prin ordinul Ministerului Educației nr. 1045 din 29 octombrie 2015;

5. Regulamentului de organizare a studiilor în învățămîntul superior în baza Sistemului Național de Credite de Studiu, aprobat prin ordinul Ministerului Educației nr. 1046 din 29 octombrie 2015;

6. Cadrelui Național al Calificărilor al Republicii Moldova și Cadrelui Național al Calificărilor pentru învățămîntul superior pe domenii de formare profesională.

Scopul programului-pilot este trecerea de la învățămîntul clasic (unde profesorul este furnizor de informații, iar studentul receptorul informației) la învățămînt bazat pe PBL (studierea axată pe probleme), ceea ce ar permite formarea specialiștilor competitivi pe piața muncii și calificăți în domeniul de formare profesională 363. Business și administrare, Specialitatea: 363.1. Business și administrare.

Toate disciplinele sunt repartizate pe module (cicluri), după cum urmează:

- Modulul disciplinelor fundamentale (cod F) – 63 credite;
- Modulul disciplinelor de creare a abilităților și competențelor generale (cod G) - 16 credite;
- Modulul disciplinelor de orientare socio-umanistică (cod U) – 17 credite;
- Modulul de orientare spre specializare (cod S) – 57 credite.

Absolventul obține titlul de Licențiat în științe economice la îndeplinirea integrală a planului de învățămînt, promovării probelor de evaluare, inclusiv examenului de licență, conform sistemului de notare în Republica Moldova cuprins între 1 și 10 puncte, notele de promovare fiind 5 – 10, și acumularii a 180 credite transferabile conform Sistemului European de Credite Transferabile (ESTC).

Programul de studii s-a bazat pe obiectivele și cerințele Cadrelui Național al Calificărilor conform Domeniului general de studii: 36. Științe Economice, Domeniului de formare profesională: 363. Business și administrare, Specialitatea: 363.1. Business și administrare.

Cadrul Național al Calificărilor presupune următoarele finalități:

1. Să demonstreze cunoștințe funcționale în următoarele domenii:
 - 1.1. Teorie economică – geneză, esență, metodologia și metoda, legități economice
 - 1.2. Management – evoluția științei management, conținutul principalelor, procese și funcții manageriale
 - 1.3. Marketing – elaborarea și realizarea, politici de marketing a întreprinderii
 - 1.4. Piețe – studierea, funcționarea și dezvoltarea piețelor de resurse, bunuri și servicii
 - 1.5. Clienți – factori de influență, procese de cumpărare și consum, modele de consum
 - 1.6. Drept – cunoașterea legislației privind antreprenoriatul și întreprinderile, micul business, protecția consumatorului, publicitatea din Republica Moldova
 - 1.7. Finanțe – managementul finanțelor, utilizarea contabilității și altor sisteme financiare
 - 1.8. Sisteme informaționale – dezvoltarea și exploatarea sistemelor informaționale cu impact asupra realizării funcțiilor manageriale în organizație.
2. Să inițieze o afacere
3. Să cunoască metode de identificare a ideilor de afaceri și evaluare a oportunităților
4. Să posede metode de evaluare și minimizare a riscurilor în afaceri
5. Să asigure desfășurarea activităților în conformitate cu legile și normele stabilite
6. Să ajusteze activitatea organizației la cerințele mediului ambiant
7. Să adopte decizii optime în condiții de certitudine, incertitudine, risc
8. Să elaboreze structura organizatorică a organizației

9. Să evalueze și să îmbunătățească eficiența și eficacitatea activităților din organizație
10. Să se automotiveze și să sporească eficiența propriei activități
11. Să formeze echipe și să dezvolte colaborarea
12. Să motiveze și să creeze relații de muncă productive
13. Să aplice sisteme de management al calității
14. Să comunice convingător și eficient
15. Să asigure și să gestioneze utilizarea eficientă a resurselor materiale, financiare și informaționale
16. Să organizeze procesul de cercetare în domeniul business și administrare
17. Să elaboreze o lucrare aplicativă ce se referă la soluționarea unei probleme din domeniul administrării afacerilor
18. Să elaboreze și să coordoneze realizarea proiectelor
19. Să cunoască aria de competență și implicare a managerilor de la diferite niveluri ierarhice
20. Să elaboreze judecăți bazate pe cunoașterea problematicii sociale și etice care apar în muncă sau studiu.

Ansamblul metodelor și procedurilor didactice utilizate în procesul formării vor fi alături de metodele tradiționale (prelegeri și seminare), modificate și completate în funcție de obiectivele propuse, cit și metodele moderne, interactive orientate spre cultivarea interesului, motivației, activismului, colaborării sociale, spiritului de organizare, inițiativei, inventivității și creativității.

În procesul de studii se va pune accent pe metodele activ-participative (interactive), care sporesc potențialul intelectual al beneficiarilor prin angajarea unui efort personal în actul învățării și pregătirii studenților pentru o viață profesională activă și creativă. Se vor utiliza forme de organizare flexibile și diversificate, specifice naturii conținuturilor și desfășurării activității cu adulții, care asigură o învățare formativă, operațională, de dezvoltare, axate pe formarea de capacități operaționale, procese psihice, deprinderi, atitudini, convingeri, valori, idealuri și aspirații, schimbări de mentalități (prelegeri, seminare, instruirea asistată de calculator, laboratoare și ateliere etc.). Se vor îmbina în mod specific, pentru diferite situații, metode și procedee precum: studiul de caz, jocul de rol, conversația euristică, dezbateri, brainstorming, problematizarea, investigația, proiectul, explorarea din unghiuri de vedere multiple, discuția panel, argumentarea și contra argumentarea, învățare academică independentă etc.

Suținerea personală a fiecărui student va fi asigurată de sistemul de tutorat.

Evaluarea va viza eficacitatea activităților educaționale prin prisma raportului dintre obiectivele proiectate și rezultatele obținute de către studenți în activitatea de învățare. Ea se va realiza de către profesori și va viza nu numai cunoștințele, ci și competențele, capacitățile și atitudinile.

Evaluarea va avea o funcție pedagogică complexă:

- a) din perspectiva celui evaluat – de stimulare, de întărire a rezultatelor, de formare a unor abilități, de conștientizare a propriilor posibilități, de orientare profesională pozitivă;
- b) din perspectiva celui care evaluează – de apreciere a eficienței celor întreprinse de el și a modificărilor necesare pentru realizarea plenară a obiectivelor.

Planul de învățământ a fost aprobat la ședința Catedrei de Economie și Management în Afaceri și Servicii.

Annex3: Bachelor's degree programme Business and Administration English Translation

MINISTRY OF EDUCATION OF THE REPUBLIC OF MOLDOVA
CAHUL STATE UNIVERSITY „BOGDAN PETRICEICU HASDEU”

CURRICULUM

APROVED

Cycle I, Licence

The Senate of
Cahul State

Context: ISCED - 6
General field of education: **041. Economic Sciences**
Professional field of education: **0413 Business and administration**
Name of curriculum: **0413 Business and administration**
Total number of ECTS credits: **180**
Awarded title: **Bachelor in economic sciences**
Original admission document: **BAC, Specialised upper secondary education (Junior college), high education**
Study language: Romanian
Form of education: **full time**

University „Bogdan
Petriceicu Hasdeu”

**Minutes no. 08
from April 27, 2017
Chair of Senate
Dr. hab., tenured
prof.**

Popa Andrei

Academic year	Didactic activities		Examination sessions		Internship	Holidays		
	sem. I	sem. II	Sem.I	Sem.II		Winter	Spring	Summer
I	01.09-15.12 (15 weeks)	01.02-20.05 (15 weeks)	16.12-29.01 (4 weeks)	23.05-23.06 (4 weeks)	-	31.12-10.01 21.01-31.01 (2 weeks)	Easter (1 week)	25.06-31.08 (9 weeks)
II	01.09-15.12 (15 weeks)	01.02-11.05 (13.5 weeks)	16.12-29.01 (4 weeks)	23.05-23.06 (4 weeks)	12.05-22.05 <i>Production internship (initiation)</i> (1.5 weeks)	31.12-10.01 21.01-31.01 (2 weeks)	Easter (1 week)	25.06-31.08 (9 weeks)
III	01.09-15.12 (15 weeks)	01.02-21.02 (3 weeks)	16.12-29.01 (4 weeks)	14.03-20.03 (2 weeks)	22.02-13.03 <i>Production internship</i> (3 weeks) 21.03-20.04 <i>Research internship</i> (4.5 weeks)	31.12-10.01 21.01-31.01 (2 weeks)	Easter (1 week)	-

UNIVERSITY CALENDAR

Academic year I, semester I

Code	Name of course unit/module	Total hours			Hours per week			Evaluation form	Nr. of credits
		Total	direct contact	Individual learning	Lecture	Seminar	Laboratory		
G.01.O.001	Foreign language I	60	30	30	-	-	10	E	2
G.01.O.002	Information Communication Technologies	60	30	30	10	10		E	2
	Problem Based Learning (PBL) principles	60	30	30	10	10		E	2
F.01.O.003	Economic Theory I (Microeconomics)*	180	90	90	45	45	45	E	6
F.01.O.004	Mathematics applied to economics	180	60	120	30	30	30	E	6
F.01.O.050 S.01.O.005	<i>Module: Computing applied to economics and business communication</i>								
	Computing	180	60	120	30	15	15	E	6
	Computing applied to economics	90	30	60	15	15	15		
	Business correspondence and communication	90	30	60	15				
F.01.O.006	Basics of management*	180	60	120	30	30		E	6
	Total hours and credits granted	900	360	540	155	130	75	6E	30
G.01.O.009	Physical Education	30	30	-	-	-	30	Adm	-
	TOTAL HOURS FOR SEMESTER I	930	390	540	155	130	105	6E	30

Academic year I, semester II

Code	Name of course unit/module	Total hours			Hours per types of activities			Evaluation form	Number of credits
		Total	direct contact	individual learning	Lecture	Seminar	Laboratory		
G.02.O.008	Foreign Language II	60	30	30	-	10	20	E	2
G.02.A.009	Professional ethics and culture	120	60	60	30	30	-	E	4
F.02.O.010	Economic Theory II (Macroeconomics) *	180	90	90	45	45	-	E	6
F.02.O.011	Basics of entrepreneurship*	180	90	120	45	45	-	E	6
F.02.O.012	Economic statistics**	180	60	120	30	30	-	E	6
F.02.O.013	Basics of accounting**	180	60	120	30	30	-	E	6
	TOTAL HOURS IN SEMESTER II	900	390	510	180	190	20	6E	30

*A common mini-project shall be developed for both courses (for each semester). **Mini-project** – a research conducted in a group of 3-5 student related to a group of connected course units. To be admitted for the examination and to get the credits, the student MUST present the research Mini-project.

** A common mini-project shall be developed for both courses. Mini-project – a group work (3-5 students) to conduct a research related to a group of connected course units. To be admitted for the examination and to get the credits, the student MUST present the research Mini-project.

Academic year II, semester III

Code	Name of course unit/module	Total hours			Hours per week			Evaluation form	Nr. of credits
		Total	direct contact	individual learning	Lecture	Seminar	Laboratory		
G.03.O.014	Foreign language III	60	30	30	-	10			2
U.03.A.015 U.03.A.016	Economic Doctrines Philosophy and logics of the economic and engineering activity	120	60	60	30	30	20	E	4
S.03.A.017 S.03.A.018	Production management* Technology and	180	90	90	45	45	--	E	6

	commodity science								
F.03.O.019	Management methods and techniques*	180	90	90	45	45	-	E	6
S.03.A.020 S.03.A.021	Enterprise finance* Finance	180	60	120	30	30	-	E	6
S.03.A.022 S.03.A.023	Business law* International commercial law	180	60	120	30	30	-	E	6
		900	390	510	180	190	20	6E	30
	TOTAL HOURS FOR SEMESTER III								

Academic year II, semester IV

Code	Name of course unit/module	Total hours			Hours per week			Evaluation form	Nr. of credits
		Total	direct contact	individual learning	Course	Seminar	Laboratory		
G.04.O.024	Foreign language IV	60	30	30	-	10	30	E	2
U.04.A.025 U.04.A.025	Leadership Initiation in human capital economics	120	60	60	30	30	-	E	4
*G.04.O.027	Communication techniques (for allophone groups)	90	45	45	15	-	-	E	3
*U.04.A.028 *U.04.A.029	Public speaking art (except allophone groups) Communication techniques (except allophone groups)								
S.04.A.051 S.04.A.230 S.04.A.031	Entrepreneurial projects management* Planning systems Business planning	180	90	90	45	45	-	E	6

F.04.O.032	Marketing*	180	60	120	30	30	-	E	6
F.04.O.033	Human resource management*	180	60	120	30	30	-	E	6
	Production internship (induction)*	90		45	1,5 weeks			E	3
TOTAL HOURS FOR SEMESTER IV		900	345	510	150	145	50	7E	30

*A semestrial interdisciplinary project shall be developed (for each semester). **Project** – a research conducted in a group of 3-5 student related to all the course units (fundamental and/or specialised) studied during the semester. To be admitted for the examination and to get the credits, the student **MUST** present the research Project.

Academic year III, semester V

Code	Name of course unit/module	Total hours			Hours per week			Evaluation form	Nr. of credits
		Total	direct contact	individual learning	Lecture	Seminar	Laboratory		
U.05.A.034 U.05.A.035	European economic integration Community policies for regional development	90	45	45	20	25	-	E	3
U.05.A.036 U.05.A.037	Intellectual property rights Legal initiation into copyright and related rights	90	45	45	20	25	-	E	3
S.05.O.38	Economic and financial analysis*	180	90	90	45	45	-	E	6
S.05.O.39	Risk management*	180	90	90	45	45	-	E	6
S.05.A.40 S.05.A.41	Supply management** Sales techniques	180	60	120	30	30	-	E	6
S.05.A.42 S.05.A.43	Quality management** Quality management systems	90	30	60	15	15	-	E	3
S.05.A.44	Entrepreneurial development project***	90	30	60			30	E	3
TOTAL HOURS FOR SEMESTER V		900	390	510	175	185	30	7E	30

*A common mini-project shall be developed for both courses.

**A mini-project shall be developed for both courses.

***A mini-project shall be developed. **Mini-project** – a research conducted in a group of 3-5 student related to a group of connected course units. To be admitted for the examination and to get the credits, the student MUST present the research Mini-project

Academic year III, semester VI

Code	Course title	Total hours			hours per week			Evaluation form	Nr. of credits
		Total	direct contact	individual learning	Course	Seminar	Laboratory		
S.06.A.145 S.06.A.046	Compared Management* International trade management	90	45	45	22.5	22.5	-	E	3
S.06.A.047 S.06.A.048	Innovation management* Merchandising	90	45	45	22.5	22.5	-	E	3
	Production (specialty) internship*	180	-	180	3 weeks			E	6
	Research internship	270	-	270	4.5 weeks			E	9
	Bachelor graduation examination	270	-	270	-	-	-	E	9
TOTAL HOURS FOR SEMESTER VI		900	90	810	45	45	0	5E	30

*A project shall be developed. **Project** – a research conducted in a group of 3-5 student related to all the course units (fundamental and/or specialised) studied during the semester. To be admitted for the examination and to get the credits, the student MUST present the research Project.

Note: The hours planned (in all semesters) for Seminars, Laboratory classes and Individual learning shall be carried out using the Problem Based Learning (PBL). Students shall develop research projects related to the courses in the module, in groups (of 3-5 people), being guided by the teachers.

Psycho-pedagogic Education Module

Code	Name of course unit/module	Total hours			Hours per week			Evaluation form	No. of credits
		Total	direct contact	individual learning	Lecture	Seminar	Laboratory		
<i>Pedagogy module</i>									
F.01.O.001	General pedagogy and pedagogic ethics	180	90	90	45	45	-	Exam	6
F.02.O.002	Theory and methodology of education	120	60	60	30	30	-	Exam	4

F.03.O.003	Inclusive education	60	30	30	15	15	-	Exam	2
<i>Psychology module</i>									
F.04.O.004	Basics of psychology: general and developmental	180	90	90	45	45	-		6
F.05.O.005	Educational psychology and conflictology	180	90	90	45	45	-		6
<i>Course didactics</i>									
S.06.O.006	Course didactics (mono-s)	180	90	90	45	45	-	Exam	6
S1.06.O.007 S2.06.O.008	Course A didactics Course B didactics								
Total:		900	450	450	225	225	-	5E	30
<i>Internships</i>									
	Induction (psycho-pedagogic) internship	60	-	60	-	-	-	Exam	2
	Internship, Major 1	420	-	420	-	-	-	Exam	14
	Internship, Major 2	420	-	420	-	-	-	Exam	14
Total:		900	-	900	-	-	-	3E	30

Minimal curricular requirements for admission to cycle II, Master education

No.	Course name	Total hours			No. of hours per week			Form of evaluation	No. of credits
		Total	Direct contact	Individual learning	Lecture	Seminar	Laboratory		
1	Economic theory I (Macroeconomics)	180	30	150	8	7	-	E	6
2	Economic theory II (Macroeconomics)	180	30	150	8	7	-	E	6
3	Basics of management	180	30	150	8	7	-	E	6
4	Basics of accounting	120	20	100	4	4	2	E	4
5	Corporate finance	120	20	100	5	5	-	E	4
6	Higher mathematics	120	20	100	8	7	-	E	4
	TOTAL	900	150	750	41	37	2	6E	30

Internships

Internships		Sem.	No. hours/week	Period	No. of credits
1	Specialty internship:				
	- Induction	4	1.5/90	May	3
	- Production	6	3/180	March	6
2	Research internship (research, documentation, final drafting of the BA dissertation)	6	4.5/270	May	9

Optional Courses

No.	Course name	Year	Semester	No. of hours by type of activities			Evaluations	No. of credits
1	Civil protection	I	II	15	15	-	E	2
2	Overall career guidance principles	I	II	15	15	-	E	2
3	Foreign language for beginners	I	II	--	45	-	E	3
4	Foreign language for beginners	II	III		45	-	E	3
5	Labour security	II	III	15	15	-	E	2
6	Basics of volunteering	II	III	15	15	-	E	2
7	Protection and family planning	III	V	15	15	-	E	2
8	Innovative career development	III	V	15	15	-	E	2

Bachelor Examination

No.	Name of activity	Period	Credits
1	Integrating examination: Economics and Business management	23.05-31.05	4
2	Presentation of the final dissertation	23.05-31.05	5

Total

No.	Components	No. of credits
1	I. Fundamental courses	63
	II. Courses aimed at creating overall skills and competences	16
	III. Socio-humanistic courses	17
	IV. Specialization courses	57
2	Internships	18
3	Bachelor examination	9
	TOTAL	180
4	Psycho-pedagogic module	60

Description

1. Prove functional knowledge in the following areas:
 - 1.1 Economic theory – genesis, essence, methodology and method, laws governing economics
 - 1.2 Management – developments in the science of management; content of the main managerial processes and functions
 - 1.3 Marketing – development and implementation of the marketing policy of enterprise
 - 1.4 Markets – research, operation and development of the market of resources, goods, and services
 - 1.5 Customers – influencing factors; purchase and consumption processes; consumption models
 - 1.6 Law – knowing the legal framework on entrepreneurship and enterprises, small business, consumer protection, and advertising in Moldova
 - 1.7 Finance – finance management; applying accounting and other financial systems
 - 1.8 Information systems – development and use of information systems with an impact on carrying out the managerial functions in an organisation
2. Start a business
3. Be familiar with the methods to identify business ideas and assess opportunities
4. Be familiar with the methods to assess and minimize business risks
5. Secure the conduct of activities in accordance with the set laws and rules.
6. Conduct the activity of the organisation in line with the demands of the market
7. Make the best decisions under conditions of both certainty, uncertainty, and risk.
8. Prepare the organisational structure of the organisation
9. Evaluate and improve the efficiency and effectiveness of the organization activities
10. Get self-motivated and increase own work efficiency
11. Establish teams and develop the cooperation
12. Motivate and establish productive work relations
13. Apply quality management systems
14. Communicate in a persuasive and efficient manner
15. Secure and manage the efficient use of material, financial and information resources
16. Organise the research process in the field of business and administration
17. Develop an applicative paper on solving a problem in the field of business administration
18. Develop projects and coordinate the implementation thereof
19. Be familiar with the areas of competence and involvement of managers at different hierarchical levels
20. Develop reasoning based on knowledge of the social and ethical issues arising at work or in study

Explanatory note

General field of education: 041. Economic Sciences

Field of professional education: 0413. Business and Administration

Name of education program: 0413.1 Business and administration

Total number of ECTS credits: 180

Awarded title: Bachelor in economic sciences

The aim of education in the field of Business and administration is to educate specialists for business administration activities, as well as for leading different subdivisions of an organisation. Within an enterprise, the specialist in the field of Business and Administration is the one who should secure proper conduct of all activities: purchase of economic resources, production/service provision; sales; establishing and streamlining company's organisational units; planning of economic activities; information system development; human resource management. At the same time, the graduates of Business and Administration are potential entrepreneurs who will create jobs and new prospects for the social and economic progress.

Specialists in the field of Business and Administration will get education in the Bachelor cycle. They will get skills in organising and managing the activity both within state, private or mixed businesses, as well as public entities. Thus, the graduates will be specialists capable of thinking strategically and creatively, adopting qualitative decisions; leaders aiming at continuously enhancing the performance of the organisation, including in terms of quality.

Education within this specialty secures to the graduate the title of Bachelor in Economic Sciences. Typical occupations for the graduates in the field of Business and Administration are as follows:

- entrepreneur
- manager/administrator
- economist
- procurement management
- production dispatcher
- sales agent
- trade specialist
- record-keeper
- specialist in charge of reception and delivery of commodities.

This curriculum has been aligned to the objectives of the ERASMUS Project "Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability", and was developed in accordance with the provisions of:

1. Education Code of Moldova No.152 of July 17, 2014;
2. The Law on Approval of the List of Areas for Professional Education and Specialties for Education in Higher Education Institutions, Cycle I, No.142-XVI of July 07, 2005;
3. Government Decision No.482 of 28.06.2017 on Approval of the List of Areas for Professional Education and Specialties in Higher Education.

4. Framework Curriculum for Higher Education (Cycle I – Bachelor, Cycle II – Master, integrated studies, Cycle III – PhD), approved by Order of the Ministry of Education No.1045 of October 29, 2015;
5. Regulation for Organisation of Studies in Higher Education based on the National Education Credits System, approved by Order of the Ministry of Education No.1046 of October 29, 2015;
6. The National Qualifications Framework of Moldova and the National Qualifications Framework for Higher Education by areas of professional education.

The goal of this pilot-program is to shift from the classic education (where the teacher is a provider and the student - a receiver of information) to Problem-Based Education (PBL), which allows educating competitive specialists on the labour market, qualified in the professional education field 363. Business and Administration, Specialty: 363.1. Business and Administration.

All courses are distributed by modules (cycles), as follows:

- Module of basic courses (code F) – 63 credits;
- Module of courses for creating general skills and competences (code G) - 16 credits;
- Module of socio-humanitarian courses (code U) – 17 credits;
- Module of specialisation (major) courses (code S) – 57 credits.

The graduate shall receive the title of Bachelor in Economic Sciences after fulfilling entirely the curriculum, passing the evaluation exam, including the final BA exam, based on the Moldovan marking system of 1-10 points, the positive marks being 5-10, and after having accumulated 180 transferable credits in line with the European Transferable Credits System (ETCS).

The Curriculum relied on the objectives and requirements of the National Qualifications Framework, according to the General Education Field 36. Economic Sciences, Field of Professional Education: 363. Business and Administration, Specialty: 363.1. Business and Administration.

The National Qualifications Framework implies the following outcomes:

1. Show functional knowledge in the following areas:
 - 1.1 Economic theory – genesis, essence, methodology and method, laws governing economics
 - 1.2 Management – developments in the management science; content of the main managerial processes and functions
 - 1.3 Marketing – development and implementation of the marketing policy of enterprise
 - 1.4 Markets – research, operation and development of the market of resources, goods, and services
 - 1.5 Customers – influencing factors; purchase and consumption processes; consumption models
 - 1.6 Law – knowing the legal framework on entrepreneurship and enterprises, small business, consumer protection, and advertising in Moldova
 - 1.7 Finance – financial management; applying accounting and other financial systems
 - 1.8 Information systems – development and use of information systems for carrying out the managerial functions in an organisation.
2. Start a business.
3. Have knowledge of the methods to identify business ideas and assess opportunities.
4. Have knowledge of the methods to assess and minimize business risks.

5. Secure the conduct of activities in accordance with the set laws and rules.
6. Adjust the activity of the organisation to the requirements.
7. Take the best decisions under conditions of certainty, uncertainty, and risk.
8. Prepare the organisational structure of the organisation.
9. Assess and improve the efficiency and effectiveness of the organization activities.
10. Get self-motivated and increase the efficiency of their own activity.
11. Establish teams and develop the cooperation.
12. Motivate and establish productive work relations.
13. Apply quality management systems.
14. Communicate persuasively and efficiently.
15. Secure and manage the efficient use of material, financial and information resources.
16. Organise the research process in the field of business and administration.
17. Develop an applicative paper on solving a problem in the field of business administration.
18. Prepare projects and coordinate their implementation.
19. Have awareness of the area of competence and involvement of managers at different hierarchical levels.
20. Develop reasoning based on knowledge of the social and ethical issues arising at work or in education.

The didactical methods and procedures used in training will be both traditional methods (lectures and seminars), adjusted and supplemented based on the set objectives and the modern interactive methods oriented towards cultivating the interest, the motivation, the activism, social collaboration, sense of organisation, initiative, inventiveness and creativity.

During the education process, the focus will be on the active-participative (interactive) methods, which increase the intellectual potential of the beneficiaries by calling for personal efforts in the process of learning and preparing for an active and creative professional life. Flexible and diverse organisation forms shall be applied, specific for the types of contents and the activities conducted with adults, to secure formative, operational, developmental learning, in order to build operational capacities, psychical processes, habits, attitudes, beliefs, values, ideals and aspirations, mind-set change (in lectures, seminars, computer-assisted education, laboratories and workshops , etc.). In different situations, the following methods and procedures will be combined: case study, roleplay, heuristic conversation, debates, brainstorming, problem-raising, investigation, project, exploration from different angles, panel discussion, reasoning and counter-reasoning, independent academic learning, etc.

Tutors shall provide support to each student.

The evaluation will assess the efficiency of the education activities putting the set objectives against the results reached by the students within the learning activity. Evaluation will be conducted by the teachers and will assess not only knowledge, but also competences, capacities, and attitudes.

The evaluation will have a complex pedagogic function:

- a) for the student subject to evaluation – to stimulate, to consolidate the results, form some skills, awareness own possibilities, positive career orientation;
- b) for the evaluating teacher – to assess the efficiency of his/her approach and the changes needed to fulfil the objectives.

This curriculum was approved at the Chair of Economics, Management, Business, and Services.

Annex 4: The advertising flyer of the study programme 2017

PERSPECTIVE PROFESIONALE

Absolvenții au posibilitatea să execute o varietate de activități comerciale și manageriale, activând în calitate de:

- Întreprinzător
- Manager
- Economist
- Coordonator de proiect
- Consultant/instructor
- Agent comercial
- Funcționar în instituțiile publice

OPORTUNITĂȚI de continuare a studiilor

⇒ Ciclu II, Masterat
⇒ Programe de colaborare cu universități din alte țări



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Program de studii re-proiectat în cadrul proiectului Erasmus plus „Introducing Problem Based Learning in Moldova: Toward Enhancing Students Competitiveness and Employability -PBLMD”

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DURATA STUDIILOR:
3ani / 6 semestre

LIMBA DE INSTRUIRE:
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CREDITE DE STUDIU ECTS:
180

TITLUL OBȚINUT:
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BAZA ADMITERII:
Diploma de bacalaureat sau un act echivalent de studii, diploma de studii superioare



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COMPETENȚE DOBÂNDITE

La finalizarea de studii absolventul va fi competent:

- Să demonstreze cunoștințe funcționale în domeniu;
- Să rezolve probleme din domeniul administrării afacerilor;
- Să comunice convingător și eficient, inclusiv într-o limbă de circulație internațională
- Să înțelegă și dezvolte o afacere;
- Să asigure desfășurarea activităților în conformitate cu legislația în vigoare;
- Să utilizeze tehnologiile informaționale;
- Să adopte decizii în condiții de risc și incertitudine;
- Să utilizeze și gestioneze eficient resursele disponibile;
- Să elaboreze și să coordoneze realizarea proiectelor;
- Să aplice principiile, valorile și normele eticii profesionale.



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**Introducing Problem Based Learning in
Moldova: Toward Enhancing Students'
Competitiveness and Employability**

www.pblmd.aau.dk

Bachelor's degree programme in „Law” at MSU

State University of Moldova

Work Package 4

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Chisinau, 2018

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1. INTRODUCTION

The purpose of this Work Package - WP4 - is to develop a bachelor's degree programme at the Faculty of Law, based on the implementation of PBL methodology, student centered teaching and learning, active learning at the State University of Moldova. Specifically, this report will propose an innovative bachelor's degree programme based on PBL at the Faculty of Law, implemented since 1 September 2017.

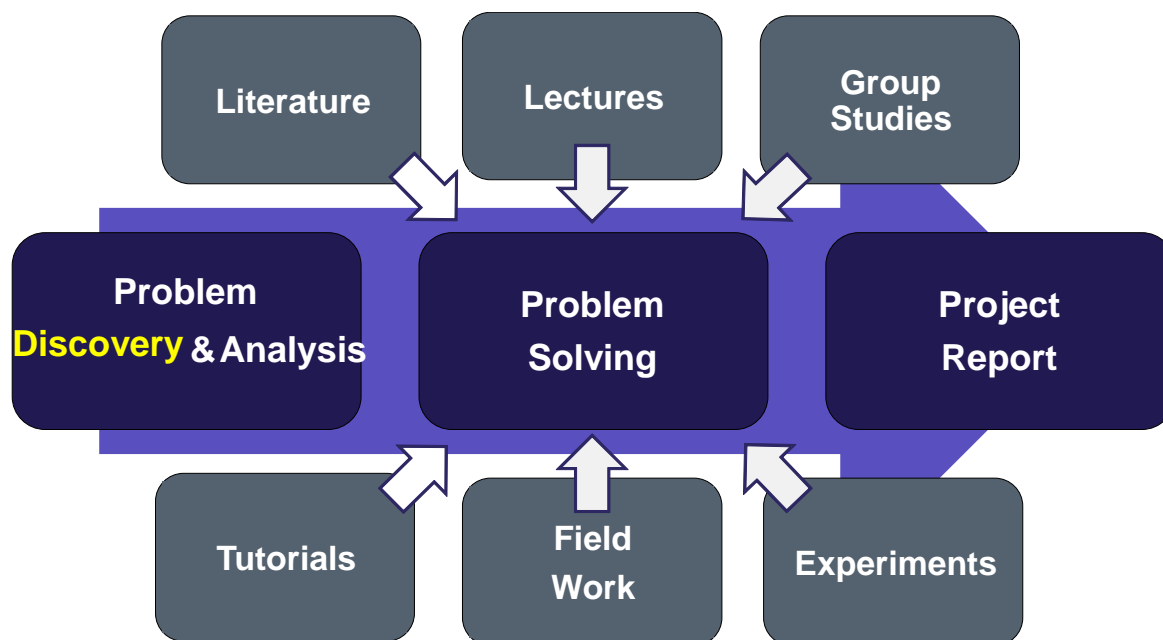
In this report, we rely on the findings outlined in WP2 and WP3 that we have developed in 2015-2017. We also rely on the experience we have accumulated during our study visits and staff mobility at EU partner universities as well as the experience gained during the PBL training sessions offered by EU project partners in Chisinau.

1.1 KEY ASSUMPTIONS

There is no PBL model suitable for all purposes. However, PBL-based models are mainly based on two key assumptions:

1. The first assumption is that work on the project is in the *center*, at the basis, consisting of discovery and problem analysis, problem solving and project report (Figure 1).

Figure 1: PBL Model at AAU: An example

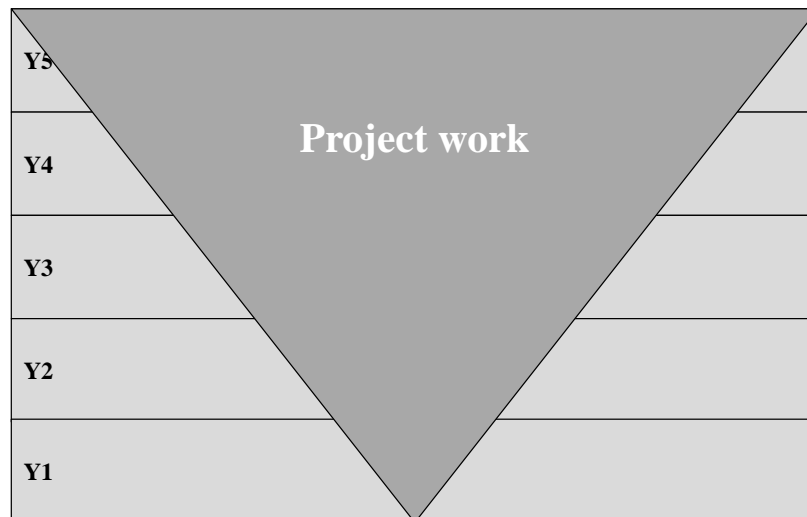


Source: AAU, 2017 (the word "Discovering" is introduced by Romeo V. Turcan)

2. The second assumption assumes that other teaching and learning (face-to-face) activities such as literature, lectures, group studies and tutorials are designed to *support* work on the project.
3. The third assumption relates to the relationship between work on the project and face-to-face activities. In the context of this report, wholly based on PBL, this means a study programme

in which there is a 50:50 sharing between student work on the project and face-to-face activities (such as lectures, seminars, workshops, laboratories and experiments). An example of progression is presented in Figure 2. Of course, there are many ways to distribute the relationship between work on the project and face-to-face activities during the semesters; the main purpose is to achieve an approximate 50:50 time sharing for the duration of the study programme.

Figure 2: An example of 50:50 time sharing between project work and face-to-face activities



Source: Louise Faber, PBLMD 2016

These three assumptions were studied by the team of the Faculty of Law at SUM during study visits and mobility internships at EU partner universities. The development of the PBL-based bachelor's degree programme at the Faculty of Law is based on the researched experiences and on the curricula elaborated within the faculty.

1.2 EXPECTED OUTCOMES

This study programme was created for the Anglophone group of the Faculty of Law. It is expected that this concept will be extended to groups with teaching in Romanian if it is successful among students and teachers. Also, such a concept will help the Faculty of Law to facilitate the employment process of students in the workplace by attracting practitioners to the implementation and evaluation of the semester projects. Moreover, this programme will offer students the opportunity to apply to mobility projects, being already much better prepared to attend law courses in other universities.

2. OUR VISION ON THE BACHELOR'S DEGREE PROGRAMME BASED ON PBL - LAW

2.1 Overview

Study programme overview [Annex 1]

The purpose of the study programme

The Law Faculty of the State University of Moldova is the main provider of staff in the Law specialty for the labor market. Until 1992 the Faculty of Law was the only higher education institution training specialists in the field of law.

The aim of the specialization is to teach modern and practical knowledge of law. The graduate will know the main areas of the law system of the Republic of Moldova, the fundamental institutions of law, and the obtained theoretical and practical knowledge will provide him / her with the necessary skills to practice as a lawyer.

In this context, the law specialty aims at achieving the objectives through:

1. Forming the professional skills of the graduate based on the theoretical and practical training in the field of law.
2. Developing research skills in the field of jurisprudence based on scientific composition. In this respect, the specialist is trained to investigate contradictory issues in the jurisprudence.
3. Ensuring the conditions for multilateral development of the future specialist, the formation of the civic position and the ethical dimension of the personality.

Level and relationship with national and European qualifications frameworks [descriptors]

In the context of the 1999 Bologna Declaration, education ministers from 29 European countries have jointly stated that a European Higher Education Area will be set up by 2010 “in order to promote citizens' mobility and their employability and to increase the international competitiveness of European higher education systems”. The Bologna Process seeks to increase transparency and comparability of education systems across Europe.

The creation of the European Higher Education Area is also geared towards promoting the attractiveness and competitiveness of higher education institutions in Europe. By creating new courses and study programmes that correspond to processes of Europeanization and globalization, universities are qualified to compete to train foreign students. Therefore, in response to increasing mobility of students and teaching staff, universities offer an increasing number of courses, containing European or comparative components.

These initiatives reflect the measures directed towards the Europeanisation of higher education systems, which is a response to European integration, though they are only a Europeanization of the curriculum for legal disciplines. The impact of European integration has not yet led to a general review of the curriculum for legal disciplines, in order to fully adapt them to the Europeanization of law and legal practice.

Subsequent legal practice is not only an object of the curriculum of legal disciplines considered to be “national”, but also dependent on the national legislator or the legal professions. It should be noted that admission to the legal professions (lawyer, judge, prosecutor, and in some countries even legal counsel) remains subject to national regulations. As long as the requirements for admission to the profession remain influenced by the national system, the study of law will remain orientated towards national law and will therefore continue to be defined by national boundaries. This, in turn, leads to the unequivocal realization of the Bologna objectives, particularly with regard to legal education. Unlike other academic disciplines such as natural sciences, medicine, economics, psychology and other social sciences, which are not restricted by national boundaries in terms of the required knowledge, or the language in which they are studied, law remains embedded in a national legal system, in a national legal culture, but also in a national language, from a legal point of view.

This national orientation of the curriculum of legal disciplines makes it difficult to respond adequately to the needs of the new generation of graduates of law faculties, who at this stage are far less dependent on a single legal system. In order to pursue legal activities in this European legal environment, practitioners must be able to cross national borders, not only physically but also intellectually. They must be able to adapt to the constantly changing European law in order to understand the European origins of the extension of national law and to communicate effectively with practitioners from other jurisdictions. Educating the new generation of graduates requires reconsideration of the curriculum of legal disciplines and increasingly calls for a curriculum of legal disciplines with European vocation.

Duration – full-time studies and part-time studies

The duration of full-time studies is 4 years, and part-time studies – 5 years.

Key and distinctive features (characteristics)

The educational plan reflects the respect of the principles of content selection and the creation of conditions necessary for an effective educational process. Taking into account that the educational institution is an institution providing educational services and that the education offer must correspond to the student-centered learning demand, the educational plan is structured in such a way that it allows a relative openness and flexibility in order to ensure the needs of the formation of independent thinking and professional training through the application of problem-based methods, with less emphasis on the traditional responsibility to transmit information only. The link between theory and practice is achieved not only by combining different study disciplines but also by encouraging professional thinking in the development of joint projects by students guided by external teachers and evaluators, by judicious correlation of studies with internships.

The concept of specialization in the proposed educational plan is unprecedented in relation to the specializations existing in other faculties of law, from two points of view: the introduction into the educational plan of a working model with the projects in a group of students, which will represent the cumulative result of the activities at several courses, being an interdisciplinary product; on the other hand, this study programme seeks to correlate theory with practice, implements a new co-teaching system, provides guidance to the group of students to solve the problem by the responsible teacher and a practitioner in the field (who will assist in assessing group work as an external evaluator) in order to modernize law education on the basis of Western university experiences.

Methodology / approach to learning and teaching, including assessment and workload

The teaching-learning process is based on the disciplinary curriculum, the academic courses, and the respective didactic design. Forms of organization of the study process combine judiciously direct contact activities between the teacher and the student and individual work. Effective teaching (modern, interactive, teamwork, etc.) strategies are implemented in the educational process. The applied didactic strategies are adequate to achieve the competences established by the National Qualifications Framework in the respective field. Various forms of organizing the teaching-learning process are effectively applied: integrative, problem-based courses and seminars, trainings, etc.

The process of implementing the PBL model in higher education institutions is a long-lasting one, as demonstrated by the experience of different institutions abroad.

The most effective way to train professional competences is the PBL (problem-based learning) strategy, which is done through projects. The application of group projects contributes to the creation of favorable conditions for the formation of general competences, which are transversal. Teamwork shapes the system of attitudes, values and behavior of the person, prepares them for work in the work team.

Professional training through projects is a welcome strategy under the conditions of the 21st century as it favors the formation of competences and is not just about the accumulation of knowledge. The PBL strategy teaches the future specialist to identify a problem, study the work of the professional environment to propose solutions and implement them in practice.

Through the PBL strategy, the student becomes an active subject of his / her own professional training process. The PBL strategy fits perfectly and becomes an effective way of professional training in the current context of higher education, when emphasis is placed on work outside the classroom tailored to the needs of the labor market and the employer.

Employment and / or continuous training

The Republic of Moldova wants to join the EU, at least this is the position of the state's government. However, accession also requires compliance with the criteria announced at Copenhagen 1993 (political, economic, taking over political, economic and monetary union and *acquis communautaire*) and the criterion set out at the Madrid Conference in 1995 which sets out the requirement that administration and justice to have the capacity to apply community creation. Therefore, adherence necessarily implies the early training of specialists, using the experience of other candidate countries, as well as their own experience of adhering to the Bologna Process, only in recent years civil society has become aware of the importance of this supranational instrument, of the consequences of the accession act.

We must be aware that both legal science and the judiciary system can not function according to rules that correspond to other times and other needs, and success in the training of specialists in higher education institutions is conditioned by the level, scale and continuity of the scientific approach subordinated to this scope.

The reality is such that civil servants, judges, prosecutors, diplomats, etc. have to deal with problems for which most of them have not been trained in the university system.

In recent years, Moldova has made progress in the process of cooperation with the European Union. Treaties have been signed with the European Union, such as the Joint Aviation Area Agreement, the Energy Community Treaty, the Association Agreement with the European Union and its Member States, which was provisionally implemented on 1 September 2014. Moldova also obtained a liberalized visa regime with the EU and its Member States.

Successful implementation of current contractual obligations and future activities require new knowledge. Moldova continues to assume its obligations, which require the harmonization of Moldovan legislation with the requirements of EU legislation and its implementation in practice by public institutions, law enforcement bodies and the judiciary system. Work has already begun.

Knowing the new results of the scientific investigations and those presented in the specialty literature, modernizing law education on the basis of Western university experiences becomes today not only a fad but a necessity. Things evolve in such a way that specialists are needed in a short time. The Republic of Moldova must develop a legal system that will enable it to deal with the problems related to the direct application and the direct effect of the International Law and the European Union on the one hand and, on the other hand, the modification suffered by the internal law because of the pressure of the Strasbourg Court today and the Luxembourg Court in the future.

Overall learning outcomes of the study programme

The professional competences acquired during the initial training have a substantial contribution to the organization and implementation of justice in the Republic of Moldova. The training provided by the study programme in the field of professional training “Law” is the basic training for the professions: judges, prosecutors, clerks, judicial assistants, heads of court secretariats, probation counselors, legal professions related to the justice sector: lawyers, notaries, bailiffs, judicial experts, administrators of the insolvency procedure, translators / interpreters need the initial training in jurisprudence.

In addition, all sectors of the national economy (businesses, institutions, public or private organizations) require legal assistance from law specialists.

The European integration which our country tends to creates the imperative need of specialists in the field of international law, national and international human rights protection, etc. and not just qualified law specialists, but specialists with knowledge of at least one modern language, with advanced computer skills, group communication skills, managerial skills, and so on, which is successfully offered by the study programme in the field of professional training “Law”.

Upon completion of the bachelor’s degree (Cycle I), the student must have the following *general competences*:

1. Ability to learn independently;
2. Ability to respect and develop values and professional ethics;
3. Ability to practice as a member of a team;
4. Ability to solve problem situations;
5. Capacity to make decisions independently;
6. Have sufficient knowledge of foreign language to be able to work effectively in the legal field;
7. Ability to use information technologies in research and legal practice.

Professional competences:

1. Knowledge of the legislation of the Republic of Moldova, European legislation and other international legal instruments;
2. Knowledge of concepts, theories, paradigms and methodologies in the legal field;
3. Using the knowledge necessary to collect data and information about a specific matter of law;
4. Using the methods applicable in the field of law;
5. Applying specific techniques and instruments in the legal field to solving practical problems;
6. Using a wide range of techniques, methods and procedures in order to enunciate interpretative solutions of normative acts;
7. Initiation and detection of legal problems proposed for solving in the legal activity process.

The deepening of practical knowledge as well as the development of professional competences will be ensured through a problem-based study programme in the legal field. The didactic and research process seeks to capitalize on the traditions of national and Western legal education.

In order to ensure the effective application of the PBL model, it is necessary to develop the following specific competences:

1. Awareness of the key issue in the area of interference between legal fields,
2. Making a diagnosis of research problems and formulating judgments based on incomplete or limited information,
3. Showing leadership and innovation skills in a context of learning that is unknown, complex and unpredictable, and which requires problem solving involving many interfering factors,
4. Critical evaluation of the strategic performance of the teams,
5. Communicating research results, methods to a specialist audience, using appropriate techniques,
6. Manifestation of an active behavior towards a series of social, scientific and ethical aspects that occur in collaboration.

2.2 Semesters

2.2.1 Semester 1

The theme of the semester: The Constitution - the fundamental law of the country.

According to p.25 of the Framework-plan for higher education ¹, following the function in initial professional training through general competences and specific competences, the course units / modules offered will be grouped into the following components: In the first cycle and in the integrated study programmes: a) the fundamental component (code F); b) component for general skills and competences (code G); c) socio-humanistic orientation component (U code); d) the

¹ Framework-plan for higher education, approved by the Order of the Ministry of Education of the Republic of Moldova, No. 1045 of October 29, 2015, available on-line:
http://mecc.gov.md/sites/default/files/ordinul_nr._1045_din_29.10.2015_plan-cadru_pentru_studii_superioare_ciclul_i_-_licenta_ciclul_ii_-_master_studii_integrate_ciclul_iii_-_doctorat.pdf

specialized component - basic and secondary, in the case of concomitant training in two related fields (code S).

We mention that during the first semester, the fundamental component includes such disciplines as: The general theory of law and Constitutional law, the general component is attributed to the ICT disciplines and physical education, the component of socio-humanistic orientation includes the disciplines of Philosophy, Psychology, Politology and Sociology, specialty component - Romanan private law and Legal-Itate institutions.

In general, the subjects / disciplines included in the first semester are aimed at forming general views on the legal system in the Republic of Moldova, forming a basis for the formation of in-depth knowledge in the field of law.

In the first semester, the **students will complete the project in the subject of Constitutional law**. Constitutional law is a fundamental course which, according to the educational plan, is studied at course I because it contains rules laying down general binding principles for all branches of the national legal system.

This discipline is meant to familiarize and train the students of the faculty of law regarding the foundations of state organization, the constitutional principles regarding the legal status of the person, the electoral system, the way of organizing and functioning of the system of public authorities in the country for the protection and guarantee of rights and the freedoms of the man and the citizen.

The university course of constitutional law is organized in order to achieve the **professional training objectives: knowledge, application, integration**. The level of knowledge implies the accumulation of the theoretical knowledge regarding the object of study of the discipline and the formation of the theoretical and conceptual basis in the field of constitutional regulations of the Moldovan government. At the level of application of knowledge, students will acquire skills and abilities to argue and generalize the link between different elements, such as: principles and norms, norms and relationships. The objectives of the integration level involve the formation of the capacity to solve various atypical situations of problem, the manifestation of the personal attitude towards the constitutional principles and provisions, different phenomena through the application of theoretical knowledge and practical abilities, including by offering students a comparative perspective of the constitutional regulations of the most important legal issues such as state power, political institutions, human rights and freedoms, the balance of executive, legislative and judicial power.

Learning objectives:

- knowledge of concepts, theories, paradigms and methodology in the field of public law, and especially of constitutional law;
- comparison of constitutions by form, modalities of adoption, revision and repeal;
- estimating various forms of constitutional control.
- assessing the legal possibilities for revising the Constitution;
- identifying the main elements and characteristics of the state;
- appreciation of the form of government, the form of the state structure and the political regime in the Republic of Moldova;
- argumentation of the legal status of foreign citizens and stateless persons in the Republic of Moldova;

- determination of the legal status of public authorities in the state;
- use of knowledge in collecting data and information on specific legal issues;
- application of the legislation of the Republic of Moldova and other European and international legal instruments;
- application of specific legal techniques and tools to solving practical problems;
- expressing their own visions of regulations or legal collisions;
- use of techniques, methods and procedures to formulate interpretative solutions to legal norms;
- formulating proposals to improve the existing legal framework;
- efficient use of communication resources, sources of assisted training, both in Romanian and in an international language.

Learning outcomes:

- classifying existing issues regarding the constitutional law topics;
- submitting recommendations and substantiating them to solve certain concrete problems that affect the implementation mechanism of constitutional legislation regarding the establishment, maintenance and exercise of state power;
- correct interpretation of constitutional control forms;
- applying the norms of law in solving practical problems in the field of constitutional law;
- identifying the form of government, the form of the state structure and the political regime in the Republic of Moldova, but also their development and change in our state;
- elaboration of action plans that can be related to the concrete situations in the activity of the institutions, the authorities in the realization of the power of the people.
- analysis of the way in which public authorities are organized and operating;
- estimation according to certain criteria, principles, notions and categories of constitutional law expressing their critical or interpretative opinion on certain relevant issues;
- argumentation of the degree of interaction between the public interest and the private interest in the realization and guaranteeing of constitutional rights and freedoms;
- determining the problems raised by the public authorities regarding the improvement of the legal framework in the Republic of Moldova;
- drafting proposals on the application of EU Member States' standards in national law.

Year I, Semester I

	Module	ECTS	Form of assessment
	General theory of law	6	E
	Constitutional law	6	E+P
	Private Roman law	5	E
	Legal-state institutions	5	E
	ICT	4	E
	Philosophy Psychology Politology Sociology Physical education	4	E C
	Total	30	6 E

Forms of organization of training.

Direct contact (lectures and seminars) - 45 hours + 45 hours.

The lectures allow the exposition and explanation of the fundamental and operational concepts of administrative law included in the discipline curriculum.

Seminars capitalize active-participatory methods to increase the intellectual potential of students by engaging a personal effort during their training and preparation for active and responsible professional activity.

Individual work - 90 hours. Individual work is done as a project. The project is being developed in small groups of 4-5 people.

Total: 180 hours - 6 credits

The main methods used in the Constitutional Law discipline are: problem-based learning, debate, case study.

Strategies for evaluating academic results, including indicating how the final grade is calculated.

The final grade in the discipline sums up the result of the semestrial assessment (activity in the theoretical lessons, practical lessons, the result of the individual work) and *the grade obtained in the examination*. The result of the semester assessment is 60% of the final grade, and the exam grade is 40%.

The *semester assessment* includes 4 grades:

Grade 1. Testing 1.

Grade 2. Testing 2.

Grade 3. Current assessment (written and oral form).

Grade 4. Individual work.

Each grade will be 25% of the semester grade. In order to be admitted to the exam, each of the four mentioned grades must be positive.

The evaluation of the individual work (project) will be done by the internal evaluator (the teacher-course holder) and, as the case may be, the external evaluator (the potential employer).

If the project is to be carried out in a group, each member of the student team will be evaluated individually, depending on the effort made to develop the project.

The student assessment scale is presented in Annex 6.

The evaluation is monitored by the vice-rector for didactic activity and the quality assurance committee of the SUM. The evaluation is also monitored by the dean and the quality assurance committee within the faculty².

The potential employers play an important role in **monitoring** work on the project. In particular, the Public Law Department has close working relations with the Constitutional Court, the

² See: p.8.1.1. and 8.2.1. of the Institutional Regulation on evaluation of academic efficiency approved by the SUM Senate.

Parliament, and the Government. Thus, during the last years the first year students participated in the national and international conferences organized by the Constitutional Court, in which they presented the results of the researches carried out in the realization of the projects in the group.

The **revision** of the curriculum to the Constitutional Law discipline takes place periodically according to the changes in the legislation and obligatory with the consultation of the practitioners. For example, one of the authors of the current curriculum at this discipline is former ex-president of the Constitutional Court of the Republic of Moldova.

2.2.2 Semester 2

Theme of the semester: Public administration and administrative reforms.

Semester 2, as well as the first semester, contains fundamental, general disciplines; socio-humanistic and specialty orientation, with the role of helping to deepen the general knowledge gained during the previous semester, and to improve the skills of project development.

The project in the second semester is to be elaborated in the discipline of Administrative law (part of the specialized component) for the following reasons:

- Administrative law is a discipline that is closely linked to constitutional law, both of which are part of public law. Having already acquired practical knowledge and skills in the constitutional law discipline, students can develop skills for synthesis, solving practical problems in the field of public law;
- lately there are many practical problems faced by public administration authorities, so students can come up with concrete solutions to how to apply existing administrative rules;
- the administrative rules are constantly changing, the students are to come up with their own ideas for improving the legislation according to the changes that occur in the society.

Although the project is to be developed within the administrative law discipline, it may have an **interdisciplinary character**, containing elements from the subjects studied in semester I and II.

The curriculum of Administrative law discipline focuses on behavioral levels with a different degree of complexity: knowledge, application and integration. The level of knowledge involves the accumulation of theoretical knowledge, the formation of the conceptual basis in the field of administrative law. The application involves the training of the abilities typical of the administrative law discipline, the development of the capacities to translate the theoretical knowledge into practice. The aim of the integration is to build the capacity of transfer of the theoretical knowledge and practical abilities in atypical situations, to solve the cases, to solve complicated tasks, to formulate the position and to argue the solutions.

This discipline is meant to familiarize and train the students of the law faculty with the legal mechanisms for organizing and functioning of the public administration system and the executive power in the state. By acquiring theoretical knowledge, the students are simultaneously trained in their practical application by analyzing the legislation in the field and through the synthesis of the national and international judicial practice. At the same time, the academic course “Administrative law” aims to integrate the theoretical and practical knowledge in solving problem situations, case studies, in formulating proposals for improvement of the administrative law norms.

Year I, Semester II

	Module	ECTS	Form of assessment
1.	Civil law (introduction and persons)	6	E
2.	Administrative law	6	E+P
3.	Criminal law. The general part (1)	6	E
4.	History of Romanian law Legal philosophy	4	E
5	Foreign language	4	E
6	Economy History of European culture and civilization European integration The culture of interpersonal and organizational communication	4	E
7	Physical education		C
	Total	30	6 E

Learning objectives and outcomes

- identifying legal issues, specific to administrative law;
- classifying legal issues according to the institutions of administrative law;
- choosing the most efficient method / procedure for collecting data and information on the concrete problem of administrative law;
- evaluating data and information gathered / accumulated from the point of view of utility for the issue of administrative law.
- distinguishing the national, European / international normative acts applicable to the administrative field;
- identifying the administrative law rules applicable to solving a concrete problem of administrative law;
- correctly interpreting the applicable administrative law;
- justifying the application of an administrative legal rule to the concrete situation;
- establishing the correlation between the national administrative law and the European / international norm;
- analysing the national legal framework in the field of administrative law and to propose solutions for its adjustment to the European / international legal framework;
- deciding on the various practical situations on the basis of accumulated knowledge and take into account the provisions of the administrative legislation;

- drawing up action plans that can be related to the concrete situations in the activity of public administration authorities.

Forms of organization of training.

- *Direct contact* (lectures and seminars) - 30 hours + 45 hours.
- *Individual work* - 105 hours. Individual work is done as a project. The project is being developed in small groups of 4-5 people

Total: 180 hours - 6 credits

In the case of administrative law, the number of hours envisaged for direct contact is lower than for constitutional law. Instead, hours for individual work are higher, allowing students to spend more time working on projects.

In terms of teaching-learning methods, types of assessment, grading system, monitoring, these are identical to the information presented for semester I.

2.2.3 Semester 3

Theme of the semester: Other main real rights (dismemberment of property rights).

Semester 3 contains fundamental, general disciplines; socio-humanistic and specialty orientation, with the role of helping to deepen the general knowledge gained during the previous semester, and to improve the skills of project development.

The project in the third semester is to be elaborated in the subject of Civil Law The real rights (belongs to the specialized component) for the following reasons:

- Civil law - the fundamental discipline of private law
- lately there are many practical issues related to property rights and other real rights.
- civil norms are constantly changing, students are expected to come up with their own ideas for improving the legislation according to the changes that occur in society.

Dismemberment of property rights is a deep study of the main real rights as the right of usufruct, right of use, right of habitation, servitude right and superficies right.

The objective of this optional course is the real legal relations.

The need to study these real rights is dictated by the reforms that have taken place in recent years, as well as the inclusion in the new Civil Code of the rules governing these real rights.

	Module	ECTS	Form of assessment
1.	Criminal law. The general part (II)	6	E
2.	International public law	6	E
3.	Contraventional law	5	E
4.	Civil law (real rights)	5	E+P
5	Financial law	4	E
6	Diplomatic good practices and techniques Juvenile delinquency Medical law Comparative legal systems	4	E
	Total	30	6 E

Learning objectives:

- having the theoretical knowledge of the rules of other main real rights;
- determining the object of study of the dismemberment of the property right;
- interpreting the civil legal norms governing the real relations;
- establishing the correlation between the doctrine of civil law and the judicial practice regarding the real rights;
- classifying the applicable rules of civil law to resolve legal relationships other than civil matters;
- determining the object of study of other main real rights;
- establishing the role of other key real rights in civil law.

Learning outcomes:

- developing proposals for the *law ferenda*;
- assuming responsibility for the consequences of errors caused by incorrect application of the law;
- continuously improving the ability to operate with presumptions strengthened in civil law;
- highlighting the contradictions between the norms in a normative act, as well as between norms included in various normative acts;
- identifying the particularities of the exercise of other real rights;
- applying the new regulations from the main real rights in the context of their historical emergence and development and in line with judicial reforms;
- applying some arguments of legal logic, applying the theoretical knowledge to situations in the judicial practice
- establishing the place of real rights in civil law
- establishing the correlation between the doctrine and the practice of real rights
- being aware of the fact that real rights can have other meanings different from those in the current speech, literature or philosophy
- establishing the correlation between the real rights doctrine and the judicial practice.

- developing written and oral scientific communication in the elaboration and presentation of the bachelor thesis.

The *final grade* in the discipline sums up the result of the semestrial assessment (activity in the theoretical lessons, practical lessons, the result of the individual work) and *the grade obtained in the examination*. The result of the semester assessment is 60% of the final grade, and the exam grade is 40%.

The *semester assessment* includes 4 grades:

Grade 1. Testing 1.

Grade 2. Testing 2.

Grade 3. Current assessment (written and oral form).

Grade 4. Individual work.

Each grade will be 25% of the semester grade. In order to be admitted to the exam, each of the four mentioned grades must be positive.

The evaluation of the individual work (project) will be done by the internal evaluator (the teacher-course holder) and, as the case may be, the external evaluator (the potential employer).

If the project is to be carried out in a group, each member of the student team will be evaluated individually, depending on the effort made to develop the project.

The elaboration of the project must lead to students' understanding of the actuality of the different components of the visions of development, moreover to the understanding that they are not mutually exclusive, but live today in theory and especially in the practice of development. We believe that this is the most open and fertile context in which a systematic reflection and an academic debate, even a political one, about the possibilities of development of the contemporary society can truly be fruitful.

In terms of teaching-learning methods, types of assessment, grading system, monitoring, these are identical to the information presented for the semester 2.

Grade at the bachelor's degree exam	ECTS scale
10	A
9	B
8	C
7	D
5/6	E
4	FX
1/2/3	F

2.2.4 Semester 4

The theme of the semester: Legal-criminal protection of the right to life

Learning objectives and outcomes:

In accordance with the discipline curriculum, within Semester 4 of the Criminal Law discipline. The Special Part, there will be set the following **objectives** to the students:

- to distinguish offenses that involve certain similarities;
- to describe the objective and subjective signs of the incriminated facts in the Special Part of the Criminal Code;
- to identify the constituent elements of the offenses, which are not explicitly specified in the corresponding incriminations;
- to interpret the special criminal rules;
- to determine the correct solutions to the practical problems concerning the matter of the Special Part of Criminal Law;
- to establish links between the rules of the Special Part of the criminal law and the reference norms of extra-criminal normative acts;
- to justify the need to include some or other facts under the criminal law framework;
- to constantly interact with colleagues and other stakeholders until the essence is raised in a matter relating to the legal framing of a crime;
- to assess the effectiveness of the rules making up the Special Part of the Criminal Law of the Republic of Moldova;
- to re-evaluate the process of criminalization, decriminalization and re-criminalization of facts in the Special Part of the local Criminal Law;
- to influence, through publications and scientific communications, the process of creating, interpreting (official) and applying special criminal rules;
- to contribute to the legal culture of the population as regards the Special Part of Criminal Law.

Achieving these objectives will lead to the following **outcomes**:

- students will gain analytical and synthesis skills that can be applied to solving legal-criminal problems;
- students will be able to do justice to the criminal deeds and will be able to argue the proposed solutions;
- students will be able to interpret criminal law rules and identify legal loopholes;
- students will gain working skills with judicial practice and will be able to solve concrete cases;
- students will be able to develop *law ferenda* proposals and argue each proposal using both doctrinal views and comparative analyses of foreign criminal laws;
- students will be able to explain criminal law elements to the non-jurists.

Progress from one semester to another and within the semester:

Criminal law. The Special Part is the discipline that continues in the discipline Criminal Law. General Part studied in previous semesters. Within the General Part, students get familiar with the principles of criminal law, the way of applying the criminal law, the concept of offense, the elements

and signs of the offense, the criminal responsibility, the individualization and the application of criminal punishment and the causes that eliminate the consequences of the conviction. Thus, studying the General Part, students are able to distinguish and analyze the most important institutions such as crime, criminal liability and criminal punishment.

At the same time, the didactic units within the discipline Criminal Law. Special Part (I) refers to specific criminal offenses, such as: crimes against peace and human security, war crimes; offenses against the life and health of the person; offenses against the person's freedom, honor and dignity; sex life offenses; offenses against political, labor and other constitutional rights of citizens; offenses against patrimony; offenses against family and minors. Within this discipline the students learn how to distinguish the elements and signs for each concrete offense, as well as how to perform the legal framing of each criminal offense using the knowledge obtained under the discipline Criminal Law. General Part.

Both the General Part and the Special Part of the Criminal Law follow the sequence of the technical-legislative units of the Criminal Code. Thus, the students progressively and consecutively learn how to apply the legal-criminal norms in concrete situations, as well as the correlation between the norms of the General Part and the Special Part in case of solving the legal-criminal problems. Students will also be able to determine how legal-criminal norms are used by different practitioners, such as prosecutors, judges or lawyers.

The theme of the project within this semester is related to other subjects already studied in previous semesters, such as constitutional law, criminal law (general part). The main objective of this project is to help students learn to make an interdisciplinary analysis of the subject, grounding their research on the provisions of national legislation, international instruments and doctrinal opinions. Under this project, students need to identify legal loopholes, study national and international judicial practice, and formulate their own opinion on the proposed topic. The purpose of this project is to teach students writing and research / legal argumentation skills, skills that each legal adviser needs. The project will also help students learn critical thinking skills and address concrete cases of violation of the right to life.

Workload and description of methods of teaching and learning to work on the project:

Workload: within this semester, the course Criminal Law. Special Part is granted a total of 150 hours, of which 75 for lectures and seminars and 75 for individual work or semestrial project.

Teaching and learning methods: in accordance with the discipline curriculum and based on the reference objectives of the subject being taught and taking into account the specificities of the participants' composition, the teacher will be able to choose one way or another to involve the student in the teaching-learning-evaluation activities : individual; in pairs; in small groups; in large groups. Group activities have the role of meeting the communication needs of the participants, representing at the same time a means of socialization, as well as training sources and a framework for the affirmation of its members. Group training activities will be applied as one way of combining individual and collective training. Techniques and methods of training: interactive lecture; modern lecture, assault of ideas, case studies, discussions, debates, role play, problem solving, exercises, including experimental, individual research studies, etc.

Taking into account the fact that the students have been trained on the methods of accomplishing the individual work, during this semester we will focus on guiding and consulting the groups of 4-5 students and the constant communication during the semester (including by e-mail) about project realization and group needs.

Methods and types of assessment:

In accordance with the discipline curriculum, the assessment will be as follows:

A. Semestrial assessment, to be achieved through:

- 1) *testings* – 2 mandatory tests that will contain tasks with objectives for measuring knowledge, professional capacities and skills;
- 2) *current assessment* - student participation in practical classes; performing individual activities in pairs and in groups; solving case-studies; resolving the multiple-choice tests; continuous feedback;
- 3) *individual work* - elaboration of reports and papers on a topic proposed for research as an individual work; carrying out a case study on a concrete theme. Presenting the results of research projects.

The semester grade is calculated based on the average grade on current assessments, grades from the 2 tests and the grade for individual work.

B. Final evaluation, which will consist of a written exam at the end of the semester, with the purpose of presenting the answers to the theoretical subjects analyzed at the lectures and practical classes, as well as solving the practical cases regarding the legal framing of the facts in agreement with the rules of qualification of the offense.

Monitoring and review:

At the end of the semester, the teacher together with the students will discuss the results of the research projects, the advantages and disadvantages of the group project, as well as how to promote and present the results of each research project in student legal events.

	Module	ECTS	Form of assessment
1.	Civil law. General theory of obligations	6	E
2.	Criminal law. Special part (I)	5	E+P
3.	Tax law	4	E
4.	EU institutional law	5	E+P
5.	Family law	4	E
6.	Law of armed conflict Comparative criminal law Information law Organization of legal professions Legal regime of real estate	4	E
7.	The right to social protection Internship of initiation into the specialization	2	E
	Total	30	7 E

In recent years, Moldova has made progress in the process of cooperation with the European Union. Treaties have been signed with the European Union, such as the Association Agreement, the Common Aviation Area Agreement, the Energy Community Treaty, the Association Agreement with the European Union and its Member States, which was provisionally implemented on 1 September 2014. Moldova has achieved a liberalized visa regime with the EU and its Member States.

The reality is such that civil servants, judges, prosecutors, diplomats, etc. have to deal with problems for which most of them have not been trained in the university system. It is true that most of them in the past did not have the opportunity to study European law, community law, etc., but according to the hopes of association with the EU, and, in the long-term, of accession they may become state officials, prosecutors, lawyers who will have to work under EU law.

The project in the fourth semester will also be developed in the EU institutional law discipline (part of the specialty component) for the following reasons:

- graduates of law faculties face a world where law and its practical application are undergoing continuous transformation, due to European integration and globalization. These developments inevitably generate new challenges for legal education. Europeanization of law and legal practice requires the training of a new generation of law graduates,
- the harmonization and unification of legislation as a result of the European integration process contributed not only to the development of European Union (EU) legislation but also to the Europeanization of national legislation. The influence of European law, which also includes the European Convention on Human Rights in the broadest sense of the term, can not be denied in the field of constitutional, administrative, private and criminal law of the Member States,
- the Europeanisation of law, the science of law, legal practice and legal culture must inevitably be reflected through a significant impact on legal education,
- the successful implementation of current contractual obligations and future activities require profound knowledge in the field of EU law. Moldova continues to assume its obligations, which require the harmonization of Moldovan legislation with the requirements of EU legislation and its implementation in practice by public institutions, law enforcement bodies and the judiciary system.

The discipline - Institutional law of the European Union - includes three levels of competence: knowledge, application and integration. Knowledge focuses on the formation and development of advanced competences in the field of EU institutional law, necessary for the critical understanding of the concepts, theories and principles in the institutional law of the European Union. Application is related to the process of training and development of the research skills in the field of European Union institutional law, necessary for the preparation of the students for the purpose of investigating contradictory concepts in the field. Integration involves the formation and development of competences for the transfer of theoretical knowledge and practical skills in atypical situations, their application in problem situations.

The European Union institutional law is a university education discipline which examines the set of legal rules governing the establishment of the European Communities and the European Union, the structure of the European Union institutions, the bodies and agencies of the Union, as

well as their organization and functioning. It is a fundamental discipline in relation to the other substantive disciplines of the European Union (European Union's Law of Business, European Union's Environmental Law, etc.), and in the perspective of association with the EU - and for the classical disciplines studying the internal law for the concrete delimitation of state competences than those of the European Union.

Learning objectives and outcomes

- to distinguish the forms of European integration and the processes involved;
- to describe the European Union's regulatory framework;
- to substantiate the essence of some institutions involved in EU decision-making;
- to demonstrate the relationship between EU institutional law and Public international law;
- to identify the particularities of EU Institutional Law in comparison with Public International Law vis-à-vis the institutions involved;
- to choose the most efficient method for gathering data and information on the interpretation of clauses of constituent treaties in line with the case-law of the EU Court of Justice;
- to argue the effectiveness of the methods used to collect data and information on the determination of the relationship between EU Institutional law and the national law of EU Member States in the light of the case-law of the Court of Justice of the EU;
- to interpret national legislation in terms of compatibility with the commitments made by Moldova in the context of the implementation of the Association Agreement with the EU;
- to identify the rights and obligations of the Republic of Moldova stemming from the status of the state associated with the EU as well as the consultation and negotiation processes with the EU institutions and ways to maximize the benefits of association with the EU;
- to determine the prospects for the development of EU Law as a tool for achieving the European integration policy of the Republic of Moldova;
- to formulate legislative and institutional changes based on European Union standards;
- to develop projects of EU relevance in the context of the harmonization of national legislation with EU law;
- to predict the evolution of the institutional system of the EU;
- to express the way in which the EU institutions are organized;
- to interpret the benefits and costs of joining the EU;
- to analyze the direct effect of EU law;
- to express their own views on the future status of the RM in relation to the EU;
- to compare the competences of the EU institutions with regard to accession and withdrawal processes within the EU;
- to distinguish the EU's enlargement policy and the EU's Neighborhood Policy;
- to compare EU external and internal competences (EU exclusive competences shared between the Union and Member States, and support, coordination or complementarity competence);
- to use the methods specific to the jurisprudence of the EU Court of Justice in the process of elucidating the legal essence of one or another EU institution;
- to express their own visions on the RM-EU institutional framework;
- to establish the new legal framework of the RM and EU relations (Implementation of the Association Agreement);

- to interpret national legislation in terms of compatibility with the provisions of the Association Agreement.

Forms of organization of training.

Direct contact (lectures and seminars) - 45 hours + 30 hours.

The lectures allow the exposition and explanation of the fundamental and operational concepts of administrative law included in the discipline curriculum.

Seminars capitalize active-participatory methods to increase the intellectual potential of students by engaging a personal effort during their training and preparation for active and responsible professional activity.

Individual work - 75 hours. Individual work is done as a project. The project shall be developed in small groups of 4-5 people.

Total: 150 hours - 5 credits.

The main methods used in the EU Institutional Law discipline are: problem-based learning, causal-comparative research projects, debate, case study.

Strategies for evaluating academic results, including indicating how the final grade is calculated.

At the end of the semester, which lasts for 15 weeks, the examination session takes place. In order to be admitted to each exam in part, the student must prove that he / she is ready for this exam. This is done through:

- two tests that take place during the semester. The student is admitted to the exam if he / she has both grades (greater than or equal to 5) in both tests;
- gaining the passing grade to the current success, that is the activism that the student showed in the discipline concerned during the semester and the degree of preparation for each seminar are appreciated;
- getting the promotion grade for individual work. The assessment of the individual work (project) will be done by the internal evaluator (the teacher-course holder) and, as the case may be, the external evaluator (the potential employer). If the project is to be carried out in a group, each member of the student team will be evaluated individually, depending on the effort made to develop the project.

In order to be admitted to the exam, the student must have promotion grades for each of the components listed above.

The final grade in the discipline sums up the result of the semestrial assessment (activity in the theoretical lessons, practical lessons, the result of the individual work) and *the grade obtained in the examination*. The result of the semester assessment is 60% of the final grade, and the exam grade is 40%.

The potential employers play an important role in **monitoring** work on the project. In particular, the International and European Law Department has close cooperation with the Ministry of Justice and the Ministry of Foreign Affairs and European Integration. Thus, during the last years students of the second year attended national and international conferences, in which they presented the results of the researches carried out in the realization of the projects in the group.

The **review** of the curriculum to EU Institutional Law discipline takes place periodically according to changes in legislation and mandatory consultation of practitioners. For example, one of the authors of the current curriculum at this discipline is the Head of the Department of Harmonization of National Legislation with EU Standards in the Ministry of Justice.

2.2.5 Semester 5

The theme of the semester: Evidence and civil judicial probation

Semester 5, contains fundamental, general disciplines; socio-humanistic and specialty orientation, with the role of helping to deepen the general knowledge gained during the previous semester, and to improve the skills of project development.

The project in the 5th semester is to be elaborated in the Civil law discipline, the general part (belongs to the specialty component) for the following reasons:

- The judges form their vision of the activity of the courts of law and the quality of the act of justice, having regard to the direct contact with the judiciary system, the way in which justice is carried out and the effectiveness of the enforcement of the court orders . Functions of the civil process coincide with those of justice: the protection of legitimate rights, freedoms and interests, the restoration of the violated legal order and the safeguarding of democratic processes.
- Training within the discipline civil procedural law, the general part is focused on the development of the problem-based learning (PBL), and this method is implemented by academic and methodical academic staff together with students.
- The topic of evidence and civil judicial probation is of practical importance. Implementation implies the ability to correctly and systematically interpret current procedural law, the ability to detect legal shortcomings and contradictions and the ability to propose solutions to improve the legislation in place.

	Module	ECTS	Form of assessment
1.	Civil law. Translatable property contracts.	5	E
2.	Criminal law. The special part (II)	5	E
3.	Criminal procedural law. The general part.	6	E
4.	Civil procedural law. The general part	6	E+P
5.	Environmental law	4	E
6.	Criminology	4	E
	Total	30	6 E

Learning objectives and outcomes:

At the end of the semester the student shall be able to:

- determine the essence and identify the stages of the judicial probation;

- define the concept of judicial evidence;
- classify evidential facts;
- determine the subject of probation in concrete civil matters;
- compare the essence of the notorious facts and the established prejudices;
- assess the role of the court in filing the evidence necessary to prove the essential facts of the case;
- define the notion and determine the importance of the probable assumptions;
- classify evidence by various criteria;
- specify the admissibility and relevance of the evidence;
- apply in concrete cases the common rules on the assessment of evidence;
- formulate the grounds for the securing of evidence;
- determine the procedure for securing evidence before and after the trial;
- resolve case situations relevant for content units.

In the seminars, it is not customary to hear the students to report information according to content units, but taking into account these, students are mobilized to apply theoretical knowledge to solve certain tasks: at first purely theoretical, then more and more practical. Thus, even the grid tests elaborated by each teacher according to the updating of the normative framework are aimed at provoking the students' interest in the civil procedural law matter. Subsequently, at seminars, students are determined to solve open-question tests, effectively using all sources of information (codes, laws, comments, textbooks, official sites, etc.). The cheating problem basically does not exist. The experience of using this teaching method shows that in the beginning the students do not correctly estimate the difficulty of carrying out a task in the field of civil procedural law with the help of the sources, then the necessity of developing the skills of a professional jurist becomes the main motivation in the perpetuation of the professional training. The main ability that the students learn from these training strategies is to motivate, argue the solution identified.

Academic results are currently and finally assessed. Assessment of learning outcomes is done with grades from “10” to “1”. In the semester there are two current assessment sessions, distributed proportionally during the semester, which totalizes the intermediate situation of the success of each student. The individual work and performance of each student in the auditorium, as well as the results of the current assessments, are recorded in the academic group register and are taken into account in the semester final assessments with an average weight of 60 percent of the final grade. The examination at Civil procedural law, the general part is carried out orally and is based on tests developed on three levels: knowledge, application, integration.

The elaboration of the project in the 5th semester will require from the students a deep knowledge of Moldovan law in the field of civil process, the stages of the Judicial Probation Process and the notion of judicial probation, Relevance of the evidence and the admissibility of evidence, Securing evidence. Grounds for providing evidence. Providing evidence until the trial starts and after the trial is initiated. The project can be developed in collaboration with a court judge, prosecutor or lawyer who can implement the theoretical knowledge in practice.

2.2.6 Semester 6

The theme of the semester: The concept and classification of civil procedure documents.

The drawing up of civil procedure acts is one of the options students can use in the sixth semester while studying the special part of the civil process. In this way, prior to the internship, students are already able to provide sufficient legal assistance to legal persons and to honour professional assignments in the courts.

The increasing number of appeals in the courts shows indisputably that the citizens of the Republic of Moldova believe in justice and resort to it when they require their rights to be defended. Thus, access to justice is achieved under the law, and its effectiveness will depend on the factual and legal merits of the legal advisers' requests in courts. In other words, the more qualitative a request is made to the court either to initiate a civil trial or to support it during its examination, the attitude of the court materialized in various acts will be just and prompt. That is why the high quality and legal character of citizens' demands and actions in civil proceedings will also facilitate the not easy work of judges.

	Module	ECTS	Form of assessment
1.	Civil law. Service contracts. Successions.	5	E
2.	Criminal procedural law. The special part.	5	E
3.	Civil procedural law. The special part.	5	E
4.	Private international law	5	E
5.	Professional ethics	4	E
6.	Qualification of offenses Transport and insurance law Consumer protection law Drafting civil procedure documents Drafting criminal procedure documents Notarial law Legislative technique Legal protection of human rights International banking law	4	E+P
7.	Internship of initiation into specialty	2	E
	Total	30	6 E

Learning objectives:

At the end of the semester the student shall be able to:

- distinguish the national, European / international normative acts applicable to civil procedure acts;
- identify the procedural rules applicable to each category of civil proceedings;
- correctly interpret the applicable procedural rules;
- report procedural norms in international / European acts to concrete situations through the

lex fori principle;

- make proposals for compatibility of the provisions of the domestic civil procedural norms with the provisions of the European / international legislation;
- compare the doctrinal and practical experience in choosing the right interpretive solution of the civil procedural norm for each category of civil procedural law;
- interpret civil procedural rules relating to civil proceedings;
- use the methods specific to civil procedural law in the process of elucidating the legal essence of each category of act of civil procedural law;

Learning outcomes:

- learn correct, discreet and respectful ways of communicating with potential clients, as well as with magistrates in the process of judging civil cases;
- exercise conflict settlement skills between the parties to the dispute, using negotiation and mediation techniques;
- identify the need to ensure the confidentiality of personal data in the interaction with clients and adverse parties as well as magistrates;

As an individual work, it is envisaged to elaborate a project which may consist of the following acts that can have a practical aspect for the future lawyers, judges: **drafting applications for summons as well as other requests and inquiries in the civil process**: request to sue regarding the claim by the owner of the property in the unauthorized possession of another person, request to sue in respect of the defense of honor and dignity (professional reputation) and the perception of moral damages, request to sue in respect of reparation of the damage caused by a road accident, request to sue for the recognition of the null testamentary inheritance certificate, request to sue for the determination of how to use the land sector, request to sue in connection with the dissolution of the rental agreement and the eviction of the tenant, request to sue for marriage dissolution and sharing property of joint property of spouses, request to sue for the collection of the pension for the maintenance of the minor child, request to sue for the determination of paternity, request to sue for disqualification from parental rights, request for consent to adoption, request to sue in respect of the payment of salary for forced absence from work and reparation of moral damages, claim for damages in respect of compensation for the damage caused to the employee by an employer's fault, claim for damages in respect of compensation for the damage caused to the employer by the employee's fault while performing duties, claim for damages in respect of compensation for damage caused by the employer's fault through the death of the maintenance worker while performing duties, petition to sue on the liability of the organization for damage caused to a third party by the fault of its worker during the performance of his / her duties, request to sue in respect of the appeal against the decision, the action (inaction) of the public authority (the official), petition for the appeal against the normative act, petition to appeal against the decision of the election bureaus and the Central Electoral Commission on the violation of electoral law, making the references to the respective appeals.

Methods and types of assessment - Academic results are currently and finally assessed.

Assessment of learning outcomes is done with grades from "10" to "1". In the semester there are two current assessment sessions, distributed proportionally during the semester, which totalizes the intermediate situation of the success of each student.

The individual work and performance of each student in the auditorium, as well as the results of the current assessments, are recorded in the academic group register and are taken into account in the semester final assessments with an average weight of 60 percent of the final grade.

Forms of organization of training.

- *Direct contact* (lectures and seminars) - 12 hours + 45 hours.
- *Individual work* - 75 hours. Individual work is done as a project. The project shall be developed in small groups of 4-5 people.

Total: 120 hours – 4 credits

In the case of the course, the drawing up of civil procedure documents, the number of hours envisaged for direct contact is lower than for civil procedural law. Instead, hours for individual work are high, allowing students to spend more time working on projects.

2.2.7. Semester 7 and 8 (Year 4).

During the year 4 the students will do the specialty internship (15 credits) and the research internship (6 credits) during which they will accumulate the necessary data for the elaboration of the bachelor project. In general, for the bachelor examinations, 9 credits are allocated, of which the integrated examination contains 6 credits and 3 credits for the bachelor project (thesis) (*see Annex 4*).

Students perform the specialty internship and the research internship in various public authorities, but also in various structures, private organizations, where they have the opportunity to apply in practice the theoretical knowledge gained during the study and to identify some problems or situations to be solved. During the internship, students, working together with potential employers, develop their communication, critical thinking, and teamwork skills.

The bachelor thesis is an official report in written form, developed by independent research, which is a mandatory condition for awarding a qualification. The bachelor thesis is a synthesis work based on the knowledge and abilities accumulated by the student during the studies, the theoretical knowledge as well as the practical skills obtained at the fundamental and the specialized disciplines, the scientific research activity carried out within the scientific circles, etc.³

In fact, as stated in the Framework Regulation on the organization of the final bachelor examination⁴, *the bachelor project (thesis) assesses the competences of the graduates to carry out research, to apply the theoretical knowledge in the process of developing practical solutions specific to the field of professional training or the realization of the case studies.*

Students who have fully completed the “Law” educational plan, accumulating the number of credits set for the programme are admitted to bachelor examinations.

The final grade awarded as a result of defending the bachelor thesis is determined by the members of the Bachelor Committee. The Chairman of the Bachelor Committee is necessarily the representative of the public authority - the potential employer. Thus, evaluation is also provided

³ <http://istorie.usm.md/files/Ghid-metodic-pentru-elaborarea-tezelor-de-licenta-master-2013.pdf>

⁴ Annex to Order of the Ministry of Education no. 1047 of October 29, 2015, <http://usm.md/wp-content/uploads/2015/11/final-Reg..pdf>

through external evaluators, which ensures an increased objectivity of the appreciation of the student's learning outcomes.

Thus, studying for 8 semesters, under the present plan, requires the accumulation of 173 study credits following the attendance of theoretical courses and the accumulation of 67 study credits as a result of the development and defence of the projects developed in the team.

Although the number of credits gained as a result of group project development is not as high as in some European universities, such as Aalborg University, Denmark, however, we consider that for stage I, which is also a test stage, this is already a pretty big step in implementing the PBL model.

3. CONCLUDING REMARKS

The pilot programme in Law [Annex 2], implemented from the 2017-2018 academic year, is an attempt to adjust the programme to similar documents from European universities.

The strengths of this programme [Annex 2] are:

- orientation towards interdisciplinary deepening;
- reflecting the current needs of professionalisation;
- the active involvement of students in the process of knowledge accumulation and the development of new communication, group work skills, etc. in response to new modern knowledge and techniques that require problem solving;
- putting emphasis on training skills for practical problems solving;
- closer collaboration with potential employers by: offering specialty internship placements, employers' participation as external project evaluators, etc.

We consider that the pilot study programme, which contains as a basic requirement the elaboration of a minimum of one semester group project that solves a practical problem in the group, strengthens the practical skills of the future graduates, contributing to the increase of their employability chances.

Changes in disciplines curricula regarding PBL application make the content of disciplines more interactive and raise students' responsibility for training in the field, contribute to the training of students' ability to analyze critically the information and synthesize information, abstract thinking, evaluation of competing arguments and motivated decision making in solving problems. All these skills are essential to the field of law.

The application of group projects contributes to creating favourable conditions for the formation of general competences, which are transversal. Working in a small group forms the system of attitudes, values and behaviour of the person, prepares them for professional activity in a real work team.

Professional training through projects is a good strategy under the conditions of the 21st century because it fosters the formation of professional skills and is not just the accumulation of knowledge. The PBL strategy teaches the future specialist to identify a problem, study the work of the professional environment, propose solutions and put them into practice.

Through the PBL strategy, the student becomes an active subject of his / her own training process. The PBL strategy is an effective way of training in the current context of higher education, focusing on work outside the classroom, tailored to the needs of the labour market and the employer.

Annex 1: Our vision on the bachelor's degree programme in "Law"

Year I Semester I	F.01.O01 General Theory of Law	F.01.O.02 Constitutional Law (project)	F.01.O03 Roman Private Law
	S.01.O.04 Legal-State Institutions	G.01.O.05 ICT G.01.O.10 Physical education	U.01. A.06 Philosophy U.01. A.07 Psychology U.01. A.08 Politology U.01. A.09 Sociology
Year I Semester II	F.02.O.11 Civil law (introduction and persons)	F.02.O.12 Administrative Law (project)	F.02.O.13 Criminal Law. The general part (I)
	U.02.A.15 History of Romanian Law U.02.A.16 Legal philosophy	G.02.O.17 Foreign language G.02.O.22 Physical Education	U.02.A.18 Economics U.02.A.19 History of European culture and civilization U.02.A.20 European integration U.02.A.21 The culture of interpersonal and organizational communication
Year II Semester III	F.03.O.23 Criminal Law. General part (II)	F.03.O.24 International public law	F.03.O.26 Civil law (real rights)
	S.03.O.25 Contraventional law	S.03.O.27 Financial law	(project) S.03.A.28 Diplomatic usages and techniques S.03.A.29 Juvenile delinquency S.03.A.30 Medical Law S.03.A.31 Comparative legal systems
Year II Semester IV	F.04.O.32 Civil law. The general theory of obligations	F.04.O.33 Criminal Law. Special Part (I) (project)	S.04.O.34 Tax law
	S.04.O.35 EU Institutional Law (project)	S.04.O.36 Family Law	S.04.A.37 Armed conflicts law S.04.A.38 Comparative criminal law S.04.A.39 Information Law S.04.A.40 Organization of legal professions S.04.A.41 Legal Regime of Real Estate S.04.A.42 Right to social protection
Year III Semester V	F.05.O.43 Civil law. Translatable Property Contracts	F.05.O.44 Criminal Law. Special part (II) (project)	S.05.O.45 Criminal procedural law. General part
	S.05.O.46 Civil procedural law. General part (project)	S.05.O.47 Environmental Law	S.05.O.48 Criminology
Year III Semester VI	F.06.O.49 Civil Law. Service providing contracts. Succession.	S.06.O.50 Criminal procedural law. Special part	S.06.O.51 Civil procedural law. Special part.

	S.06.O.52 Private international law	G.06.O. 53 Professional ethics	S.06.A.54 Qualification of offenses S.06.A.55 Transport and insurance law S.06.A.56 Consumer protection law S.06.A.57 Drawing up civil procedure documents (project) S.06.A.58 Drawing up criminal procedure documents S.06.A.59 Notarial law S.06.A.60 Legislative technique S.06.A.61 Legal Protection of Human Rights (project) S.06.A.62 International banking law
Year IV Semester VII	S.07.O.63 Business law	S.07.O.64 Criminalistics	S.07.O.65 Labor Law
	S.07.O.66 International trade law	S.07.A.75 Customs law S.07.A.76 Intellectual property law	S.07.A.67 Labor litigation S.07.A.68 Competition law S.07.A.69 Criminal executional Law S.07.A.70 Civil executional law S.07.A.71 Comparative Constitutional Law (project) S.07.A.72 Current Problems of the General Theory of Law S.07.A.73 Law of the European Convention on Human Rights (project) S.07.A.74 Methodology for the investigation of certain categories of offenses
Year IV Semester VIII	Specialty internship	Research internship	Bachelor's degree exam

Annex 2: Study programme implemented from 1 September 2017.

MINISTRY OF EDUCATION, CULTURE
AND RESEARCH
OF THE REPUBLIC OF MOLDOVA

Coordinated: _____
"____" _____ 2017
registration number _____

MOLDOVA STATE UNIVERSITY

Approved: _____
SENATE OF MOLDOVA STATE
UNIVERSITY
"30" *august* 2017
Protocol nr. *1*



FACULTY OF LAW

STUDY PROGRAM

Level of qualification according to ISCED-6

General field of study – 042 Law

Professional field– 0421 Law

Speciality – 0421.1 Law

Total number of credits – 240

Obtained title - Bachelor in Law

*Base of admission: baccalaureate or equivalent degree
university degree*

Study language: romanian, english, french, russian

Study form – full-time attendance

CHIȘINĂU 2017

Chief Private Law Department, PhD, associate prof.

Nicolae Roșca

Chief Public Law Department, Dr. Sc., PhD., associate prof.

Andrei Negru

Chief Criminal Law Department, Dr. Sc., PhD., univ. prof.

Sergiu Brînză

Chief Procedural Law Department, PhD., associate prof.

Elena Belei

*Chief European and International Law Department,
Dr. Sc., PhD., univ. prof.*

Violeta Cojocaru

Approved by Faculty Council

29.08. 2017

Protocol nr. 01

*Dean Law Faculty, Moldova State University
PhD, univ. prof.*

Sergiu Băieș

ACADEMIC CALENDAR

Nr	Year of study	Didactic activities		Examination sessions			Vacation		
		Sem. I	Sem. II	Winter	Spring/summer	Internship	Winter	Spring	Summer
1	First year 2017-2018	01.09-16.12 (15 weeks)	29.01-19.05 (15 weeks)	18.12-23.12 15.01-28.01 (4 weeks)	21.05- 15.06 (3 weeks)	-	24.12-08.01 (2 weeks)	Easter 08.04-16.04 (1 week)	28.06-31.08 (10 weeks)
2	Second year 2018-2019	01.09-9.12 (15 weeks)	01.02-06.05 (15 weeks) ●	13.12-21.12 09.01-28.01 (4 weeks)	22.05-10.06 (3 weeks)	Specialty Starting internship 07.05-21.05 (2 weeks)	24.12-08.01 (2 weeks)	Easter 30.04-17.05 (1 week)	28.06-31.08 (10 weeks)
3	Third Year 2019-2020	01.09-13.12 (15 weeks)	29.01-19.05 (15 weeks)	16.12-24.12 09.01-28.01 (4 weeks)	22.05-10.06 (3 weeks)	Specialty Starting internship 07.05-21.05 (2 weeks)	25.12-08.01 (2 weeks)	Easter 20.04-27.04 (1 week)	28.06-31.08 (10 weeks)
4	Fourth Year 2020-2021	01.09-16.12 (15 weeks)	10.01-02.06 (15 weeks)	15.12-30.12 (2 weeks)	08.06-30.06 (3 weeks)	Specialty internship 03.02-05.04 (10 weeks) Research internship 06.04-04.05 (4 weeks)	31.12-14.01 (2 weeks)	Easter 02.05-09.04 (1 week)	

In case of PBL strategy application

	Didactic activities carried out through the PBL strategy, including internship			Vacation		
	5 weeks	8 weeks	2 weeks	Winter	spring	summer
Semesters I-VII 15 week	<ul style="list-style-type: none"> Theoretical basis (course and seminar) 4 hours per week Monitoring work group activity Current evaluation 	<ul style="list-style-type: none"> Monitoring work group activity Current evaluation 	<ul style="list-style-type: none"> Presentation of projects Final evaluation 	24.12-08.01 (2 weeks)	Easter 08.04-16.04 (1 week)	28.06-31.08 (10 weeks)
				24.12-08.01 (2 weeks)	Easter 30.04-07.05 (1 week)	28.06-31.08 (10 weeks)
				24.12-08.01 (2 weeks)	Easter 20.04-27.04 (1 week)	28.06-31.08 (10 weeks)
Semester VIII 15 week	14 weeks		1 week	31.12-14.01 (2 weeks)	Easter 02.05-09.05 (1 week)	
	<ul style="list-style-type: none"> Monitoring of individual projects Current evaluation 		<ul style="list-style-type: none"> Preliminary evaluation of individual projects 			

Program Content

Code	Module Discipline	Total hours	Including		week			Type of final assessment	Nr. of credits
			Direct contact	Individual work	lecture	Seminar	laboratory		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Year I									
Semester I									
F.01.O.01	General Theory of Law	180	90	90	3	3		E	6
F.01.O.02	Constitutional Law (project)	180	According to the academic calendar					E	6
F.01.O.03	Roman Private Law	150	75	75	3	2		E	5
S.01.O.04	State-Judicial institutions	150	60	90	2	2		E	5
G.01.O.05	IT Communication	120	60	60			4	E	4
U.01. A.06	Philosophy	120	45	75	2	1		E	4
U.01. A.07	Psychology								
U.01. A.08	Political Science								
U.01. A.09	Social science								
G.01.O.10	Physical Training	30	30			2		C	
Total sem. I		930	450	480	13	13	4	6 E	30
Semester II									
F.02.O.11	Civil Law (introduction and persons)	180	90	90	3	3		E	6
S.02.O.12	Administrative Law (project)	180	According to the academic calendar					E	6
F.02.O.13	Criminal Law. General Part I	180	90	90	3	3		E	6
		120	60	60	2	2		E	4
U.02.A.15	History of Romanian Law	120	60	60	2	2		E	4
U.02.A.16	Philosophy of Law								
G.02.O.17	Foreign Language								
U.02.A.18	Economy								
U.02.A.19	European culture and civilization history	120	45	75	2	1		E	4
U.02.A.20	European Integration	120	45	75	2	1		E	4
U.02.A.21	Interpersonal and organizational communication culture								
G.02.O.22	Physical Training	30	30			2		C	
Total sem. II		930	450	450	12	14	4	6 E	30
Total year I		1860	930	900	25	27	8	12 E	60
Year II									
Semester III									
F.03.O.23	Criminal Law. General Part II	180	75	105	2	3		E	6
F.03.O.24	International Public Law	180	90	90	3	3		E	6
S.03.O.25	Contravention Law	150	75	75	2	3		E	5
F.03.O.26	Civil Law (real rights) (project)	150	According to the academic calendar					E	5
S.03.O.27	Financial Law	120	60	60	2	2		E	4

S.03.A.28	Diplomatic good practices and technics	120	45	75	2	1		E	4
S.03.A.29	Juvenile delinquency								
S.03.A.30	Medical Law								
S.03.A.31	Comparative Legal Systems								
Total semester III		900	450	450	13	15		6 E	30
Semester IV									
F.04.O.32	Civil Law. General Theory of obligations	180	90	90	3	3		E	6
F.04.O.23	Criminal Law. Special Part (I) (project)	150	According to the academic calendar					E	5
S.04.O.34	Tax Law	120	60	60	2	2		E	4
S.04.O.35	EU institutions Law	150	According to the academic calendar					E	5
S.04.O.36	Family Law	120	60	60	2	2		E	4
S.04.A.37	Armed conflicts law	120	60	60	2	2		E	4
S.04.A.38	Comparative criminal Law								
S.04.A.39	Informational Law								
S.04.A.40	The organization of legal professions								
S.04.A.41	Legal status of real estate								
S.04.A.42	Social protection Law								
	Specialty Starting internship	60	According to the academic calendar					E	2
Total semester IV		900	420	480	15	13		7 E	30
Total Year II		1800	870	930	28	28		13 E	60
Year III									
Semester V									
F.05.O.43	Civil law. Property transmitting contracts	150	75	75	3	2		E	5
F.05.O.44	Criminal Law. Special Part II	150	75	75	2	3		E	5
F.05.O.45	Criminal Process law. General Part	180	75	105	2	3		E	6
F.05.O.46	Civil Process law. General Part (project)	180	According to the academic calendar					E	6
S.05.O.47	Environmental law	120	60	60	2	2		E	4
S.05.O.48	Criminology	120	60	60	2	2		E	4
Total semester V		900	420	480	13	15		6 E	30
Semester VI									
S.06.O.49	Civil Law. Service Contracts. Succession.	150	60	90	2	2		E	5
F.06.O.50	Criminal Process law. Special Part	150	90	60	3	3		E	5
F.06.O.51	Civil Process law. Special Part	150	90	60	3	3		E	5
S.06.O.52	Private international law	150	75	75	2	3		E	5
G.06.O.53	Professional ethics	120	60	60	2	2		E	4
S.06.A.54	Crimes qualification	120	45	75	2	1		E	4
S.06.A.55	Transport and insurance law								

S.06.A.56	Consumer protection law								
S.06.A.57	Civil procedure documents (project)		According to the academic calendar						
S.06.A.58	Criminal procedure documents								
S.06.A.59	Notary law								
S.06.A.60	Legislative technics								
S.06.A.61	Human Rights legal protection (project)		According to the academic calendar						
S.06.A.62	International banking law								
	Specialty Starting internship	60	According to the academic calendar				E	2	
Total semestrul VI Total Semester VI		900	420	480	14	14	7E	30	
Total Anul III Total Year III		1800	900	900	27	29	13E	60	
ANUL IV Year IV									
Semestrul VII Semester VII									
S.07.O.63	Business law	150	75	75	3	2	E	5	
S.07.O.64	Forensic	180	90	90	3	3	E	6	
S.07.O.65	Labor Law	180	90	90	3	3	E	6	
S.07.O.66	International Trade Law	150	60	90	2	2	E	5	
S.07.A.67	Labor conflicts	120	45	75	2	1	E	4	
S.07.A.68	Competition Law								
S.07.A.69	Criminal executional law								
S.07.A.70	Civil executional law								
S.07.A.71	Constitutional comparative law								
S.07.A.72	Actual problems of General theory of law								
S.07.A.73	European Convention for Human Rights law								
S.07.A.74	Methods of specific crimes investigation								
S.07.A.75	Customs law	120	60	60	2	2	E	4	
S.07.A.76	Intellectual property law								
Total semester VII		900	420	480	15	13	6E	30	
Semester VIII									
	Specialty internship	450	According to the academic calendar				E	15	
	Research internship	180	According to the academic calendar				E	6	
	Graduation exams	270		270			E	9	
Total semester VIII		900		900			3E	30	
Total Year IV		1800	420	1380	15	13	9E	60	

Total Program	7260	3120	4110	96	96	8	47 E	240
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Romanian language for non-native speakers

Code	Module/discipline	Total hours	Including				Laboratory	Evaluation Form	Credits
			Direct contact	Individual work	lecture	seminars			
G.02.O.14	Romanian language	120	60	60		4		E	4

Facultative courses

Nr.	Facultative courses	Total hours	year	sem	Hours/week			Evaluation form	credits
					S	L			
1.	Latin	180	I	II	0	0	6	Exam	6
2.	Legal logic	180	II	I	3	3	0	Exam	6
3.	Initiation in German Law	180	III	II	3	3	0	Exam	6
4.	Rhetoric	180	IV	VII	3	3	0	Exam	6

Stagiile de practică

Internships

Nr. d/o	Internships	Sem.	weeks	hours	Period	credits
1	Specialty Starting internship	IV, VI	4	120		4
2	Specialty internship	VIII	10	450	May	15
3	Research internship	VIII	4	180		6
				Săptămâni weeks	750	25

Graduation Exam

Nr. d/o	Graduation Exam	Period	Credits
1.	Integrated exam, law sciences	June	6
2.	Graduation (Licence) Thesis	June	3

Master studies preconditions

Code	Module/discipline	Total hours	Including		Hours/week			Evaluation form	Number of credits
			Direct contact	Individual work	course	Seminars	Laboratory		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
F.01.O.02	Constitutional Law	180	45	135	2	1		E	6
F.01.O.01	General Theory of Law	180	60	120	2	2		E	6
F.02.O.11	Civil Law. Introduction and persons	180	45	135	2	1		E	6
F.02.O.13	Criminal Law. General Part	180	45	135	2	1		E	6
F.03.O.24	International Public Law	180	45	135	2	1		E	6
		900	240	660	10	6		5E	30

EXPLANATORY NOTE

Specialty Law is an important one in a contemporary society. A qualified and competent specialist in jurisprudence can be placed in any sphere of harmonious social life both nationally and internationally.

As a specialty aim is to achieve an effective field training, creating prerequisites for socio-secure successful professional people specialized in law in the legal system of the Republic of Moldova and the possibility of professional advancement abroad.

In this context, Law specialty aims to achieve its goals through:

1. Formation of the graduate professional skills based on theoretical and practical training in law.
2. Formation of research abilities in the field of jurisprudence based on scientific composition. In this sense specialist training aims to investigate contradictions in jurisprudence.
3. Ensure the future of multilateral developed specialist, training civic position and the ethical dimension of personality.

Applying for Bachelor specialty Law (Cycle I) can be based on High School/Lyceum (BAC) diploma or university diploma.

The specialist in jurisprudence (law degree) can carry on his professional activity in different fields - civil, criminal, financial, banking, criminology, psychology, legislation, human rights protection, etc., taking into account specialty nominated.

An efficient achievement of all mentioned objectives assures the graduate successful socio-professional integration. Lawyers can operate as judges, prosecutors, advocates, employee in different government structures, especially the Ministry of Justice, Ministry of Interior, legal departments and sections of the central and local public administration authorities, institutions, organizations, public and private enterprises, as judge in the Constitutional Court, Ombudsman, institutions with judicial expertise; NGOs sorting and dispute mediation; organizations defending human rights; embassies abroad; international government and regional organizations, as well as

any other areas that require protection, surveillance of rights, freedoms and interests or values protected by law.

Upon completion of university studies (cycle) student shall have the following general skills:

1. The ability to learn independently;
2. Ability to meet and develop values and professional ethics;
3. Ability to exercise his profession as a member of a team;
4. Ability to solve problem situations;
5. The ability to make decisions independently;
6. Possess sufficient knowledge of the foreign language to be able to work effectively in the legal field;
7. The ability to use information technologies in research and legal practice.

Professional skills:

1. Knowledge of Moldovan legislation, European legislation and other international legal instruments;
2. Knowledge of the concepts, theories, paradigms and methodologies in the legal field;
3. Use knowledge needed in data collection and information relating to a specific practical issue in law;
4. Using specific methods applied in law;
5. Application of techniques and specific legal instruments in solving practical problems;
6. Using a variety of techniques, methods and solutions to interpretative enunciation of acts;
7. Initiate and detection as proposed for solving problems in the legal activity.

The most effective way to train professional skills is the PBL (problem-based learning) strategy, which is done through projects. The application of group projects contributes to the creation of favorable conditions for the formation of general skills, which are transversal. The work in a small group shapes the system of attitudes, values and behavior of the person, prepares him for professional activity in a real work team.

Vocational training through projects is a good strategy under the conditions of the 21st century as it favors the formation of professional skills and is not just about the accumulation of knowledge. The PBL strategy teaches the future specialist to identify a problem, to study the work of the professional environment, to propose solutions and to implement them in practice.

Through the PBL strategy, the student becomes an active subject of his own training process. The PBL strategy is an effective way of training in the current context of higher education, with an emphasis on work outside the classroom oriented towards the needs of the labor market and the employer.

Annex 3: Study programme implemented from 1 September 2017 English Translation

Annex 4: Advertising flyer of the Study programme implemented from 1 September 2017

- sporirea flexibilității în procesarea informației și îndeplinirea obligațiilor;
- exersarea abilităților necesare pentru activitatea profesională.

Cum este organizat procesul de studiu?

- Studenții lucrează în echipe;
- Echipa are un tutore sau supervisor;
- Întâlniri periodice ale echipei;
- Fiecare echipă are un lider.

Mobilități academice în universitățile din UE:

În cadrul programului de studii *Drept cu aplicarea metodei ÎBP* 15 studenți vor avea oportunitatea să realizeze, în semestrul 3 sau în semestrul 4, mobilități academice la Universitatea din Aalborg (Danemarca) sau Universitatea din Gloucestershire (Marea Britanie). Participanții la mobilități vor fi selectați în bază de concurs din numărul studenților înmatriculați în acest program de studii. Mobilitățile vor fi finanțate în cadrul proiectului Erasmus + «Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability - PBLMD». www.pblmd.aau.dk

ADMITEREA: în baza diplomei de bacalaureat sau un act echivalent de studii, diploma de studii superioare.

Universitatea de Stat din Moldova Facultatea de Drept



NOU !!!

Programul de licență Drept cu aplicarea metodei Învățarea Bazată pe Probleme

Universitatea de Stat din Moldova
str. Alexe Mateevici 60, Chișinău, 2009
tel. 022 24 00 76

Chișinău 2017

PROGRAMUL DE STUDII DE LICENȚĂ "DREPT" își propune formarea specialiștilor pentru toate domeniile dreptului, abili să investigheze/ soluționeze probleme complexe și contradictorii din jurisprudență.

DURATA STUDIILOR: 4 ANI / 8 SEMESTRE.

LIMBA DE INSTRUIRE: Română/Engleză.

NUMĂRUL DE CREDITE: 240

TITLUL OBTINUT: Licențiat în DREPT

OPORTUNITĂȚI DE ANGAJARE:

Jurist, ofițer de urmărire penală, procuror, judecător, executor judecătoresc, mediator, avocat, notar, inspector vamal, lichidator, administrator de insolvență, asistent: judecătorească, Curtea de Apel, Curtea Supremă de Justiție, Curtea Constituțională.

CONȚINUTUL PROGRAMULUI

- Drept constituțional și drept administrativ
- Drept civil și drept procesual civil
- Drept penal, drept procesual penal și criminalistică
 - Drept contravențional
 - Drept vamal
 - Drept internațional
 - Dreptul muncii
 - Dreptul familiei
 - Drept fiscal
 - Dreptul afacerilor



Pentru mai multe detalii despre program vizitați site-ul www.usm.md



Programul de studii de licență "Drept" oferit de Universitatea de Stat din Moldova a fost re-proiectat în cadrul proiectului Erasmus + «Introducing Problem Based Learning (PBL) in Moldova: Toward Enhancing Students' Competitiveness and Employability - PBLMD» prin implementarea metodei învățare bazată pe probleme (ÎBP).

Ce este învățarea bazată pe probleme?

- studenții soluționează probleme complexe, provocatoare, care sunt bazate pe cazuri reale;
- studenții lucrează în echipe sau grupuri mici (3-5 persoane) pentru elaborarea proiectului;
- studenții colectează și analizează informația necesară în mod individual, dar cu ghidare din partea profesorului;
- echipele/grupurile de studenți beneficiază de îndrumarea continuă a profesorului;
- studenții sunt evaluați în baza proiectelor elaborate în grup.

Care sunt avantajele învățării bazate pe probleme?

- explorarea și aplicarea cunoștințelor obținute;
- dezvoltarea abilităților de lucru în echipe;
- îmbunătățirea competențelor de comunicare;
- cultivarea abilităților de perfectare a documentelor juridice;
- formarea abilităților de formulare și apărare a pozițiilor sale cu dovezi și argumente raționale;



Annex 5: Roadmap.

	Activity on PBL implementation	Administration level
I STAGE <i>Short term:</i>	Teacher training on the application of the PBL method	Team established for the development of the study programme
	Elaborating the curriculum for teacher training in problem-based learning and its placement on Moodle	The team for the psycho-pedagogical module
	Incorporating the PBL teaching method into the curricula of disciplines with practical applicability selected for the pilot project	Team established for the development of the study programme
	Training teachers and students on the application of the PBL method	Team established for the development of the study programme and external experts
	Endowment of study facilities with equipment for the extensive use of information technologies	University Administration
	All departments will develop and promote policies for collecting feedback from students in the evaluation process. The department's policies for feedback evaluation should be based on rationally relevant pedagogies for the given discipline and must be approved by the quality committee	Administration of the Faculty of Law
	Ensuring the extensive use of information technologies for the efficiency of traditional learning combined with a high degree of application of the PBL method	University Administration
II STAGE <i>In the medium term:</i>	Training students who will participate in the pilot project on the application of the PBL method	Team established for the development of the study programme
	Applying the PBL method in training students in English-teaching groups	Team established for the development of the study programme
	Developping a Methodological Guideline on PBL implementation	Team established for the development of the study programme and the team for the psycho-pedagogical module

	Training teachers and students on the application of the PBL method according to the Methodological Guideline	Team established for the development of the study programme and the team for the psycho-pedagogical module
	Revision of teacher remuneration by increasing the number of hours of guidance on group work and student assessment	University Administration
	Applying the PBL method to disciplines with practical applicability in the training of students in all groups	Teachers from the Faculty of Law
	Arranging and equipping study spaces with equipment necessary for the implementation of PBL	University Administration
III STAGE <i>Long term:</i>	Creating the research group for the development and improvement of PBL-based teaching that will investigate the specificity of the PBL application process, taking into account the particularities of the disciplines	Departments at the Faculty of Law
	Signing cooperation agreements between the Faculty of Law and professional associations with clear provisions on the approval of the study programme and the participation in the external evaluation of the group work	Administration of the Faculty of Law
	Developing a new educational plan taking into account the reduction in the number of disciplines, the new educational plan will be based on competence, focused on employability (through consultation of employers, professional associations).	Administration of the Faculty of Law
	Approval of the study programme in Law with the compulsory endorsement of professional associations (Union of Legal Advisers, Association of Judges, Union of Lawyers, etc.)	Administration of the Faculty of Law
	The number of theoretical disciplines will be reduced, will be planned in the form of modules and largely oriented towards the project theme. The theoretical hours do not have to overlap with the hours planned for the project, which will be interdisciplinary. In this way, the ECTS credits granted to the realization of projects per year at the specialty will be increased (10-15 credits per semester).	Administration of the Faculty of Law
	Creating a system for collecting feedback from students and graduates on the quality of the study programme	Administration of the Faculty of Law

Annex 6: Action plan

Target groups (No. of participants)	Activity on PBL implementation and dissemination	Level of administration	Deadline
Teachers involved in the teaching process of English-language teaching groups (no. 20)	Training on the application of the PBL method	Team established for the development of the study programme	September 2017
Teachers involved in the training process at the Faculty of Law (no. 50)	Training on the application of the PBL method	Team established for the development of the study programme	October 2017
Students involved in the training process at the Faculty of Law (Cycle II) (no. 50 (psycho-pedagogical module))	Training on the application of the PBL method	Team established for the development of the study programme	October 2017
Doctoral students involved in the training process at the Faculty of Law (no.20 (psycho-pedagogical module))	Training on the application of the PBL method	Team established for the development of the study programme	October 2017
Those responsible for disciplines taught in English (no. 20)	Incorporating the PBL teaching method into the curricula of disciplines selected for the pilot project regarding the application of the PBL method	Teachers involved in the teaching process of English-language teaching groups	October 2017
Teachers, PhD students, master students.	Elaborating the curriculum for teacher training in problem-based learning and its placement on Moodle	The team for the psycho-pedagogical module	December 2017
Teachers, PhD students, master students.	Developping a Methodological Guideline on PBL implementation at the Law specialty	Team established for the development of the study programme and the team for the psycho-pedagogical module	December 2017
Teachers involved in the training process at the Faculty of Law (no. 50)	Training teachers on the application of the PBL method according to the Methodological Guideline	Team established for the development of the study programme and the team for the psycho-pedagogical module	January 2018

Students included in the pilot project regarding the application of the PBL method (no.15)	Training on the application of the PBL method according to the Methodological Guideline	Team established for the development of the study programme and the team for the psycho-pedagogical module	February 2018
Students involved in the training process at the Faculty of Law in all groups (no. 200)	Training on applying the PBL method to the Faculty of Law	Team established for the development of the study programme and the team for the psycho-pedagogical module	February 2018
Teachers and students involved in the teaching process of English-language teaching groups (no. 80)	Creating a system for collecting feedback from students and teachers on the application of the PBL method	Administration of the Faculty of Law	February 2018
Teachers, PhD students, master students.	Description of the particularities of the application of the PBL method in the training process in the Law specialty (publication of an article)	Team established for the development of the study programme and the team for the psycho-pedagogical module	March 2018
Teachers, PhD students, master students.	Publishing and presenting a Methodological Guideline on the implementation of the PBL in the specialty of Law	Team established for the development of the study programme and the team for the psycho-pedagogical module	April 2018
Teachers involved in the training process at the Faculty of Law from other universities	Training teachers on the application of the PBL method according to the Methodological Guideline	Team established for the development of the study programme and the team for the psycho-pedagogical module	May 2018
Teachers, PhD students, master students.	Creating the research group for the development and improvement of PBL-based teaching that will investigate the specificity of the PBL application process, taking into account the particularities of the disciplines	Departments at the Faculty of Law	May 2018

Annex 7: Study programme implemented from 1 September 2017

MINISTRY OF EDUCATION , CULTURE
AND RESEARCH
OF THE REPUBLIC OF MOLDOVA

MOLDOVA STATE UNIVERSITY

Coordinated: _____
„____” _____ 2017
registration number _____

Approved: _____
SENATE OF MOLDOVA STATE
UNIVERSITY
„____” _____ 2017
Minutes nr. ____

FACULTY OF LAW STUDY PROGRAMME

Level of qualification according to ISCED-6

General field of study – 042 Law

Professional field– 0421 Law

Speciality – 0421.1 Law

Total number of credits – 240

Obtained title - Bachelor in Law

Base of admission: baccalaureate or equivalent degree
university degree

Study language: romanian, english, french, russian

Study form – full-time attendance

CHIȘINĂU 2017

Head of Private Law Department, PhD, associate prof.

Nicolae Roșca

Head of Public Law Department, Dr. Sc., PhD., associate prof.

Andrei Negru

Head of Criminal Law Department, Dr. Sc., PhD., univ. prof.

Sergiu Brînză

Head of Procedural Law Department, PhD., associate prof.

Elena Belei

Head of European and International Law Department,

Dr. Sc., PhD., univ. prof.

Violeta Cojocar

Approved by Faculty Council
_____2017
Minutes nr. _____

Dean, Law Faculty, Moldova State University
PhD, univ. prof.

Sergiu Băieș

ACADEMIC CALENDAR

Nr.	Year of study	Didactic activities		Examination sessions		Internship	Vacation		
		Sem. I	Sem. II	Winter	Spring/summer		Winter	Spring	Summer
1	First year 2017-2018	01.09-16.12 (15 weeks)	29.01-19.05 (15 weeks)	18.12-23.12 15.01-28.01 (4 weeks)	21.05-15.06 (3 weeks)	-	24.12-08.01 (2 weeks)	Easter 08.04-16.04 (1 week)	28.06-31.08 (10 weeks)
2	Second year 2018-2019	01.09-9.12 (15 weeks)	01.02-06.05 (15 weeks)	13.12-21.12 09.01-28.01 (4 weeks)	22.05-10.06 (3 weeks)	Specialty Starting internship 07.05-21.05 (2 weeks)	24.12-08.01 (2 weeks)	Easter 30.04-07.05 (1 week)	28.06-31.08 (10 weeks)
3	Third Year 2019-2020	01.09-13.12 (15 weeks)	29.01-19.05 (15 weeks)	16.12-24.12 09.01-28.01 (4 weeks)	22.05-10.06 (3 weeks)	Specialty Starting internship 07.05-21.05 (2 weeks)	25.12-08.01 (2 weeks)	Easter 20.04-27.04 (1 week)	28.06-31.08 (10 weeks)
4	Fourth Year 2020-2021	01.09-16.12 (15 weeks)	10.01-02.06 (15 weeks)	15.12-30.12 (2 weeks)	08.06-30.06 (3 weeks)	Specialty internship 03.02-05.04 (10 weeks) Research internship 06.04-04.05 (4 weeks)	31.12-14.01 (2 weeks)	Easter 02.05-09.04 (1 week)	

In case of PBL strategy application

	Didactic activities carried out through the PBL strategy, including internship			Vacation		
	5 weeks	8 weeks	2 weeks	Winter	spring	summer
Semesters I-VII 15 week	<ul style="list-style-type: none"> • Theoretical basis (course and seminar) 4 hours per week • Monitoring work group activity • Current evaluation 	<ul style="list-style-type: none"> • Monitoring work group activity • Current evaluation 	<ul style="list-style-type: none"> • Presentation of projects • Final evaluation 	24.12-08.01 (2 weeks)	Easter 08.04-16.04 (1 week)	28.06-31.08 (10 weeks)
				24.12-08.01 (2 weeks)	Easter 30.04-07.05 (1 week)	28.06-31.08 (10 weeks)
				24.12-08.01 (2 weeks)	Easter 20.04-27.04 (1 week)	28.06-31.08 (10 weeks)
	14 weeks		1 week			
Semester VIII 15 week	<ul style="list-style-type: none"> • Monitoring of individual projects • Current evaluation 		<ul style="list-style-type: none"> • Preliminary evaluation of individual projects 	31.12-14.01 (2 weeks)	Easter 02.05-09.05 (1 week)	

Programme Content

Code	Module Discipline	Total hours	Including		Week			Type of final assessment	Nr. of credits
			Direct contact	Individual work	Lecture	Seminar	Laboratory		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Year I									
Semester I									
F.01.O.01	General Theory of Law	180	90	90	3	3		E	6
F.01.O.02	Constitutional Law (project)	180	According to the academic calendar					E	6
F.01.O.03	Roman Private Law	150	75	75	3	2		E	5
S.01.O.04	State-Judicial institutions	150	60	90	2	2		E	5
G.01.O.05	IT Communication	120	60	60			4	E	4
U.01. A.06	Philosophy	120	45	75	2	1		E	4
U.01. A.07	Psychology								
U.01. A.08	Political Science								
U.01. A.09	Social science								
G.01.O.10	Physical Training	30	30			2		C	
	Total sem. I	930	450	480	13	13	4	6 E	30
Semester II									
F.02.O.11	Civil Law (introduction and persons)	180	90	90	3	3		E	6
S.02.O.12	Administrative Law (project)	180	According to the academic calendar					E	6
F.02.O.13	Criminal Law. General Part I	180	90	90	3	3		E	6
U.02.A.15	History of Romanian Law	120	60	60	2	2		E	4
U.02.A.16	Philosophy of Law								
G.02.O.17	Foreign Language	120	60	60			4	E	4
U.02.A.18	Economy	120	45	75	2	1		E	4
U.02.A.19	European culture and civilization history								
U.02.A.20	European Integration								
U.02.A.21	Interpersonal and organizational communication culture								
G.02.O.22	Physical Training	30	30			2		C	
	Total sem. II	930	450	450	12	14	4	6 E	30
	Total year I	1860	930	900	25	27	8	12 E	60
Year II									
Semester III									
F.03.O.23	Criminal Law. General Part II	180	75	105	2	3		E	6
F.03.O.24	International Public Law	180	90	90	3	3		E	6
S.03.O.25	Contravention Law	150	75	75	2	3		E	5
F.03.O.26	Civil Law (real rights) (project)	150	According to the academic calendar					E	5

S.03.O.27	Financial Law	120	60	60	2	2		E	4
S.03.A.28	Diplomatic good practices and techniques	120	45	75	2	1		E	4
S.03.A.29	Juvenile delinquency								
S.03.A.30	Medical Law								
S.03.A.31	Comparative Legal Systems								
	Total semester III	900	450	450	13	15		6 E	30
Semester IV									
F.04.O.32	Civil Law. General Theory of obligations	180	90	90	3	3		E	6
F.04.O.33	Criminal Law. Special Part (I) (project)	150	According to the academic calendar					E	5
S.04.O.34	Tax Law	120	60	60	2	2		E	4
S.04.O.35	EU institutions Law	150	According to the academic calendar					E	5
S.04.O.36	Family Law	120	60	60	2	2		E	4
S.04.A.37	Armed conflicts Law	120	60	60	2	2		E	4
S.04.A.38	Comparative criminal Law								
S.04.A.39	Informational Law								
S.04.A.40	The organization of legal professions								
S.04.A.41	Legal status of real estate								
S.04.A.42	Social protection Law								
	Specialty Starting internship								
	Total semester IV	900	420	480	15	13		7 E	30
	Total Year II	1800	870	930	28	28		13 E	60
Year III									
Semester V									
F.05.O.43	Civil Law. Property transmitting contracts	150	75	75	3	2		E	5
F.05.O.44	Criminal Law. Special Part II	150	75	75	2	3		E	5
F.05.O.45	Criminal Process Law. General Part	180	75	105	2	3		E	6
F.05.O.46	Civil Process Law. General Part (project)	180	According to the academic calendar					E	6
S.05.O.47	Environmental Law	120	60	60	2	2		E	4
S.05.O.48	Criminology	120	60	60	2	2		E	4
	Total semester V	900	420	480	13	15		6 E	30
Semester VI									
S.06.O.49	Civil Law. Service Contracts. Succession.	150	60	90	2	2		E	5
F.06.O.50	Criminal Process Law. Special Part	150	90	60	3	3		E	5
F.06.O.51	Civil Process Law. Special Part	150	90	60	3	3		E	5
S.06.O.52	Private international Law	150	75	75	2	3		E	5
G.06.O. 53	Professional ethics	120	60	60	2	2		E	4
S.06.A.54	Crimes qualification	120	45	75	2	1		E	4
S.06.A.55	Transport and insurance Law								
S.06.A.56	Consumer protection law								
S.06.A.57	Civil procedure documents (project)		According to the academic calendar						

S.06.A.58	Criminal procedure documents								
S.06.A.59	Notary law								
S.06.A.60	Legislative techniques								
S.06.A.61	Human Rights legal protection (project)		According to the academic calendar						
S.06.A.62	International banking law								
	Specialty Starting internship	60	According to the academic calendar					E	2
	Total Semester VI	900	420	480	14	14		7E	30
	Total Year III	1800	900	900	27	29		13E	60
Year IV									
Semester VII									
S.07.O.63	Business Law	150	75	75	3	2		E	5
S.07.O.64	Forensic	180	90	90	3	3		E	6
S.07.O.65	Labor Law	180	90	90	3	3		E	6
S.07.O.66	International Trade Law	150	60	90	2	2		E	5
S.07.A.67	Labor conflicts	120	45	75	2	1		E	4
S.07.A.68	Competition Law								
S.07.A.69	Criminal execution Law								
S.07.A.70	Civil execution Law								
S.07.A.71	Constitutional comparative Law								
S.07.A.72	Actual problems of General Theory of Law								
S.07.A.73	European Convention for Human Rights Law								
S.07.A.74	Methods of specific crimes investigation								
S.07.A.75	Customs Law	120	60	60	2	2		E	4
S.07.A.76	Intellectual property Law								
	Total semester VII	900	420	480	15	13		6E	30
Semester VIII									
	Specialty internship	450	According to the academic calendar					E	15
	Research internship	180	According to the academic calendar					E	6
	Graduation exams	270		270				E	9
	Total semester VIII	900		900				3 E	30
	Total Year IV	1800	420	1380	15	13		9 E	60
	Total Programme	7260	3120	4110	96	96	8	47 E	240

Romanian language for non-native speakers

Code	Module/discipline	Total hours	Including		Week			Evaluation Form	Credits
			Direct contact	Individual work	Lecture	Seminars	Laboratory		
G.02.O.14	Romanian language	120	60	60		4		E	4

Facultative courses

Nr.	Facultative courses	Total hours	year	sem	Hours/week			Evaluation form	Credits
						S	L		
1.	Latin	180	I	II	0	0	6	Exam	6
2.	Legal logic	180	II	I	3	3	0	Exam	6
3.	Initiation in German Law	180	III	II	3	3	0	Exam	6
4.	Rhetoric	180	IV	VII	3	3	0	Exam	6

Internships

Nr. d/o	Internships	Sem.	Weeks	Hours	Period	Credits
1.	Specialty Starting internship	IV, VI	4	120		4
2.	Specialty internship	VIII	10	450	May	15
3.	Research internship	VIII	4	180		6
			Săptămâni Weeks	750		25

Graduation Exam

Nr. d/o	Graduation Exam	Period	Credits
1.	Integrated exam. law sciences	June	6
2.	Graduation (Licence) Thesis	June	3

Master studies preconditions

Code	Module/discipline	Total hours	Including		Hours/week			Evaluation form	Number of credits
			Direct contact	Individual work	Course	Seminars	Laboratory		
1	2	3	4	5	6	7	8	9	10
F.01.O.02	Constitutional Law	180	45	135	2	1		E	6
F.01.O.01	General Theory of Law	180	60	120	2	2		E	6
F.02.O.11	Civil Law. Introduction and persons	180	45	135	2	1		E	6
F.02.O.13	Criminal Law. General Part	180	45	135	2	1		E	6
F.03.O.24	International Public Law	180	45	135	2	1		E	6
		900	240	660	10	6		5E	30

EXPLANATORY NOTE

Specialty Law is an important one in a contemporary society. A qualified and competent specialist in jurisprudence can be placed in any sphere of harmonious social life both nationally and internationally.

As a specialty aim is to achieve an effective field training, creating prerequisites for socio-secure successful professional people specialized in law in the legal system of the Republic of Moldova and the possibility of professional advancement abroad.

In this context, Law specialty aims to achieve its goals through:

1. Formation of the graduate professional skills based on theoretical and practical training in law.
2. Formation of research abilities in the field of jurisprudence based on scientific composition. In this sense specialist training aims to investigate contradictions in jurisprudence.
3. Ensure the future of multilateral developed specialist, training civic position and the ethical dimension of personality.

Applying for Bachelor specialty Law (Cycle I) can be based on High School/Lyceum (BAC) diploma or university diploma.

The specialist in jurisprudence (law degree) can carry on his professional activity in different fields - civil, criminal, financial, banking, criminology, psychology, legislation, human rights protection, etc., taking into account specialty nominated.

An efficient achievement of all mentioned objectives assures the graduate successful socio-professional integration. Lawyers can operate as judges, prosecutors, advocates, employee in different government structures, especially the Ministry of Justice, Ministry of Interior, legal departments and sections of the central and local public administration authorities, institutions, organizations, public and private enterprises, as judge in the Constitutional Court, Ombudsman, institutions with judicial expertise; NGOs sorting and dispute mediation; organizations defending human rights; embassies abroad; international government and regional organizations, as well as any other areas that require protection, surveillance of rights, freedoms and interests or values protected by law.

Upon completion of university studies (cycle) student shall have the following general skills:

1. The ability to learn independently;
2. Ability to meet and develop values and professional ethics;
3. Ability to exercise his profession as a member of a team;
4. Ability to solve problem situations;
5. The ability to make decisions independently;
6. Possess sufficient knowledge of the foreign language to be able to work effectively in the legal field;
7. The ability to use information technologies in research and legal practice.

Professional skills:

1. Knowledge of Moldovan legislation, European legislation and other international legal instruments;
2. Knowledge of the concepts, theories, paradigms and methodologies in the legal field;
3. Use knowledge needed in data collection and information relating to a specific practical issue in law;
4. Using specific methods applied in law;
5. Application of techniques and specific legal instruments in solving practical problems;
6. Using a variety of techniques, methods and solutions to interpretative enunciation of acts;
7. Initiate and detection as proposed for solving problems in the legal activity.

The most effective way to train professional skills is the PBL (problem-based learning) strategy, which is done through projects. The application of group projects contributes to the creation of favorable conditions for the formation of general skills, which are transversal. The work in a small group shapes the system of attitudes, values and behavior of the person, prepares him for professional activity in a real work team.

Vocational training through projects is a good strategy under the conditions of the 21st century as it favors the formation of professional skills and is not just about the accumulation of knowledge. The PBL strategy teaches the future specialist to identify a problem, to study the work of the professional environment, to propose solutions and to implement them in practice.

Through the PBL strategy, the student becomes an active subject of his own training process. The PBL strategy is an effective way of training in the current context of higher education, with an emphasis on work outside the classroom oriented towards the needs of the labor market and the employer.

„Study programme”

SUMPh „Nicolae Testemițanu”

Work Package 4

Prepared by: Gavriliuc Mihail, vice-rector, university professor, project coordinator
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Chisinau, 2018

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1 INTRODUCTION

In accordance with the purpose of the Work Package 4 - WP4 of the project "Introducing the Problem Based Learning Methods in the Republic of Moldova: Enhancing the Competitiveness and Employability of Students" funded by the European Commission under the Erasmus Plus European Programme, the State University of Medicine and Pharmacy "Nicolae Testemitanu" of the Republic of Moldova, has developed the programme of the PBL course "Neuroscience" with student centered teaching and learning.

The "Neuroscience" course was developed as a multidisciplinary pilot programme, based on PBL, for the students of the third year, the spring semester, who are studying at the Public Health specialty of the Medical Faculty No. 1 of the USMF "Nicolae Testemitanu".

According to the action plan, the implementation of the course started on 5 February 2018.

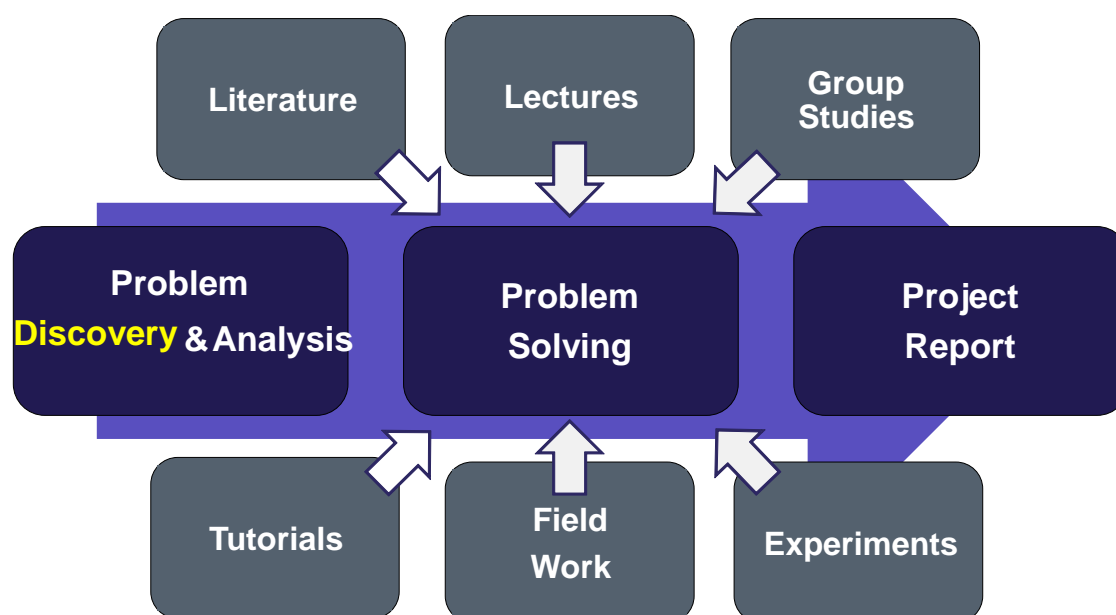
The synthesis of this report was carried out based on previous WP2 and WP3 reports, presented in the period 2015-2017. A substantial contribution and a major impact for the implementation of the study programme of the Neuroscience course was made by the mobility of the teaching staff at the partner universities in the EU as well as the experience gained in Chisinau during the PBL training sessions offered by the external partners of the project.

1.1. KEY ASSUMPTIONS

Bibliographic sources do not specify a PBL model that would apply to all study programmes. At the same time, PBL-based models are basically grounded on two key assumptions.

According to the first assumption, the work on the project is in the center, it is the basis, and has as components the discovery and analysis of problems, their solving and the report on the project, an assumption applied in PBL at the University of Aalborg (Figure 1).

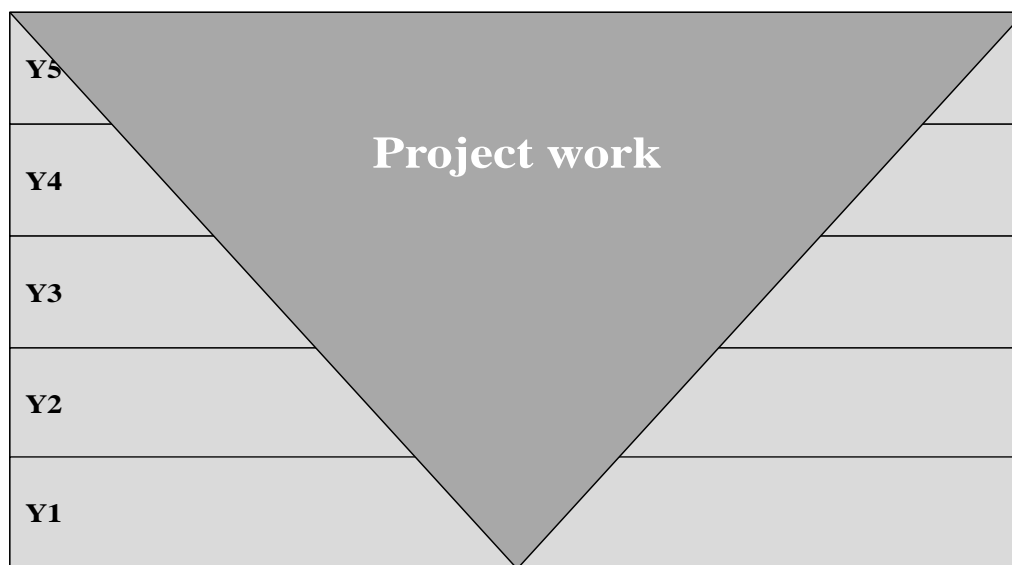
Figure 1: PBL model from AAU



Source: AAU, 2017 (the word "Discovery" was introduced by Romeo V. Turcan)

Another assumption relates to the relationship between work on the project and didactic direct contact activities. In the context of this report, a study programme, totally based on PBL, is the programme where there is a 50:50 sharing between student work on the project and direct contact activities (lectures, seminars, workshops, laboratory work and experiments) . At USMF "Nicolae Testemitanu", the sharing of work time on the project and the direct contact activities for the "Neuroscience" course is 50:50, following the model presented in 2016 under the PBLMD project by Louise Faber, Associate Professor at Aalborg University (Figure 2).

Figure 2. Project Work



Source: Louise Faber, PBLMD 2016

1.2 EXPECTED OUTCOMES

The implementation of problem-based learning in the Public Health specialty of the Faculty of Medicine, no.1 of USMF "Nicolae Testemitanu", is rightly a challenge for both students and the teaching staff because both sides face certain difficulties in the achievement of the learning objectives, but at the same time it is a new, interactive stage in the education of the medical student, which gives him / her the freedom in actions aimed at solving the problem.

The outcomes expected from the implementation of the "Neuroscience" course will be capitalized by:

- acquisition of the theoretical knowledge and practical skills applicable to the development of the health system in the Republic of Moldova;
- training of public health specialists in line with labor market requirements;
- enhancing competitiveness and employability in the workplace.

2 OUR VISION OF INTEGRATED HIGHER EDUCATION PROGRAMME BASED ON PBL - "NEUROSCIENCE"

2.1 OVERVIEW

The "Neuroscience" multidisciplinary course was developed as a pilot programme based on the curriculum of the Neurology discipline and adapted to the requirements of the PBL training model in order to study the physiological and pathological changes of the nervous system depending on the neural substrate and the causal factor, determined by the relationship between the structure and the internal organization of the nervous system, revealing the laws of syndromology and topical diagnosis.

The PBL "Neuroscience" course is in line with the objectives of the *Development Strategy of USMF "Nicolae Testemitanu" for the period 2011-2020, the Regulation for organization of studies in higher education based on the National Credit Studies System at the State University of Medicine and Pharmacy "Nicolae Testemitanu" from the Republic of Moldova*, approved by minutes of the session of the USMF Senate, no. 1/8 of 06.04.2017 and the standards of the *Quality Management System ISO 9001: 2015* regarding the development of the educational activities in the University.

The didactic activities related to the curriculum of the PBL "Neuroscience" course were structured in accordance with the educational plans of the disciplines integrated in the course, with the application of student centered education.

The PBL model from Aalborg University, with the amendment proposed by Romeo V. Turcan 2017, was adapted to the requirements of the educational programme in the specialty of Public Health for the "Neuroscience" course, which is under implementation at Medical University "Nicolae Testemitanu".

The multidisciplinary "Neuroscience" course is provided for a semester under full-time education.

This course was developed in accordance with the PBL teaching and learning requirements and methodology, so the distinctive and specific elements of the course refer to the training of competences and practical skills characteristic of problem-based education and includes the following components:

- centering educational activities on the student;
- developing team work skills;
- stimulating creativity;
- developing critical and clinical thinking;
- integrating disciplines to solve problems and case studies;
- developing practical dexterity;
- building cooperative skills in unpredictable situations and in stressful situations;
- student freedom in decision-making;
- taking responsibility in actions;
- application of knowledge and dexterity in medical practice.

The State University of Medicine and Pharmacy "Nicolae Testemitanu" applies systematic approach to curricular monitoring by elaborating, implementing and improving the efficiency of the training programme according to the standards of the Quality Management System ISO 9001: 2015 for the full satisfaction of the needs of the beneficiaries. Thus, there is a system of evaluation of the study programme that monitors curricula and students' progresses, with the identification and subsequent correction of nonconformities.

Curriculum monitoring programme of processes and outcomes is ensured by applying the following procedures: *assessment of teaching quality* and *assessment of teacher satisfaction*, including all elements necessary to meet the established requirements.

The workload of the student for the successful learning of the Neuroscience course was estimated to be in line with the 50:50 time sharing model on project work and direct contact, presented in 2016 under the PBLMD project by Louise Faber, associate professor at Aalborg University.

The use of PBL-based training methodology, with the application of modern learning principles, favors students' progress and ability to participate in professional training, including medical research, aimed at developing the theoretical and practical skills and requirements needed for a graduate for successful employment.

2.2 SEMESTERS

2.2.1 Semester 6, year of study III

The theme of the course "Neuroscience" was created based on the integration of fundamental disciplines, which are part of the educational plan for the public health specialty, focusing on the neuro-physiological and neuropathological substratum in the curriculum of each discipline and is studied during the 6th semester of the third year of university studies.

The professional training objectives of the Neuroscience course and the learning outcomes are staged according to the study programme and include the acquisition of practical skills and dexterity as follows:

At the level of knowledge and understanding the student must be able:

- to define the theoretical foundations of contemporary neurology;
- to identify the anatomical-functional features of the nervous system;
- to highlight the place and the weight of different structures, formations and areas of the nervous system in the realization of concrete functions and neurological syndromes as a whole;
- to establish topical diagnosis based on defined clinical syndromes;
- to report on etiopathogenesis, clinical manifestations, diagnosis, treatment principles and prophylaxis of neurological diseases.

At application level:

- to collect the history and assess the data on nervous system functions;
- to perform the special neurological examination on systems;
- to apply diagnostic methods in neurological diseases;

- to evaluate the results of clinical samples and tests, additional diagnostic investigations to assess the functional status of the nervous system;
- to apply the methods of examining the patient in emergency situations.

At the integration level:

- to appreciate the importance of neurology in the context of Medicine and integration with related medical disciplines;
- to evaluate the evolution of physiological processes and the etiology of the pathological processes of the nervous system;
- to oversee pathological processes and to use the methods of investigation, treatment and prophylaxis of nervous system diseases;
- to evaluate the results of diagnostic methods in neurological diseases;
- to make optimal decisions in emergency aid in critical situations;
- to develop scientific research projects in the field of neurology.

Based on the educational plan of the third year, semester 6, Public Health specialty (Annex 4), the students who attended the "Neuroscience" course and accumulated the transfer credits attributed to the given course are promoted to the next year of studies.

In accordance with the educational plan for integrated higher education, the "Neuroscience" course is mandatory and is completed by awarding 4 study credits. This course encompasses 4 case studies, the results of which are assessed by the facilitator and are part of the formative assessments. Each case presentation is evaluated in accordance with the grading system existing in the University. The formative grades are entered into the University Management Information System (SIMU), and then the average grade is calculated per semester, which is 50% of the final grade. The course „Neuroscience” ends with differentiated colloquy.

Within the timeframe foreseen for the case study, students consult the bibliographic sources available at the USMF Medical Library <http://library.usmf.md/>, which offers a wide range of information services to users, and they also benefit from the Services provided by [Information Center INFOMEDICA](#).

Students work actively both at and off-classes, exchange information by email, organize meetings and discussions on clinical cases, and if necessary, consult the facilitator.

3 CONCLUDING REMARKS

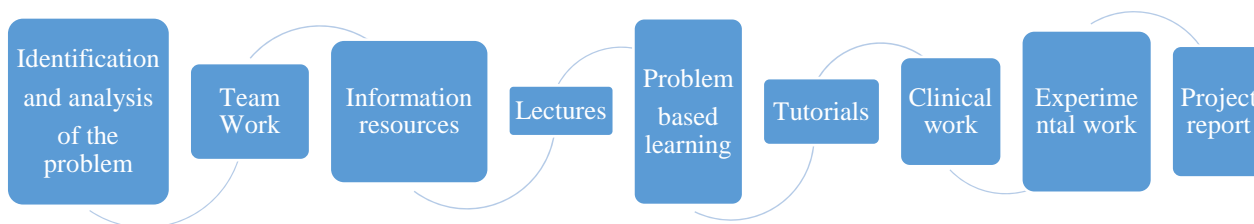
1. The Action Plan of the PBL "Neuroscience" course corresponds to the rigors of the normative acts of the USMF "Nicolae Testemitanu" and is implemented according to the requirements of the project "Introducing Problem Based Learning Methods in the RM: Enhancing Student Competitiveness and Employability" funded by the European Commission under the Erasmus Plus programme.
2. The didactic activities referring to the Study programme of the "Neuroscience" multidisciplinary course at the State University of Medicine and Pharmacy "Nicolae Testemitanu" are based on the PBL model of Aalborg University, adapted to the requirements of the Curriculum of the "Neuroscience" course.
3. The use of PBL-based teaching methods, with the application of modern learning principles, favors students' progress and ability to participate in professional training activities, including medical research, geared to developing personal skills and exigencies, enhancing competitiveness in employment.

Annex 1: Our vision of integrated higher education programme based on PBL - "Neuroscience"

In accordance with the Project Plan and the requirements of the educational plan for the Public Health specialty, for the students of the third year, in the spring semester of the academic year 2017-2018, the multidisciplinary "Neuroscience" course based on PBL was introduced, which is studied simultaneously with the subjects taught traditionally.

The didactic activities referring to the study programme of the "Neuroscience" multidisciplinary course at the State University of Medicine and Pharmacy "Nicolae Testemitanu" are based on the PBL model of the Aalborg University, adapted to the requirements of the Curriculum of the „Neuroscienc”e course (Figure 3) .

Figure 3: PBL structure of the "Neuroscience" course at USMF "Nicolae Testemitanu"



The course "Neuroscience" is attended by 28 students, who study at the Public Health specialty of the Faculty of Medicine no. 1 of the USMF "Nicolae Testemitanu". Lectures are held interactively with the use of IT equipment and then distributed to students via email or on the memory stick. During practical hours students are divided into 4 groups of 7 people.

The process of preparing students for the case study and other components of the training process is guided by 4 facilitators who have been trained in mobility at EU partner universities, particularly at Aalborg University, by PBL experts, and, at the same time, the facilitators also gained experience in the familiarization sessions with the PBL training methodology conducted in the Republic of Moldova by the project partners.

Table 1. The schedule of the "Neuroscience" course

Day/ Date	Time	Office	Lecture	Case	Manual dexterities	Consultation session	Colloquy
February 8	08.00 – 09.40	Neurology	Introduction in PBL				
	09.50 – 11.30	Neurology	Anatomy				
February 15	08.00 – 09.40	Neurology	Morphopatology				
	09.50 – 11.30	Neurology	Fiziology				
February 22	08.00 – 09.40	Neurology	Microbiology				
	09.50 – 11.30	Neurology		Case no. 1			
March 1	08.00 – 09.40	Neurology	Pathophysiology				
	09.50 – 11.30	Neurology		Case no. 1			
March 15	08.00 – 09.40	Neurology	Neurology				
	09.50 – 11.30	Neurology	Psychiatrics				

March 22	08.00 – 09.40	Neurology			Manual dexterities (Case no. 1)		
	09.50 – 11.30	Neurology	Genetics				
March 29	08.00 – 09.40	Neurology		Case no. 2			
	09.50 – 11.30	Neurology	Anatomy + Imagistics				
April 5	08.00 – 09.40	Neurology		Case no. 2			
	09.50 – 11.30	Neurology	Histology				
April 12	08.00 – 09.40	Neurology			Manual dexterities (Case no. 2)		
	09.50 – 11.30	Neurology		Case no. 3			
April 19	08.00 – 09.40	Neurology				Consultation session	
	09.50 – 11.30	Neurology		Case no. 3			
April 26	08.00 – 09.40	Neurology	Biochemistry				
	09.50 – 11.30	Neurology			Manual dexterities (Case no. 3)		
May 10	08.00 – 09.40	Neurology	Pathophysiology				
	09.50 – 11.30	Neurology		Case no. 4			
May 17	08.00 – 09.40	Neurology	Psychiatrics				
	09.50 – 11.30	Neurology		Case no. 4			
May 24	08.00 – 09.40	Neurology	Neurology				
	09.50 – 11.30	Neurology			Manual dexterities (Case no. 4)		
May 31	08.00 – 09.40	Neurology	Psychiatrics				
	09.50 – 11.30	Neurology				Consultation session	
June 7	08.00 – 09.40						Colloquy
	09.50 – 11.30						Colloquy


Annex 2: Roadmap

Table 2.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH		
	2015			2016									2017						2018																
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun		
Formarea grupului de lucru																																			
Cercetarea bunelor practici internaționale																																			
Obținerea aprobării derogărilor înaintate ME																																			
Crearea structurii programului																																			
Diseminarea noului program																																			
Dezvoltarea și implementarea unui chestionar referitor noului program																																			
Aprobarea noului curriculum																																			
Implementarea programului																																			

Annex 3: The Action Plan on the implementation of the "Neuroscience" course is found in the Plan of Activities for the Implementation of the University Development Strategy and the Quality Objectives for 2018.

Table 3.

	OBC 5.1 IMPLEMENTATION PLAN OF THE ACTIVITIES OF THE "NEUROSCIENCE" COURSE 2018				RED: 03
					PagE
	Specific objectives	Activities	Responsible for implementation	Performance indicators	Note
1	2	3	4	5	
I. Achieving the student-centered curricular reform aimed at acquiring the necessary competences in the professional activity, in accordance with the national and international standards.	1. Periodic evaluation of the study programme and its compatibility with the European PBL programmes.	Vice-rector for quality Vice-rector for international students DDMA FM1 dean's office	1.1 Initial report of the Curricular Reform Commission. 1.2 Coherence degree of the study programme estimated according to the annual questionnaire of the students of at least 75%.		
	2. Compatibility of the PBL study programme based on ECTS with those in the European partner health universities of the project to individualize the educational path of each student, ensuring students' mobility.	Vice-rector for quality Vice-rector for international students DDMA FM1 dean's office	2.1 Number of students who have benefited from mobility of at least 4.		
	3. Optimizing the ratio of direct contact hours (lectures and practical works) and individual work, group work, and work on the project.	Vice-rector for quality Vice-rector for international students DDMA FM1 dean's office	3.1 Sharing time between student work on the project and direct contact activities of at least 50:50.		

II. Continuously improving the quality of admission, training and assessment processes for students.	1. Implementing modern methods and techniques of training, based on clinical case and problem.	Vice-rector for quality Vice-rector for international students DDMA FM1 dean's office	1.1 Number of teachers trained with PBL methods and techniques of at least 14 . 1.2 Number of teachers applying modern methods, according to the results of the questionnaires of at least 14 students.	
	2. Ensuring the transparency of the competences assessment process by publishing the results on the Intranet.	Vice-rector for quality Vice-rector for international students DDMA FM1 dean's office DTIC	2.1 Number of facilitators who placed on the Intranet the results of assessment of students' knowledge and practical competences of 100% .	
	3. Systematic questioning (at the end of the course) of the students, regarding the quality of the didactic process in PBL format.	Vice-rector for quality Vice-rector for international students DDMA FM1 dean's office	3.1 Number of students subject to systematic questioning of at least 75% . 3.2 Number of facilitators who practice systematic questioning of students regarding the quality of the didactic process of at least 4	
III. Promoting the PBL programme in the University and among high school graduates	4. Editing and distributing promotional materials related to the PBL programme.	Vice-rector for quality Vice-rector for international students Department of Public Relations Admissions Commission	4.1 Number of high school graduates enrolled in the programme promoted of at least 10 .	

Annex 4: Study Programme in Preventive Medicine, ro

MINISTERUL SĂNĂTĂȚII AL REPUBLICII MOLDOVA
UNIVERSITATEA DE STAT DE MEDICINĂ ȘI FARMACIE „NICOLAE TESTEMIȚANU”



COORDONAT
Ministerul Educației
al Republicii Moldova
[Signature] 2017
Nr. de înregistrare: *328-0*



COORDONAT
Ministerul Sănătății
al Republicii Moldova
[Signature] 2017



APROBAT
la ședința Senatului Universitar
proces verbal nr. *3/2*
05 iunie 2017

”APROB”
Rector, profesor universitar,
de Medicină, academician al A.Ș.M.
[Signature]
Ion Ababii



FACULTATEA MEDICINĂ Nr. 1

PLAN DE ÎNVĂȚĂMÂNT PENTRU STUDIUL SUPERIOARE INTEGRATE

Nivelul calificării conform ISCED: 7

Domeniul general de studiu: **091 Sănătate**

Domeniul de formare profesională: **0910 Sănătate Publică**

Programul de studiu: **0910.1 Medicină Preventivă**

Numărul total de credite de studii: **360**

Titlul conferit: **Licențiat în medicină**

Baza admiterii: **Diploma de bacalaureat sau un act echivalent de studii; diploma de studii superioare**

Limba de instruire: **română**

Forma de organizare a învățământului: **învățământ cu frecvență**

CHIȘINĂU 2017

[Signature]

NOTĂ EXPLICATIVĂ

Concepția formării specialistului

Învățământul în domeniul de formare profesională **0910.1 Medicină Preventivă** are misiunea de a pregăti specialiști capabili să asigure starea de sănătate a populației și prevenirea bolilor în rândul populației. Domeniul dat este orientat spre promovarea noilor metode și concepte moderne în asigurarea stării de sănătate a populației, utilizarea unui management eficient în promovarea sănătății.

Necesitățile pentru programele de formare profesională au fost identificate la nivel național prin consultații cu Ministerul Sănătății, Centrele de Sănătate Publică și cerințele în cadre. Absolvenții sunt solicitați pe piața forței de muncă, deoarece asigurarea stării de sănătate este o cerință indispensabilă vieții umane.

Programul de studii în **0910.1 Medicină Preventivă** se adresează unor categorii foarte largi ale populației: absolvenți ai liceelor, colegiilor de medicină, instituțiilor de învățământ superior, care și-au planificat cariera profesională în domeniul sănătății publice. Programul dat de studiu are un caracter inovator, deoarece la elaborarea lui s-a ținut cont de complexitatea și caracterul multidisciplinar al activității specialiștilor din domeniul medicinei preventive și de necesitatea instruirii continue a lor. În acest caz pregătirea calitativă fundamentală a specialistului din medicină preventivă îi va permite continuarea ulterioară a studiilor în rezidențiat, masterat și doctorat.

Scopul și misiunea programului de studiu

Programul dat are scopul de a forma profesioniști în domeniul Medicină Preventivă pentru monitorizarea stării de sănătate, elaborarea și realizarea politicilor și programelor naționale de sănătate publică, prevenirea morbidității în rândul populației, promovarea modului sănătos de viață. Programul propune pregătirea medicilor epidemiologi, igienisti, microbiologi și manageri ai instituțiilor medicale.

Obiectivul general al programului de studiu

Programul de studiu **0910.1 Medicină Preventivă** are drept obiectiv pregătirea viitorilor medici în medicină preventivă licențiați în domeniul prevenției, profilaxiei morbidității populației, promovării sănătății, planificării și organizării diverselor misiuni în domeniul medicinei preventive. Datorită abilităților și aptitudinilor formate pe parcursul studiilor vor asigura necesitățile și sarcinile profesionale din domeniul Medicinei preventive.

- Formarea profesională a specialiștilor în domeniul Sănătății Publice în conformitate cu nivelul actual al cunoașterii;
- Asigurarea formării continue postuniversitare a specialiștilor din domeniul Sănătății Publice;
- Promovarea învățământului superior pe plan național și internațional;
- Promovarea cercetării științifice ca una din activitățile de bază a cadrelor didactice prin colaborări naționale și internaționale.

Gradul de noutate și relevanța programului de studiu

Programul de învățământ este elaborat în conformitate cu cerințele standardului internațional ISCED. Conținutul programului de studiu și unitățile de curs/module sunt orientate spre formarea competențelor transversale și profesionale la viitorii specialiști.

Planul de învățământ este elaborat în conformitate cu următoarele acte normative naționale:

- Codul Educației nr. 152 din 17 iulie 2014 (Monitorul Oficial al Republicii Moldova, 2014, nr. 139-324, art. 634);

- Clasificatorul ocupațiilor din Republica Moldova (CORM 006-2014) nr. 22 din 03.03.2014 (Monitorul Oficial al Republicii Moldova, 2014, nr. 120-126, art. 670);
- Hotărârea de Guvern nr. din 23.06.2017 cu privire la aprobarea Nomenclatorului domeniilor de formare profesională și a specialităților în învățământul superior (Monitorul Oficial al Republicii Moldova, 2017, nr. 216-228);
- Planul-Cadru pentru studii superioare (ciclul I – Licență, ciclul II – Master, studii integrate, ciclul III - Doctorat), aprobat prin ordinul Ministerului Educației nr. 1045 din 29.10.2015
- Regulamentului de organizare a studiilor în învățământul superior în baza Sistemului Național de Credite de Studiu, aprobat prin ordinul Ministrului Educației nr. 1046 din 29.10.2015;
- Regulamentul-cadru privind organizarea examenului de finalizare a studiilor superioare de licență, aprobat prin ordinul Ministrului Educației nr.1047 din 29.10.2015;

Programul de studiu este în concordanță cu tendințele actuale în materie de formare a medicilor în domeniul Medicinei preventive și cu programele de studii similare din universitățile de peste hotare.

Caracteristici:

Durata instruirii în programul de studiu **0910.1 Medicină Preventivă** este de 6 ani. După *funcția* în formarea profesională inițială prin competențe generale și competențe specifice, unitățile de curs sunt grupate în următoarele componente:

- a) componenta *fundamentală* (cod F);
- b) componenta *de formare a abilităților și competențelor generale* (cod G);
- c) componenta *de orientare socio-umanistică* (cod U);
- d) componenta *de specialitate* - de (cod S);

Primii trei ani studenții studiază disciplinele de cultură generală și social umaniste, fundamentale, iar în ultimii trei ani accentul este pus pe disciplinele de specialitate.

După *gradul de obligativitate și posibilitatea de alegere*, unitățile de curs se clasifică în:

- a) *obligatorii*;
- b) *opționale*;
- c) *la libera alegere*.

Repartizarea pe semestre a disciplinelor este condiționată de logica procesului de pregătire a unui farmacist. Volumul mare de material didactic, care necesită preponderent contact direct cu profesorul atât la cursuri, dar în special la lucrări practice de laborator și seminare, justifică durata semestrelor de 17 săptămâni. Totodată, numărul mare de discipline studiate pe parcursul semestrului, justifică repartizarea creditelor de studii și selectarea formei de evaluare a finalităților de curs în baza priorităților și importanței fiecăreia din ele în formarea viitorului specialist: de la 1 credit și mai mult și evaluarea finală a unității de curs prin coloevii fără notă – C; prin coloevii cu notă (diferențiate) – CD și examene - E. Astfel, graficul procesului de studii pentru anii I-V prevede anual 34 săptămâni de studii, repartizate în două semestre a câte 17 săptămâni fiecare, două sesiuni de examinare cu durata de 3 săptămâni la finele semestrelor. La anul XII semestrul de primăvară are durata de 12 săptămâni, care reprezintă practica de Licență urmată de examenele de absolvire. Toate disciplinelor sînt concepute cu activități didactice sub formă de cursuri și aplicații practice (lucrări practice sau de laborator și seminare).

Coresponderea obiectivelor programului strategiei instituționale de dezvoltare

Obiectivele planului de învățământ corespund strategiei instituționale de dezvoltare, fiind orientate spre calitate și excelență academică, perfecționarea activității didactice prin diversificarea metodelor de predare-învățare-evaluare, creșterea competitivității, integrarea profundă cu sistemul de sănătate.

Conținutul planului de învățământ este racordat la politica Universității de Stat de Medicină și Farmacie Nicolae Testemianu în domeniul calității. Unitățile de curs/module incluse în planul de învățământ sunt parcurse de studenți într-o succesiune logică, pornind cu cele fundamentale, generale și continuând cu speciale domeniului de formare, în care se definesc competențele transversale și cele profesionale.

Abordări pedagogice

Învățământul integral este orientat spre cunoștințe de ordin general și special, astfel ca studenții să cunoască tot spectrul de probleme legate de starea de sănătate și maladiile cu care se poate confrunta populația, metodele de prevenție, tratament, diagnostic și toate problemele aferente. Studenții sunt instruiți prin aplicarea diferitor metode didactice de predare: ore de curs, seminare, lucrări practice, proiecte individuale, fișe de examinare, ceea ce contribuie la dezvoltarea calităților interpersonale, capacitatea de comunicare și lucru în echipă.

În procesul de instruire se pune accentul pe metode interactive de predare, care sporesc potențialul intelectual al studentului și impunerea unui efort personal în procesul de învățare și pregătire pentru viitoarea activitate profesională. În mod special se îmbină în procesul de studii diferite metode și procedee precum: problema bazată pe studii, studii de caz, jocul de rol, conversația la patul pacientului, dezbateri, problematizarea, testarea, cercetarea proiectelor.

Angajabilitate

Calificarea obținută după absolvirea specialității de Medicină Preventivă permite deținătorului diplomei de licență să participe la concursul în rezidențiat, doctorat.

Metodele și criteriile de evaluare a competențelor în cadrul programului

Conceptul de evaluare pune accentul pe examinarea competențelor de aplicare în practică în domeniul Medicină Preventivă. Studenții pe parcursul anilor de studii vor realiza un număr mare de lucrări practice, lucru individual prin realizarea proiectelor, fișelor medicale, avizelor, care sunt programate pentru fiecare modul și vor demonstra aptitudinile și competențele profesionale.

Evaluarea curentă și finală se realizează în conformitate cu formele de evaluare a cunoștințelor studenților aprobate de catedre. Planul de învățământ prevede următoarele forme și tipuri de evaluare a cunoștințelor teoretice și practice a studenților:

- Evaluarea curentă – care se efectuează în cadrul orelor practice, de laborator, seminarelor prin diverse modalități: testări sistate la calculator, referate, proiecte, lucrări individuale, fișe medicale, manipulații. Pe parcursul semestrului se efectuează testări obligatorii, în dependență de solicitarea catedrei, prin care se totalizează situația intermediară a reușitei studentului.
- Evaluarea finală prezintă o metodă combinată, care constă din testare, examen oral și deprinderi practice.

Programul de studii se finalizează cu susținerea examenului la Sănătate Publică format din etapa de testare, interviu oral și susținerea tezei de licență.

Sporirea calității

Asigurarea și sporirea calității se va face prin evaluarea internă și externă a programelor de studiu, evaluarea personalului implicat în formarea profesională, monitorizarea competențelor studenților în etapele de pregătire și cele finale ale absolvenților, dezvoltarea resurselor umane și materiale pentru a asigura un mediu educațional productiv.

Finalități de studiu și competențe

Drept finalități scontate ale programului de studiu **0910.1 Medicină Preventivă** vizează formarea tinerilor specialiști, deținători ai titlului de medic licențiat, care denotă aptitudini, abilități, cunoștințe și competențe transversale și profesionale care corespund cerințelor și așteptărilor angajatorilor confirmate prin diplomă de licență cu 360 credite transferabile și și asigură oportunitatea de a continua studiile prin rezidențiat.

Competențe profesionale:

- CP1. Cunoașterea temeinică a particularităților de structură, dezvoltare și funcționare a organismului uman în diverse stări fiziologice și patologice.
- CP2. Efectuarea diverselor manopere practice și procedee pentru realizarea activităților profesionale specifice specialității pe baza cunoștințelor din științele fundamentale;
- CP3. Elaborarea planului de prevenire, reabilitare în diverse situații și selectarea procedeedelor adecvate pentru acestea, inclusiv acordarea asistenței medicale de urgență;
- CP4. Utilizarea tehnicilor medicale, investigațiilor instrumentale și de laborator, a tehnologiilor digitale pentru rezolvarea sarcinilor specifice conduitei medicului în diverse situații de urgență.
- CP5. Planificarea, coordonarea și efectuarea activităților de promovare a sănătății și a măsurilor profilactice pentru îmbunătățirea sănătății la nivel individual și comunitar.
- CP6. Evaluarea și asigurarea calității serviciilor medicale în relație cu manoperele, procedeele și tratamentele asociate.

Competențe transversale:

- CT1. Executarea responsabilă a sarcinilor profesionale cu aplicarea valorilor și normelor eticii profesionale, precum și prevederilor legislației în vigoare. Promovarea raționamentului logic, a aplicabilității practice, a evaluării și autoevaluării în luarea deciziilor;
- CT2. Realizarea activităților și exercitarea rolurilor specifice muncii în echipă în diverse instituții medicale. Promovarea spiritului de inițiativă, dialogului, cooperării, atitudinii pozitive și respectului față de ceilalți, a empatiei, altruismului și îmbunătățirea continuă a propriei activități;
- CT3. Autoevaluarea obiectivă a nevoii de formare profesională continuă în scopul prestării serviciilor de calitate și al adaptării la dinamica cerințelor politice în sănătate și pentru dezvoltarea personală și profesională. Utilizarea eficientă a abilităților lingvistice, a cunoștințelor în tehnologiile informaționale, a competențelor în cercetare și comunicare.

Consultarea partenerilor și coordonarea procesului de elaborare a programului conform standardelor de asigurare a calității

Planul de învățământ la specialitatea Medicină preventivă este racordat la cerințele procesului de la Bologna și elaborat în concordanță cu experiența acumulată de universitățile europene. Programul de studii este coordonat cu strategia de dezvoltare a sistemului de sănătate.

În baza concepției de pregătire a specialiștilor Medicină preventivă se discută în cadrul catedrelor. Toate propunerile sunt discutate și analizate detaliat de către comisia de reformă curriculară, instituită în baza ordinului rectorului. Modificările sunt aprobate în cadrul ședinței Consiliului Facultății și Senatului.

Asigurarea și sporirea calității se va efectua prin:

- ✓ Implementarea unui program anual de audit intern al ofertei educaționale din perspectiva următorilor factori ai calității – satisfacția beneficiarilor, eficacitatea, fezabilitatea;
- ✓ Evaluarea internă și externă a calităților programelor de formare;
- ✓ Asigurarea unui feedback permanent de consultare a beneficiarilor externi și interni (studenți, cadre didactice, manageri) și altor parteneri de interes în scopul ameliorării ofertei educaționale;
- ✓ Autoevaluarea și evaluarea reciprocă a personalului implicat în formarea profesională, monitorizarea competenței studenților la etapele de pregătire și cele finale ale absolvirii;
- ✓ Dezvoltarea resurselor umane și materiale pentru a asigura un mediu și proces educațional productiv.

CALENDARUL UNVERSITAR/GRAFICUL PROCESULUI DE STUDII

Anul de studii	Activități didactice		Sesiuni de examene (săptămâni)		Stagii de practică	Vacanțe		
	Sem.I	Sem.II	iarnă	vară		Iarnă	primăvară	Vară
I	01.09-29.12	5.02-08.06	09-26.01	11.06-30.06	-	30.12-08.01	08.04-16.04	01.07-31.08
II	01.09-29.12	5.02-08.06	09-26.01	11.06-30.06	02-27.07	30.12-08.01	08.04-16.04	30.07-31.08
III	01.09-29.12	5.02-08.06	09-26.01	11.06-30.06	02-27.07	30.12-08.01	08.04-16.04	30.07-31.08
IV	01.09-29.12	5.02-27.06	modular	modular	-	30.12-08.01	08.04-16.04	02.07-31.08
V	01.09-29.12	5.02-27.06	modular	modular	-	30.12-08.01	08.04-16.04	02.07-31.08
VI	01.09-29.12	5.02-6.05	modular	14.05-08.06	5.02-6.05	30.12-08.01	08.04-16.04	-

CONȚINUTUL PLANULUI DE ÎNVĂȚĂMÂNT PE ANI DE STUDII

Cod	Denumirea unității de curs/modul	Total ore			Nr. ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Studiu individual	Curs	Lucrări practice	Seminar		
1	2	3	4	5	6	7	8	9	10
ANUL I, Semestrul I (17 săptămâni)									
Discipline obligatorii (O)									
F.01.O.001	Anatomia omului	180	105	75	37	34	34	E	6
U.01.O.002	Antropologia și filosofia în medicină	90	51	39	17	14	20	CD	3
F.01.O.003	Biologia moleculară	150	85	65	34	20	31	E	5
F.01.O.004	Biochimia descriptivă	90	51	39	17	14	20	E	3
F.01.O.005	Histologia, citologia, embriologia	150	85	65	34	21	30	C	5
G.01.O.006	Limba engleză/franceză	120	68	52	-	-	68	C	4
S.01.O.007	Urgența medicală primară	90	51	39	17	20	14	CD	3
Total discipline obligatorii		870	496	374	156	123	217	3E, 2CD, 3C	29
Discipline obligatorii (O) Pachetul I									
G.01.A.008	Curs introductiv universitar (Tehnologii informaționale: Bazele culturii informaționale)	30	20	10	20	-	-	C	1
G.01.A.009	Tehnici de comunicare bazate pe IT în medicină								
Total semestrul I curricular		900	516	384	176	123	217	5E, 2CD, 3C	30
Discipline obligatorii extracurriculare (OE)									
G.01.O.010	Educația fizică	34	34	-	-	34	-	C	-
ANUL I, Semestrul II (17 săptămâni)									
Discipline obligatorii (O)									
F.02.O.011	Anatomia omului	120	85	35	17	30	38	E	4
F.02.O.012	Biochimia	120	85	35	34	20	31	C	4
F.02.O.013	Biofizica	120	68	52	17	20	31	E	4
U.02.O.014	Comunicarea și comportamentul în medicină	90	51	39	17		34	CD	3
F.02.O.015	Genetica umană	150	85	65	34	20	31	E	5
F.02.O.016	Histologia, citologia, embriologia	150	85	65	34	20	31	E	5
G.02.O.017	Limba engleză/franceză	120	68	52	-	68	-	E	4
Total discipline obligatorii		870	527	343	153	178	196	5E	29
Discipline obligatorii (O) Pachetul II									
U.02.A.018	Istoria medicinei	30	20	10	20	-	-	C	1
U.02.A.019	Istoricul savanților tineri mediciști								
Total semestrul II curricular		900	547	353	173	178	196	5E, 1CD, 2C	30
Total anul I curricular		1800	1063	737	349	301	413	10E, 3CD, 5C	60
Total discipline obligatorii extracurriculare (OE)									
G.02.O.020	Educația fizică	34	34	-	-	34	-	C	-
Total extracurricular		60	60			60		2C	

Cod	Denumirea unității de curs/modul	Total ore			Nr. ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Lucru individual	Curs	Lucrări practice	Seminare		
1	2	3	4	5	6	7	8	9	10
ANUL II, Semestrul III (17 săptămâni)									
Discipline obligatorii (O)									
F.03.O.021	Anatomia topografică și chirurgie operatorie	120	68	52	17	20	31	E	4
F.03.O.022	Biochimia	150	85	65	34	20	31	E	5
F.03.O.023	Igiena generală	120	85	35	34	31	20	C	4
F.03.O.024	Fiziologia umană	150	85	65	34	20	31	C	5
F.03.O.025	Microbiologia, virusologia și imunologia	180	102	78	34	38	30	C	6
U.03.O.026	Sociologia și psihologia generală	150	85	65	34	-	51	E	5
Total discipline obligatorii		870	510	360	187	129	194	3E, 3C	29
Discipline opționale (A)									
Pachetul III									
U.03.A.027	Sociologia medicală	30	20	10	20	-	-	C	1
U.03.A.028	Psihologia medicală								
Total semestrul III curricular		900	530	370	207	129	194	3E, 4C	30
ANUL II, Semestrul IV (17 săptămâni)									
Discipline obligatorii (O)									
F.04.O.029	Biotistica și metodologia cercetării	120	68	52	34	-	34	E	4
F.04.O.030	Farmacologia	150	85	65	34	20	31	CD	5
F.04.O.031	Fiziologia umană	150	85	65	34	20	31	E	5
F.04.O.032	Igiena generală	150	85	65	34	20	31	E	5
F.04.O.033	Microbiologia, virusologia și imunologia	150	85	65	34	20	31	E	5
S.04.O.034	Stagiul practic*	150	120	30	-	120	-	E	5
Total discipline obligatorii		870	528	342	170	200	158	5E, 1CD	29
Discipline opționale (A)									
Pachetul IV									
U.04.A.035	Leadershipul în domeniul serviciilor medicale	30	20	10	20	-	-	C	1
U.04.A.036	Psihologia personalității								
Total semestrul IV curricular		900	548	352	190	200	158	5E, 1CD, 1C	30
Total anul II curricular		1800	1078	722	397	329	352	8E, 1CD, 5C	60

Cod	Denumirea unității de curs/modul	Total ore			Nr. ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Lucru individual	Curs	Lucrări practice	Seminare		
1	2	3	4	5	6	7	8	9	10
ANUL III, Semestrul V (17 săptămâni)									
Discipline obligatorii (O)									
S.05.O.037	Asigurarea sanitaro-igienică în situații excepționale	120	68	52	17	-	51	E	4
S.05.O.038	Boli interne - semiologia	150	85	65	34	30	21	C	5
S.05.O.039	Boli chirurgicale-semiologia	120	68	52	17	30	21	C	4
U.05.O.040	Bioetica	30	25	5	10	-	15	C	1
F.05.O.041	Fiziopatologia	150	85	65	34	30	21	E	5
F.05.O.042	Morfopatologia	150	85	65	34	30	21	E	5
S.05.O.043	Medicina socială	150	85	65	34	-	51	E	5
Total discipline obligatorii		870	501	369	180	120	201	4E, 3C	29
Discipline opționale (A)									
Pachetul V									
S.05.A.044	Microbiologia clinică	30	20	10	20	-	-	C	1
S.05.A.045	Microbiologia sanitară								
Total semestrul V curricular		900	521	379	200	120	201	4E 4C	30
ANUL III, Semestrul VI (17 săptămâni)									
S.06.O.046	Boli interne - semiologia	150	85	65	34	30	21	E	4
S.06.O.047	Boli chirurgicale-semiologia	120	68	52	17	30	21	E	4
S.06.O.048	Igiena radiațiilor	120	68	52	17	30	21	E	4
S.06.O.049	Neuroștiințe	120	68	52	17	30	21	CD	4
S.06.O.050	Radiologia și imagistică	90	51	39	17	17	17	CD	4
S.06.O.051	Traumatologia și ortopedia	120	68	52	17	30	21	CD	4
S.06.O.052	Stagiul practic*	150	120	30	-	120	-	E	5
Total discipline obligatorii		870	528	342	119	287	122	4E, 3CD	29
Discipline opționale (A)									
Pachetul VI									
S.06.A.053	Economia sănătății	30	20	10	20	-	-	C	1
S.06.A.054	Managementul financiar în sistemul de sănătate								
Total semestrul VI curricular		900	548	352	139	287	122	4E, 3CD, 4C	30
Total anul III curricular		1800	1069	731	339	407	323	8E, 3CD, 5C	60

Cod	Denumirea unității de curs/modul	Total ore			Nr. ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Lucru individual	Curs	Lucrări practice	Seminare		
1	2	3	4	5	6	7	8	9	10
ANUL IV, Semestrul VII (17 săptămâni)									
Discipline obligatorii (O)									
S.07.O.055	Anestezologia și reanimatologia	60	35	25	10	15	10	C	2
S.07.O.056	Chirurgia generală	180	140	40	20	60	60	E	6
S.07.O.057	Igiena mediului	300	210	90	60	75	75	E	10
S.07.O.058	Management și marketing în sănătate	60	35	25	10		25	CD	2
S.07.O.059	Obstetrica și ginecologia	120	70	50	20	30	20	E	4
S.07.O.060	Oftalmologia	60	35	25	10	15	10	C	2
S.07.O.061	Pneumofiziologia	90	70	20	20	30	20	CD	3
Total discipline obligatorii		870	595	275	150	225	220	3E, 2CD, 2C	29
Discipline opționale (A)									
Pachetul VII									
S.07.A.062	Sistemul informațional medical								
S.07.A.063	Managementul sanitar militar. Toxicologia militară	30	20	10	20	-	-	C	1
Total semestrul VII curricular		900	615	285	170	225	220	3E, 2CD, 3C	30
ANUL IV, Semestrul VIII (17 săptămâni)									
S.08.O.064	Boli interne	180	140	40	40	50	50	E	6
S.08.O.065	Endocrinologia	60	35	25	10	15	10	C	2
S.08.O.066	Hematologia	60	35	25	10	15	10	C	4
S.08.O.067	Igiena alimentației și nutriția umană	270	175	95	50	75	50	E	9
S.08.O.068	Oncologia	60	35	25	10	15	10	C	2
S.08.O.069	Psihiatria, Psihologia medicală și Narcologia	60	35	25	10	15	10	CD	2
S.08.O.070	Semiologia pediatică. Puericultura. Pediatria	180	140	40	40	50	50	E	6
Total discipline obligatorii		870	595	275	170	235	190	3E, 1CD, 3C	29
Discipline opționale (A)									
Pachetul VIII									
S.08.O.071	Siguranța alimentelor și sănătatea umană								
S.08.O.072	Nutriția sportivă	30	20	10	20			C	1
Total semestrul VIII curricular		900	615	285	190	235	190	C	30
Total anul IV curricular		1800	1230	570	360	460	410	6E, 3CD, 7C	60

Cod	Denumirea unității de curs/modul	Total ore			Nr. ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Lucru individual	Curs	Lucrări practice	Seminare		
1	2	3	4	5	6	7	8	9	10
ANUL V, Semestrul IX (17 săptămâni)									
Discipline obligatorii (O)									
S.09.O.073	Boli infecțioase la adulți	150	105	45	30	45	30	E	5
S.09.O.074	Epidemiologia	300	210	90	42	84	84	E	10
S.09.O.075	Igiena copiilor și adolescenților	180	140	40	32	58	50	E	6
S.09.O.076	Managementul Supravegherii de Stat în Sănătate Publică	60	35	25	10	-	25	CD	2
S.09.O.077	Parazitologia medicală și boli infecțioase tropicale	120	70	50	20	30	20	CD	4
S.09.O.078	Urgente medicale	60	35	25	10	15	10	C	2
Total discipline obligatorii		870	595	275	144	232	219	3E, 2CD, 1C	29
Discipline opționale (A)									
Pachetul IX									
S.09.A.079	Igiena IMSP și profilaxia infecțiilor nosocomiale								
S.09.A.080	Epidemiologia și combaterea HIV	30	20	10	20	-	-	C	1
Total semestrul VII curricular		900	615	285	164	232	219	3E, 2CD, 2C	30
ANUL V, Semestrul X (17 săptămâni)									
S.10.O.081	Boli infecțioase la copii	90	70	20	20	25	25	CD	3
S.10.O.082	Dermatovenerologia	90	70	20	20	25	25	E	3
S.10.O.083	Epidemiologia clinică	60	35	25	10	15	10	CD	2
S.10.O.084	Epidemiologia în situații excepționale	60	35	25	10	15	10	CD	2
S.10.O.085	Igiena muncii	300	210	90	60	75	75	E	10
S.10.O.086	Medicina legală și dreptul medical	90	70	20	20	25	25	E	3
S.10.O.087	Otorinolaringologie	60	35	25	10	15	10	C	2
S.10.O.088	Promovarea sănătății și educația pentru sănătate	120	70	50	20	25	25	CD	4
Total discipline obligatorii		870	595	275	170	220	205	3E, 4CD, 1C	29
Discipline opționale (A)									
Pachetul X									
S.10.O.089	Estimarea riscului								
S.10.O.090	Siguranța chimică și toxicologia	30	20	10	20	-	-	C	1
Total semestrul VIII curricular		900	615	285	190	220	205	3E, 4CD, 3C	30
Total anul IV curricular		1800	1230	570	354	452	424	6E, 6CD, 5C	60

Cod	Denumirea unității de curs/modul	Total ore			Nr. ore pe tipuri de activități			Forma de evaluare	Nr. credite
		Total	Contact direct	Lucru individual	Curs	Lucrări practice	Seminare		
1	2	3	4	5	6	7	8	9	10
ANUL VI, Semestrul XI (15 săptămâni/7 ore/zi)									
Discipline obligatorii (O)									
S.11.O.091	Boli ocupaționale	120	70	50	20	30	20	E	4
S.11.O.092	Diagnosticul epidemiologic	120	105	15	2	63	40	CD	4
S.11.O.093	Ecologia umană	120	70	50	20	20	30	E	4
S.11.O.094	Laboratorul sanitaro-igienic	90	70	20	20	30	20	CD	3
S.11.O.095	Laboratorul microbiologic	90	70	20	20	30	20	CD	3
S.11.O.096	Medicina de laborator	90	70	20	20	30	20	CD	3
S.11.O.097	Medicina de familie	120	70	50	20	30	20	E	4
S.11.O.098	Reabilitarea medicală	60	35	25	10	15	10	C	2
S.11.O.099	Promovarea sănătății comunitare și familiei – aspecte epidemiologice	60	35	25	10	15	10	CD	2
Total discipline obligatorii		870	595	275	142	263	190	3E, 5CD, 1C	29
Discipline opționale (A)									
Pachetul XI									
S.11.A.100	Metode de analiză și evaluarea riscurilor ocupaționale	30	20	10	20	-	-	C	1
S.11.A.101	Școala epidemiologului de spital								
Total semestrul XI curricular		900	615	285	162	263	190	3E, 5CD, 2C	30
ANUL VI, Semestrul XII (15 săptămâni/7 ore/zi)									
S.12.O.102	Supravegherea igienică a mediului și sănătății	360	210	150	-	210	-	E	12
S.12.O.102	Sănătatea ocupațională	120	70	50	-	70	-	E	4
S.12.O.103	Supravegherea epidemiologică	180	140	40	-	140	-	E	6
	Examen de absolvire	240	60	180	-	60	-	-	8
Total semestrul XII curricular		900	480	420	-	480	-	4E	30
Total anul VI curricular		1800	1095	705	162	743	190	6E, 5CD, 2C	60
Total pe anii de studii		10800	6765	4035	1961	2692	2112	44E, 21CD, 28C	360

DISCIPLINELE OPȚIONALE SE SELECȚEAZĂ DE CĂTRE STUDENȚI - UNA DIN DOUĂ PROPUSE ÎN SEMESTRU

Cod	Modul/disciplina	Total ore	Inclusiv		Număr de ore			Forma de evaluare	Numar de credite
			Contact direct	Lucru individual	Curs	Seminar	Laborator		
Anul I semestrul I, II									
G.01.A.008	Curs introductiv universitar (Tehnologii informaționale: Bazele culturii informaționale)	30	20	10	20	-	-	C	1
G.01.A.009	Tehnici de comunicare bazate pe IT în medicină								
U.02.A.018	Istoria medicinei	30	20	10	20	-	-	C	1
U.02.A.029	Istoricul savanților iluștri mediciniști								
Anul II semestrul III, IV									
U.03.A.027	Sociologia medicală	30	20	10	20	-	-	C	1
U.03.A.028	Psihologia medicală								
U.04.A.035	Leadershipul în domeniul serviciilor medicale	30	20	10	20	-	-	C	1
U.04.A.036	Psihologia personalității								
Anul III semestrul V, VI									
S.05.A.044	Microbiologia clinică	30	20	10	20	-	-	C	1
S.05.A.045	Microbiologia sanitară								
S.06.A.053	Economia sănătății	30	20	10	20	-	-	C	1
S.06.A.054	Managementul financiar în sistemul de sănătate								
Anul IV semestrul VII, VIII									
S.07.A.062	Sistemul informațional medical	30	20	10	20			C	1
S.07.A.063	Managementul sanitar militar. Toxicologia militară								
S.08.O.071	Siguranța alimentelor și sănătatea umană	30	20	10	20			C	1
S.08.O.072	Nutriția sportivă								
Anul V semestrul IX, X									
S.09.A.079	Igiena IMSP și profilaxia infecțiilor nosocomiale	30	20	10	20			C	1
S.09.A.080	Epidemiologia și combaterea HIV								
S.10.O.089	Estimarea riscului	30	20	10	20			C	1
S.10.O.090	Siguranța chimică și toxicologia								
ANUL VI, Semestrul XI									
S.11.A.100	Metode de analiză și evaluarea riscurilor ocupaționale	30	20	10	20			C	1
S.11.A.101	Școala epidemiologului de spital								

DISCIPLINELE LA LIBERA ALEGERE

Nr. crt.	Denumirea disciplinei	Anul	Semestrul	Număr de ore pe tipuri de activități				Evaluări	Nr. de credite
				Total	Contact direct	P	S		
1	Istoricul specialității	I	1	120	60	40	20	E	4
2	Modul sănătos de viață	II	4	120	60	40	20	E	4
3	Metode rapide de diagnostic a bolilor infecțioase	III	6	120	60	40	20	E	4
4	Alimentația copiilor în instituțiile preșcolare și preuniversitare	IV	7	90	45	25	20	E	3
5	Tehnici moderne utilizate în laboratorul igienic	IV	8	90	45	25	20	E	3
6	Planificarea familiei	V	10	120	60	40	20	E	4
7	Medicina alternativă și complementară	VI	11	90	45	25	20	E	3
Total				750	375	235	140	7E	25

MATRICEA CORELAȚIEI DINTRE COMPETENȚELE PROFESIONALE ȘI TRANSVERSALE ȘI UNITĂȚILE DE CURS/MODULE INCLUSE ÎN PLANUL DE ÎNVĂȚĂMÂNT

COD	Denumirea disciplinei	Credite											
			CP1	CP2	CP3	CP4	CP5	CP6	CT1	CT2	CT3		
F.01.O.001	Anatomia omului	5	+								+		
U.01.O.002	Antropologia și filosofia în medicină	3	+								+	+	+
F.01.O.003	Biologie moleculară	5	+								+		
F.01.O.004	Biochimie descriptivă	3	+				+						
F.01.O.005	Histologie, citologie și embriologie	5	+								+		
G.01.O.006	Limba engleză/franceză	4	+								+	+	+
S.01.O.007	Urgența medicală primară	3	+	+	+	+						+	
G.01.A.008	Curs introductiv universitar (Tehnologii informaționale, Istoria specialității, Bazele culturii informaționale)	1	+										
G.01.A.009	Tehnici de comunicare bazate pe IT în medicină	1	+										
F.02.O.011	Anatomia omului	4	+								+		
F.02.O.012	Biochimie	4	+								+		
F.02.O.013	Biofizică	4	+								+		
U.02.O.014	Comunicarea și comportamentul în medicină	3						+			+	+	+
F.02.O.015	Genetica omului	5	+				+						
F.02.O.016	Histologie, citologie și embriologie	5	+								+		
G.01.O.017	Limba engleză/franceză	4									+	+	+
U.02.A.018	Istoria medicinei	1				+					+	+	+
U.02.A.019	Istoricul savanților iluștri mediciști	1				+					+	+	+
G.02.O.020	Educația fizică	4											+
S.03.O.021	Anatomie topografică și chirurgie operatorie	4	+	+							+	+	
F.03.O.022	Biochimie	5	+								+		
S.03.O.023	Igienă generală	4	+			+	+	+	+				
F.03.O.024	Fiziologia omului	5	+								+		
F.03.O.025	Microbiologie, virusologie și imunologie	6	+			+	+				+	+	+
U.03.O.026	Sociologia și psihologia generală	5				+					+	+	+
U.03.A.027	Sociologia medicală	1				+					+	+	+
U.03.A.028	Psihologia medicală	1				+					+	+	+
F.04.O.029	Biostatistica Metodologia cercetării științifice	4				+		+	+	+	+	+	+
F.04.O.030	Farmacologie	5	+			+		+	+	+	+	+	+
S.04.O.031	Igienă generală	5	+			+	+	+	+				
F.04.O.032	Fiziologia omului	5	+			+					+		
F.04.O.033	Microbiologie, virusologie și imunologie	5	+			+	+				+		

S.04.O.034	Stagiul practic (ingrijirea bolnavilor)	5	+	+	+	+	+	+	+	+	+
U.04.A.035	Leadershipul in domeniul serviciilor medicale	1				+				+	+
U.04.A.036	Psihologia personalității	1				+				+	+
S.05.O.037	Asigurarea sanitaro-igienică în situații excepționale	4	+			+	+	+	+		
S05.O.038	Boli interne - semiologie	5	+	+	+	+	+	+	+	+	+
S.05.O.039	Boli chirurgicale -semiologie	4	+	+	+	+	+	+	+	+	+
U.05.O.040	Bioetica	1								+	+
F.05.O.041	Fiziopatologie	9	+	+						+	
F.01.O.042	Morfopatologie	8	+							+	
S.05.O.043	Medicina socială	5					+	+	+	+	+
S.05.A.044	Microbiologia clinică	1	+			+	+			+	
S.05.A.045	Microbiologia sanitară	1	+			+	+			+	
S05.O.046	Boli interne - semiologie	5	+	+	+	+	+	+	+	+	+
S.05.O.047	Boli chirurgicale -semiologie	4	+	+	+	+	+	+	+	+	+
S.06.O.048	Igiena radiațiilor	4	+			+	+	+	+		
S.06.O.049	Neuroștiințe	4	+	+	+	+	+	+	+	+	+
S.06.O.050	Radiologia și imagistica	3	+	+	+	+	+	+	+		
S.06.O.051	Traumatologia și ortopedia	4	+	+	+	+	+	+	+	+	+
S.01.O.052	Stagiul practic (asistent medical)	5	+	+	+	+	+	+	+	+	+
S.06.A.053	Economia sănătății										
S.06.A.054	Managementul financiar în sistemul de sănătate										
S.07.O.055	Anestezie și reanimatologie	2	+	+	+	+	+	+	+	+	+
S.07.O.056	Chirurgia generală	6	+	+	+	+	+	+	+	+	+
S.07.O.057	Igiena mediului	10	+			+	+	+	+		
S.07.O.058	Management și marketing în sănătate	2								+	+
S.07.O.059	Obstetrica și ginecologia	4	+	+	+	+	+	+	+	+	+
S.07.O.060	Oftalmologia	2	+	+	+	+	+	+	+	+	+
S.07.O.061	Pneumofiziologia	3	+	+	+	+	+	+	+	+	+
S.07.A.062	Sistemul informațional medical	1								+	+
S.07.A.063	Managementul sanitar militar. Toxicologia militară	1			+	+	+		+	+	+
S.08.O.064	Boli interne	6	+	+	+	+	+	+	+	+	+
S.08.O.065	Endocrinologia	2	+	+	+	+	+	+	+	+	+
S.08.O.066	Hematologia	2	+	+	+	+	+	+	+	+	+
S.08.O.067	Igiena alimentației și nutriția umană	9	+			+	+	+	+		
S.01.O.068	Oncologie	2	+	+	+	+	+	+	+	+	+
S.08.O.069	Psihiatria, Psihologia medicală și Narcologia	2	+	+	+	+	+	+	+	+	+
S.08.O.070	Semiologia pediatrică. Puericultura. Pediatria	6	+	+	+	+	+	+	+	+	+
S.08.O.071	Siguranța alimentelor și sănătatea umană	1	+			+	+	+	+		
S.08.O.072	Nutriția sportivă	1	+			+	+	+	+		
S.09.O.073	Boli infecțioase mature	5	+	+	+	+	+	+	+	+	+
S.09.O.074	Epidemiologie	10								+	+
S.09.O.075	Igiena copiilor și adolescenților	6	+			+	+	+	+		

S.09.O.076	Managementul Supravegherii de Stat în Sănătate Publică	2								+	+	+
S.09.O.077	Parazitologie medicală. Boli infecțioase tropicale	4	+	+	+	+	+	+	+	+	+	
S.09.O.078	Urgențe medicale	2	+	+	+	+	+	+	+	+	+	
S.09.A.079	Igiena IMSP și profilaxia infecțiilor nozocomiale	1							+	+	+	
S.09.A.080	Epidemiologia și combaterea HIV	1							+	+	+	
S.10.O.081	Boli infecțioase la copii	3	+	+	+	+	+	+	+	+	+	
S.10.O.082	Dermatovenerologia	3	+	+	+	+	+	+	+	+	+	
S.10.O.083	Epidemiologia clinică	2							+	+	+	+
S.10.O.084	Epidemiologia în situații excepționale	2							+	+	+	
S.10.O.085	Igiena muncii	10	+			+	+	+	+			
S.10.O.086	Medicina legală și dreptul medical	3				+	+	+	+	+	+	
S.10.O.087	ORL	4	+	+	+	+	+	+	+	+	+	
S.10.O.088	Promovarea sănătății și educația pentru sănătate	4				+	+	+	+	+	+	+
S.10.O.089	Estimarea riscului	1							+	+	+	+
S.10.O.090	Siguranța chimică și toxicologia	1							+	+	+	+
S.11.O.091	Boli ocupaționale	4	+	+	+	+	+	+	+	+	+	
S.11.O.092	Diagnosticul epidemiologic	4	+	+	+	+	+	+	+	+	+	
S.11.O.093	Ecologia umană	4							+	+	+	
S.11.O.094	Laboratorul sanitaro-igienic	3				+	+	+	+	+	+	
S.11.O.095	Laboratorul microbiologic	3	+			+	+	+	+	+	+	
S.11.O.096	Medicina de laborator	3	+	+	+	+	+	+	+	+	+	
S.11.O.097	Medicina de familie	4	+	+	+	+	+	+	+	+	+	+
S.11.O.098	Reabilitarea medicală	2	+	+	+	+	+	+	+	+	+	+
S.11.O.099	Promovarea sănătății comunitare și familiei – aspecte epidemiologice	2							+	+	+	
S.11.A.100	Metode de analiză și evaluarea riscurilor ocupaționale	1				+	+	+		+	+	
S.11.A.101	Școala epidemiologului de spital	1				+	+	+				
S.12.O.102	Stagiul clinic (Supravegherea igienică a mediului și sănătății)	12	+	+	+	+	+	+	+	+	+	+
S.12.O.103	Stagiul clinic (Sănătatea ocupațională)	4	+	+	+	+	+	+	+	+	+	+
S.12.O.104	Stagiul clinic (Supravegherea epidemiologică)	6	+	+	+	+	+	+	+	+	+	+
	Pregătirea și susținerea lucrării de licență	8	+	+	+	+	+	+	+	+	+	+

REPARTIZAREA ORELOR PE GRUPELE DE DISCIPLINE

Grupe de discipline	Ore		Număr credite ECTS	Cota(%)ore
	Total	Inclusiv contact direct		
Disciplini fundamentale (F)	2970	1737	99	27,5
- obligatorii (FO)	2970	1737	99	27,5
Disciplini generale (G)	150	60	5	1,4
- obligatorii (GO)	150	60	5	1,4
Disciplini socio-umane (U)	450	272	15	4,2
- obligatorii	360	212	12	3,3
- optionale (UA)	90	60	3	0,8
Disciplini de specialitate (S)	6030	1870	201	55,8
- obligatorii (SO)	5820	1730	194	53,9
- optionale (SA)	210	140	7	1,9
Activități obligatorii (AO)	1200	720	40	11,1
- stagii de practică	960	660	32	8,9
- examene de licență	240	45	8	2,2
Total ore	10800	4659	360	100

STAGIILE DE PRACTICĂ

Stagiile de practică		Sem.	Durata/nr. săptămâni/ore	Perioada	Număr de credite
1.	<i>Practica de inițiere:</i> • Laboratorul sanitaro-igienic și bacteriologic • Asistent medical	IV	4 săptămâni/150 ore	02.07-27.07	5
		VI	4 săptămâni/150 ore	02.07-27.07	5
2.	<i>Practica clinică:</i> (Supravegherea igienică a mediului și sănătății, Sănătatea ocupațională, Supravegherea epidemiologică)	VII	12 săptămâni/660 ore	05.02-06.05	22

Examenul de absolvire /Teza de Licență

Nr./d	Denumirea activității	Perioada
1.	Susținerea tezei de licență	Mai
2.	- proba test-control	Mai
3.	- proba de examinare orală la specialitatea 0910.1 Medicină Preventivă	Iunie

Decan Facultatea de Medicină 1

Conferențiar universitar

Gheorghe Plăcintă



Prodecan Facultatea de Medicină 1,

Specialitatea Medicină Preventivă

Conferențiar universitar

Cazacu-Stratu Angela



Annex 5: Study Programme in Preventive Medicine English Translation

MINISTRY OF HEALTH OF THE REPUBLIC OF MOLDOVA „NICOLAE TESTEMITANU”



COORDINATED
Ministry of Education of
the Republic
of Moldova

COORDINATED
Ministry of Health of
the Republic of
Moldova

APPROVED
at the University Senate
Meeting
Minute No. 3/2, June 5,
2017

I HEREBY APPROVE
Rector, Tenured Professor,
Habilitation Doctor,
Academician of the Academy
of Science of Moldova
Ion Ababii _____

FACULTY OF MEDICINE No. I

CURRICULUM

FOR INTEGRATED HIGHER EDUCATION GRATE

Qualification level according to ISCED: 7

General field of education: **091 Healthcare**

Professional field of education: **0910 Public Health**

Study program: **0910.1 Preventive Medicine**

Total number of credits: **360**

Awarded title: **Bachelor of Medicine**

Original admission document: **Baccalaureate or equivalent degree; Higher Education Degree**

Study language: **Romanian**

Form of education: **full time**

CHIȘINĂU 2017

EXPLNATORY NOTE

Concept on education of professionals

The aim of education in the field **0910.1 Preventive Medicine** is to educate specialists capable to ensure good health condition of and prevent diseases among the population. It aims at promoting new methods and modern concepts in securing a good health condition of the population and using efficient management tools to promote good health.

The needs for such professional education programs have been identified at national level through consultations with the Ministry of Health and the Public Health Centres. The graduates of this specialty are in demand on the labour market, due to the fact that securing the health condition is a indispensable for human life.

The Curriculum for **0910.1 Preventive Medicine** targets a large category of people: graduates of high schools, junior colleges of medicine, and higher education institutions, who intend to develop a professional carrier in the field of public healthcare. The curriculum is innovative since it takes into account the complexity and multidisciplinary nature of the activity of specialists in the field of preventive medicine and the need for their continuous education. Sound and qualitative education of the specialist in preventive medicine will allow him/her to continue education at the level of residency, master and PhD.

Goal and Mission of the Curriculum

This Curriculum aims at educating professionals in the field of Preventive Medicine for monitoring the health condition, developing and implementing national public health policies and programs, preventing morbidity among the population, and promoting healthy lifestyle. The type of specialists to be taught based on this Curriculum will be epidemiology, hygiene, and microbiology doctors, and managers of healthcare institutions.

Overall Objective of the Curriculum

The Curriculum for **0910.1 Preventive Medicine** aims at educating future doctors in preventive medicine, licenced in prevention of diseases and population morbidity, promoting good health, planning and organising various missions in the field of preventive medicine. The skills and abilities developed during the education process will meet the needs and tasks existing in the field of preventive medicine:

- Educate specialists in the field of Public Health, in line with the current developments;
- Secure continuous post-graduate education of specialists in the field of Public Health;
- Promote higher education at national and international level;
- Promote scientific research as one of the basic activities of teachers through national and international cooperation.

Novelty and Relevance of the Curriculum

The Curriculum has been developed in line with the requirements of the international ISCED standard. The content of the Curriculum and the course units/modules aim at developing

transversal and professional competences in the future professionals. The Curriculum has been developed in line with the following national regulatory documents:

- Code of Education No.152 of July 17, 2014 (Official Gazette of Moldova, 2014, No.139-324, Art. 634);
- Classifier of Occupations of Moldova (CORM 006-2014) No. 22 of 03.03.2014 (Official Gazette of Moldova, 2014. No.120-126, Art. 670):
- Government Decision No.482 of 23.06.2017 on Approval of the List of Areas for Professional Education and Specialties in Higher Education (Official Gazette of Moldova, 2017, No. 216-228);
- Framework Curriculum for Higher Education (Cycle I – Bachelor, Cycle II – Master, integrated studies, Cycle III – PhD), approved by Order of the Ministry of Education No.1045 of October 29, 2015;
- Regulation on Organisation of Studies in Higher Education based on the National Education Credits System, approved by Order of the Ministry of Education No.1046 of October 29, 2015;
- Framework Regulation on Organisation of the Final Bachelor Examination, approved by Order of the Ministry of Education No.1047 of 29.10.2015.

This Curriculum is in line with the current trends in education of doctors in the field of Preventive Medicine, as well as with similar curricula in foreign universities. *Characteristics:*

The duration of studies under the Curriculum for **0910.1 Preventive Medicine** is 6 years. Based on their *function* in the initial professional education in terms of developing general and specific competences, the course units are grouped by the following components:

- a) *fundamental component (code F)*;
- b) *general skills and competences component (Code G)*
- c) *socio-humanitarian orientation component (code U)*;
- d) *Specialty component (code S)*;

During the first three years, students study basic common knowledge and social-humanitarian subjects, while in the last three years the focus is on specialty subjects.

The course units are also classified into:

- a) *mandatory*;
- b) *optional, and*
- c) *free choice*

The distribution of courses by semesters is determined by the logics of the process of education of a specialist in preventive medicine. The big volume of didactic material, which requires primarily direct contact with the teacher both during lectures but primarily during practical laboratory classes and seminars, justifies the 17-week length of semesters. At the same time, the big number of subjects studied during one semester justifies the distribution of credits and the selection of the form of evaluation of outcomes based on the priorities and importance of each of them in educating the future professionals: starting from 1 credit, and the final evaluation of the course unit through Tests without mark – C; Tests with marks (Differentiated tests) - CD and Exams - E. Thus, the schedule

of the education process for years I-V includes every year 34 weeks of study, divided into two semesters of 17 weeks each; and two examination sessions of 3 weeks at the end of each semester. In year VI, the spring semester lasts 12 weeks, which include the Research Internship, followed by the graduation examinations. All courses will include didactic activities in the form of lecturing and practical application (practical or laboratory works and seminars).

Matching the Curriculum Objectives to the Institution's Development Strategy

The objectives of the Curriculum are in line with the institution's Development Strategy, being oriented towards quality and academic excellence, and upgrading the didactic activity by diversifying the teaching-learning-evaluation methods, increasing competitiveness, and securing integration with the healthcare systems.

The content of the Curriculum is in line with the policy of Nicolae Testemianu State University of Medicine and Pharmacy in terms of quality. The course units/modules included in the Curriculum are delivered to students in a logical sequence, starting from the basic ones and continuing with the specialty ones, in which transversal and professional competences are defined.

Teaching Approaches

Integrated education aims at developing general and specific knowledge in order for students to be aware of the full spectrum of issues related to the health condition and the diseases the population might face, the prevention methods, the treatment, diagnosis, and all related issues. Students are taught using different methods: lecturing, seminars, practical works, individual projects, and examination sheets, which contributes to developing the inter-personal qualities, the communication and team work skills.

During the education process, the focus is on interactive teaching methods, which increase the intellectual potential of the student and require personal effort in the process of learning and preparation for the future professional activity. Particularly, during the education process, various methods and procedures are combined, as follows: problem-solving, case studies, role-play, conversation by the patient's bed, problematisation, testing, research, projects.

Employability

The qualification acquired following the graduation of the Preventive Medicine specialty allows the degree holder to take part in the contest for residency and PhD studies.

Methods and criteria for evaluation of competences within the Curriculum

The evaluation concept focuses on the assessment of competences for practical application in the field of Preventive medicine. During the academic years, students will conduct a big number of practical works, individual work through project implementation, health records, opinions, which are planned for each module, where they will show their professional skills and competences.

The current and final evaluation will be conducted in accordance with forms of evaluation approved by the chairs. The curriculum includes the following forms and types of evaluation of the theoretic and practical knowledge:

- a. Current evaluation – performed during the practical and laboratory classes and the seminars, through different ways: computer-assisted tests, reports, projects, individual

works, health records, manipulations. Throughout the semester, compulsory tests will be conducted, based on the chair requirements, which will reflect student's intermediary success.

- b. Final evaluation represents a combined method, which consists of test, verbal examination, and assessment of practical skills.

The education program will end with an examination in Public Health, composed of testing, verbal interview and presentation of the Bachelor Dissertation.

Quality Enhancement

Quality assurance and enhancement will be achieved through internal and external evaluation of the syllabi, evaluation of the teaching staff, monitoring of student competences at the preparatory and final stages, development of human and material resources to secure a productive education environment.

Outcomes of education and competences

The expected outcomes of the Curriculum for **0910.1 Preventive Medicine** relate to the education of young professionals, which will earn them the title of "Bachelor of Medicine". The graduates shall prove transversal and professional skills, competences, and knowledge that meet employers' requirements and expectations, and which are confirmed through the Bachelor Degree, by 360 transferable credits, offering the possibility for graduates to continue their education in the residency program.

Professional skills:

CP 1. Have sound knowledge of the structural peculiarities, development and functioning of the human body in various physiologic and pathologic conditions.

CP2. Conduct various practical manipulations and procedures for performing professional specialty-specific activities based on the knowledge from the fundamental sciences;

CP3. Develop the plan for prevention and rehabilitation in various situations and selecting the proper procedures, including provision of emergency care;

CP4. Use medical techniques, instrumental and laboratory investigations, digital technologies for solving medical tasks in various emergency situations.

CP5. Plan, coordinate, and conduct activities to promote health and prevention measures for purpose of improving the health condition at individual and community level.

CP6. Evaluate and ensure the quality of health-related services in relation to the associated manipulations, procedures, and treatments.

Transversal competences:

CT1. Perform the professional tasks with responsibility, based on the values and rules of professional conduct and the provisions of the legislation in force. Promote logical reasoning, practical applicability, evaluation, and self-evaluation in decision-making;

CT2. Perform the activities and exercise the roles specific for team work in various healthcare facilities. Promote the sense of initiative, dialogue, positive attitude and respect towards the others, empathy, altruism, and permanent self-improvement;

CT3. Objectively assess the need for continuous professional education with a view to providing quality services and adjusting to the changing needs in the field of healthcare, as well as for personal and professional development. Efficiently using language skills, IT knowledge, and the research and communication skills.

Partner Consultation and Coordination of the Curriculum Development Process in Line with the Quality Assurance Standards

The Curriculum for Preventive Medicine is in line with the requirements of the Bologna Process and the experience of European universities. The Curriculum is aligned to the Strategy on Healthcare System Development.

Discussions have been held within the university chairs, based on the Concept for education of professionals in Preventive Medicine. All suggestions have been discussed and analysed thoroughly by the Curriculum Reform Committee established based on Rector's Order. The amendments have been approved within the meeting of the Faculty Board and the Senate.

Quality Assurance and Enhancement Shall be Done by:

- √ Implementing an annual program for internal audit of the educational offer from the perspective of the following quality factors: beneficiaries' satisfaction, efficiency, feasibility;
- √ Internal and external evaluation of the quality of curricula;
- √ Securing permanent feedback from external and internal beneficiaries (students, teachers, managers), and other partners, with a view to enhancing the education offer
- √ Self-evaluation and peer evaluation of the teaching staff; monitoring student competences at the intermediary and the final stages;
- √ Developing the human and material resources for securing a productive educational environment and process.

II

Academic year	Didactical activities		Examination sessions (weeks)		Internships	Vacations		
	Sem. I	Sem. II	Winter	Summer		Winter	Spring	Summer
I	01.09-29.12	5.02-08.06	09-26.01	11.06-30.06	-	30.12-08.01	08.04-16.04	01.07-31.08
II	01.09-29.12	5.02-08.06	09-26.01	11.06-30.06	02-27.07	30.12-08.01	08.04-16.04	30.07-31.08
III	01.09-29.12	5.02-08.06	09-26.01	11.06-30.06	02-27.07	30.12-08.01	08.04-16.04	30.07-31.08
IV	01.09-29.12	5.02-27.06	modular	modular		30.12-08.01	08.04-16.04	02.07-31.08
V	01.09-29.12	5.02-27.06	modular	modular	-	30.12-08.01	08.04-16.04	02.07-31.08
VI	01.09-29.12	5.02-6.05	modular	14.05-08.06	5.02-6.05	30.12-08.01	08.04-16.04	--

CONTENT OF THE CURRICULUM BY ACADEMIC YEARS

YEAR I

Code	Name of course unit/module	Total hours			No. of hours by types of activities			Form of evaluation	No. of credits ECTS
		Total	Direct contact	Individual study	Lecture	Practical works	Seminars		
1	2	3	4	5	6	7	8	9	10
YEAR 1, Semester I (17 weeks)									
Compulsory courses (O)									
F.01.O.001	Human anatomy	180	105	75	37	34	34	E	6
U.01.O.002	Anthropology and philosophy in medicine	90	51	39	17	14	20	CD	3
F.01.O.003	Molecular biology	150	85	65	34	20	31	E	5
F.01.O.004	Descriptive bio-chemistry	90	51	39	17	14	20	F	3
F.01.O.005	Histology, cytology, embryology	150	85	65	34	21	30	C	5
G.01.O.006	English/French language	120	68	52	-	-	68	C	4
S.01.O.007	Emergency primary care	90	51	39	17	20	14	CD	3
Total for compulsory courses		870	496	374	156	123	217	3E, 2CD, 3C	29
Compulsory courses (O) Package 1									
G.01.A.008	<i>Introductory university course (IT, Basics of informational culture)</i>	30	20	10	20	-	-	C	1
G.01.A.009	<i>IT-based communication techniques in medicine</i>								
Total for semester I		900	516	384	176	123	217	5E, 2CD, 3C	30
Extracurricular compulsory courses (OE)									
G.01.O.010	Physical education	34	34	-	-	34	-	C	-
YEAR 1, Semester II (17 weeks)									
Compulsory courses (O)									
F.02.O.011	Human anatomy	120	85	35	17	30	38	F	4
F.02.O.012	Bio-chemistry	120	85	35	34	20	31	c	4
F.02.O.013	Bio-physics	120	68	52	17	20	31	F	•1

U.02.O.014	Communication and conduct in medicine	90	51	39	17		34	CD	3
F.02.O.015	Human genetics	150	85	65	34	20	31	F	5
F.02.O.016	Histology, cytology, embryology	150	85	65	31	20	31	IE	5
G.02.O.017	English/French language	120	68	52	-	68	-	E	4
Total for compulsory courses		870	527	343	153	178	196	5E	29
Compulsory courses (O)		Package II							
U.02.A.018	<i>History of medicine</i>	30	20	10	20	-		C	1
U.02.A.019	<i>History of notorious medical scientists</i>								
Total for semester II		900	547	353	173	178	196	5E, 1CD, 2C	30
Total for academic year I		1800	1063	737	349	301	413	10E, 3CD, 5C	60
Total for extracurricular compulsory courses (OE)									
G.02.O.020	Physical education	34	34	-	-	34	-	C	-
Total for extracurricular courses		60	60			60		2C	

YEAR II

Code	Name of course unit/module	Total hours			No. of hours by types of activities			Form of evaluation	No. of credits ECTS
		Total	Direct contact	Individual study	Lecture	Practical works	Seminars		
1	2	3	4	5	6	7	8	9	10
YEAR II, Semester III (17 weeks)									
Compulsory courses (O)									
F.03.O.021	Topographic anatomy and surgery	120	68	52	17	20	31	E	4
F.03.O.022	Bio-chemistry	150	85	65	34	20	31	E	5
F.03.O.023	General hygiene	120	85	35	34	31	20	C	4
F.03.O.024	Human physiology	150	85	65	34	20	31	C	5
F.03.O.025	Micro-biology, virology and immunology	180	102	78	34	38	30	C	6
U.03.0.026	Sociology and general psychology	150	85	65	34	-	51	E	5

Total for compulsory courses		870	510	360	187	129	194	3E, 3C	29
Optional courses (A)									
Package III									
U.03.A.027	<i>Medical sociology</i>	30	20	10	20	-	-	C	1
U.03.A.028	<i>Medical psychology</i>								
Total for semester III		900	530	370	207	129	194	3E, 4C	30
YEAR II, Semester IV (17 weeks)									
Compulsory courses (O)									
F.04.O.029	Biostatistics and research methodology	120	68	52	34	-	34	E	4
F.04.O.030	Pharmacology	150	85	65	34	20	31	CD	5
F.04.O.031	Human physiology	150	85	65	34	20	31	E	5
F.04.O.032	General hygiene	150	85	65	34	20	31	E	5
F.04.O.033	Microbiology, virology and immunology	150	85	65	34	20	31	E	5
S.04.O.034	Internship*	150	120	30	.	120	-	E	5
Total for compulsory courses		870	528	342	170	200	158	5K, 1CD	29
Optional courses (A)									
Package IV									
U.04.A.035	<i>Leadership in medical services</i>	30	20	10	20	-	-	C	1
U.04.A.036	<i>Personality psychology</i>								
Total for semester IV		900	548	352	190	200	158	5E, 1CD, 1C	30
Total for academic year II		1800	1078	722	397	329	352	8E, 1CD, 5C	60

YEAR III

Code	Name of course unit/module	Total hours			No. of hours by types of activities			Form of evaluation	No. of credits
		Total	Direct contact	Individual work	Lectures	Practical work	Seminars		
1	2	3	-1	5	6	7	8	9	10
YEAR III, Semester V (17 weeks)									

Compulsory courses (O)									
S.05.O.037	Securing the sanitary and hygiene conditions in exceptional situations	120	68	52	17	-	51	E	4
S.05.O.038	Internal diseases – semiology	150	85	65	34	30	21	C	5
S.05.O.039	Surgical diseases – semiology	120	68	52	17	30	21	C	4
U.05.O.040	Bioethics	30	25	5	10	-	15	C	1
F.05.O.041	Physiopathology	150	85	65	34	30	21	E	5
F.05.O.042	Human pathology	150	85	65	34	30	21	E	5
S.05.O.043	Social medicine	150	85	65	34	.	51	E	5
Total for compulsory courses		870	501	369	180	120	201	4E, 3C	29
Optional courses (A)									
Package V									
S.05.A.044	<i>Clinical micro-biology</i>	30	20	10	20	-	-	C	1
S.05.A.045	<i>Sanitary micro-biology</i>								
Total for Semester V		900	521	379	200	120	201	4E4C	30
YEAR III, Semester VI (17 weeks)									
S.06.O.046	Internal diseases – semiology	150	85	65	34	30	21	E	4
S.06.O.047	Surgical diseases – semiology	120	68	52	17	30	21	E	4
S.06.O.048	Hygiene of radiations	120	68	52	17	30	21	E	4
S.06.O.049	Neurosciences	120	68	52	17	30	21	CD	4
S.06.O.050	Radiology and imaging	90	51	39	17	17	17	CD	4
S.06.O.051	Traumatology and orthopaedics	120	68	52	17	30	21	CD	
S.06.O.052	Internship*	150	120	30		120	-	E	5
Total for compulsory courses		870	528	342	119	287	122	4E,3CD	29
Optional courses (A)									
Package VI									
S.06.A.053	<i>Economics of healthcare</i>	30	20	10	20	-	-	C	1
S.06.A.054	<i>Financial management in healthcare</i>								

Total for Semester VI	900	548	352	139	287	122	4E, 3CD, 4C	30
Total for academic year III	1800	1069	73!	339	407	323	8E, 3CD, 5C	60

YEAR IV

Code	Name of course unit/module	Total hours			No. of hours by types of activities			Form of evaluation	No. of credits
		Total	Direct contact	Individual work	Lectures	Practical work	Seminars		
1	2	3	4	5	6	7	8	9	10
YEAR IV, Semester VII (17 weeks)									
Compulsory courses (O)									
S.07.O.055	Anaesthesiology and intensive care	60	35	25	10	15	10	C	2
S.07.O.056	General surgery	180	140	40	20	60	60	E	6
S.07.O.057	Environmental hygiene	300	210	90	60	75	75	E	10
S.07.O.058	Management and marketing in healthcare	60	35	25	10		25	CD	2
S.07.O.059	Obstetrics and gynecology	120	70	50	20	30	20	E	4
S.07.O.060	Ophthalmology	60	35	25	10	15	10	C	2
S.07.O.061	Pulmonology and phtisiology	90	70	20	20	30	20	CD	3
Compulsory courses		870	595	275	150	225	220	3E, 2CD, 2C	29
Optional courses (A)									
Package VII									
S.07.A.062	<i>Medical information system</i>	30	20	10	20	-	-	C	1
S.07.A.063	<i>Military sanitary management. Military toxicology</i>								
Total for semester VII		900	615	285	170	225	220	3E, 2CD, 3C	30

YEAR IV, Semester VIII (17 weeks)									
S.08.O.064	Internal diseases	180	140	40	40	50	50	E	6
S.08.O.065	Endocrinology	60	35	25	10	15	10	C	2
S.08.O.066	Haematology	60	35	25	10	15	10	C	4
S.08.O.067	Hygiene of human nutrition	270	175	95	50	75	50	E	9
S.08.O.068	Oncology	60	35	25	10	15	10	C	2
S.08.O.069	Psychiatry, Medical psychology and narcology	60	35	25	10	15	10	CD	2
S.08.O.070	Paediatric semiology. Child care. Paediatrics	180	140	40	40	50	50	E	6
Total for compulsory courses		870	595	275	170	235	190	3E, 1CD,3C	29
Optional courses (A)									
Package VIII									
S.08.O.071	<i>Food safety and human health</i>	30	20	10	20			C	1
S.08.O.072	<i>Nutrition in sports</i>								
Total for Semester VIII		900	615	285	190	235	190	c	30
Total for academic year IV		1800	1230	570	360	460	410	6E, 3CD, 7C	60

YEAR V

Code	Name of course unit/module	Total hours			No. of hours by types of activities			Forma of evaluation	No. of credits
		Total	Direct contact	Individual work	Course	Practical works	Seminars		
II	2	3	4	5	6	7	8	9	10
YEAR V, Semester IX (17 weeks)									
Compulsory courses (O)									
S.09.O.073	Communicable diseases in adults	150	105	45	30	45	30	E	5
S.09.O.074	Epidemiology	300	210	90	42	84	84	E	10

S.09.O.075	Hygiene in children and adolescents	180	140	40	32	58	50	E	6
S.09.O.076	Management of State Oversight in Public Healthcare	60	35	25	10	-	25	CD	2
S.09.O.077	Medical parasitology and tropical communicable diseases	120	70	50	20	30	20	CD	4
S.09.O.078	Emergency medical situations	60	35	25	10	15	10	C	2
Total for compulsory courses		870	595	275	144	232	219	3E, 2CD, 1C	29
Optional courses (A)									
Package IX									
S.09.A.079	<i>Hygiene within public healthcare facilities and prevention of nosocomial diseases</i>	30	20	10	20	-	-	C	1
S.09.A.080	<i>Epidemiology and fighting of HIV</i>								
Total for Semester VII		900	615	285	164	232	219	3E, 2CD, 2C	30
YEAR V, Semester X (17 weeks)									
S.10.O.081	Communicable diseases in children	90	70	20	20	25	25	CD	3
S.10.O.082	Dermatology and venerology	90	70	20	20	25	25	E	3
S.10.O.083	Clinical epidemiology	60	35	25	10	15	10	CD	2
S.10.O.084	Epidemiology in exceptional situations	60	35	25	10	15	10	CD	2
S.10.O.085	Labour hygiene	300	210	90	60	75	75	E	10
S.10.O.086	Forensics and medical law	90	70	20	20	25	25	E	3
S.10.O.087	Otorhinolaryngology	60	35	25	10	15	10	C	2
S.10.O.088	Promoting health and education for health	120	70	50	20	25	25	CD	4
Total for compulsory courses		870	595	275	170	220	205	3E, 4CD, 1C	29
Optional courses (A)									

Package X									
S.10.O.089	<i>Risk assessment</i>	30	20	10	20	-	-	C	1
S.10.O.090	<i>Chemical safety and toxicology</i>								
Total for Semester VIII		900	615	285	190	220	205	3E, 4CD, 3C	30
Total for academic year IV		1800	1230	570	354	452	424	6E, 6CD, 5C	60

YEAR VI

Code	Name of course unit/module	Total hours			No. of hours by types of activities			Form of evaluation	No. of credits
		Total	Direct contact	Individual work	Courses	Practical work	Seminars		
1	2	3	4	5	6	7	8	9	10

YEAR VI, Semester XI (15 weeks/7 hours/day)

Compulsory courses (O)

S.11.O.09 1	Occupational diseases	120	70	50	20	30	20	E	4
S.11.O.09 2	Epidemiologic diagnosis	120	105	15	2	63	40	CD	4
S.11.O.09 3	Human ecology	120	70	50	20	20	30	E	4
S.11.O.09 4	Sanitary and hygiene laboratory	90	70	20	20	30	20	CD	3
S.11.O.09 5	Microbiology laboratory	90	70	20	20	30	20	CD	3
S.11.O.09 6	Laboratory medicine	90	70	20	20	30	20	CD	3
S.11.O.09 7	Family medicine	120	70	50	20	30	20	E	4
S.11.O.09 8	Health rehabilitation	60	35	25	10	15	10	C	2
S.11.O.09 9	Promoting community and family health – epidemiologic aspects	60	35	25	10	15	10	CD	2
Total for compulsory courses		870	595	275	142	263	190	3E, 5CD, IC	29

Optional courses (A)									
Package XI									
S.11.A.100	<i>Methods for analysis and evaluation of occupational risks</i>	30	20	10	20	-	-	C	1
S.11.A.101	<i>School of hospital epidemiologist</i>								
Total for Semester XI		900	615	285	162	263	190	3E, 5CD, 2C	30
YEAR VI, Semester XII (15 weeks/7 hours/day)									
S.12.O.102	Hygienic oversight of the environment and health	360	210	150	-	210		E	12
S.12.O.102	Occupational healthcare	120	70	50	-	70		E	4
S.12.O.103	Epidemiologic oversight	180	140	40		140		E	6
Graduation examination		240	60	180	-	60		-	8
Total for Semester XII		900	480	420	-	480		4E	30
Total for academic year VI		1800	1095	705	162	743	190	6E, 5CD, 2C	60
Total for all academic years		10800	6765	4035	1961	2692	2112	44E,21C, D,28C	360

**OPTIONAL COURSES ARE SELECTED BY STUDENTS - ONE OUT OF TWO COURSES
PROPOSED PER SEMESTER**

Code	Module/course	Total hours	Including		Number of hours			Form of evaluation	No. of credits
			Direct contact	Individual work	Lecture	Seminar	Laboratory		
Year I, Semester I, II									
G.01.A.008	<i>Introductory university course (IT, Basics of informational culture)</i>	30	20	10	20	-	-	C	1
G.01.A.009	<i>IT-based communication techniques in medicine</i>								
U.02.A.018	<i>History of medicine</i>	30	20	10	20	-	-	C	1
U.02.A.029	<i>History of notorious medical scientists</i>								
Year II, Semester III, IV									
U.03.A.027	<i>Medical sociology</i>	30	20	10	20	-	-	C	1
U.03.A.028	<i>Medical psychology</i>								
U.04.A.035	<i>Leadership in medical services</i>	30	20	10	20	-	-	C	1
U.04.A.036	<i>Personality psychology</i>								
Year III, Semester V, VI									
S.05.A.044	<i>Clinical micro-biology</i>	30	20	10	20	-	-	C	1
S.05.A.045	<i>Sanitary microbiology</i>								
S.06.A.053	<i>Economics of healthcare</i>	30	20	10	20	-	-	C	1
S.06.A.054	<i>Financial management in healthcare</i>								
Year IV, Semester VII, VIII									
S.07.A.062	<i>Medical information system</i>	30	20	10	20	-	-	C	1

S.07.A.063	<i>Military sanitary management. Military toxicology</i>								
S.08.O.071	<i>Food safety and human health</i>	30	20	10	20	-	-	C	1
S.08.O.072	<i>Nutrition in sports</i>								
Year V, Semester IX, X									
S.09.A.079	<i>Hygiene within public healthcare facilities and prevention of nosocomial diseases</i>	30	20	10	20	-	-	C	1
S.09.A.080	<i>Epidemiology and fighting of HIV</i>								
S.10.O.089	<i>Risk assessment</i>	30	20	10	20	-	-	C	1
S.10.O.090	<i>Chemical safety and toxicology</i>								
Year VI, Semester XI									
S.11.A.100	<i>Methods for analysis and evaluation of occupational risks</i>	30	20	10	20	-	-	C	1
S.11.A.101	<i>School of hospital epidemiologist</i>								

FREE CHOICE COURSES

#	Name of course	Year	Semester	Number of hours by types of activities				Evaluations	No. of credits
				Total	Direct contact	P	S		
1	History of public health	I	1	120	60	40	20	E	4
2	Healthy lifestyle	II	4	120	60	40	20	E	4
3	Rapid methods for diagnosis of infectious diseases	III	6	120	60	40	20	E	4
4	Nutrition of children in pre-school and pre-university institutions	IV	7	90	45	25	20	E	3
5	Modern techniques used in the hygiene laboratory	IV	8	90	45	25	20	E	
6	Family planning	V	10	120	60	40	20	E	4
7	Alternative and complementary medicine	VI	11	90	45	25	20	E	3
Total				750	375	235	140	7E	25

**MATRIX OF CORRELATION BETWEEN PROFESSIONAL AND TRANSVERSAL
COMPETENCES AND THE COURSE UNITS/MODULES IN THE CURRICULUM**

Code	Name of course	Credits	CP1	CP2	CP3	CP4	CP5	CP6	CT1	CT2	CT3
F.01.0.001	Human anatomy	5	+						+		
U.01.O.002	Anthropology and philosophy in medicine	3	+						+	+	+
F.01.O.003	Molecular biology	5	+						+		
F.01.O.004	Descriptive bio-chemistry	3	+			+					
F.01.O.005	Histology, cytology, embryology	5	+						+		
G.01.O.006	English/French language	4							+	+	+
S.01.O.007	Emergency primary care	3	+	-	+	+				+	
G.01.A.008	<i>Introductory university course (IT, Basics of informational culture)</i>	1	+								
G.01.A.009	<i>IT-based communication techniques in medicine</i>	1	+								
F.02.O.011	Human anatomy	4	+						•		
F.02.O.012	Bio-chemistry	4	+						+		
F.02.O.013	Bio-physics	4	+						+		
U.02.O.014	Communication and conduct in medicine	3					+		+	+	+
F.02.O.015	Human genetics	5	+			+					
F.02.O.016	Histology, cytology, embryology	5	i						+		
G.01.O.017	English/French language	4							+	+	+
U.02.A.018	<i>History of medicine</i>	1			+				+	+	+
U.02.A.019	<i>History of notorious medical scientists</i>	1			+					+	+
G.02.O.020	Physical education	4									+
S.03.O.021	Topographic anatomy and surgery	4	+					+		+	
F.03.O.022	Bio-chemistry	5	+						•		
S.03.O.023	General hygiene	4			+	+	+	+			
F.03.O.024	Human physiology	5	+						+		

F.03.O.025	Micro-biology, virology and immunology	6	+		+	+			+		
U.03.O.026	Sociology and general psychology	5							+	+	+
U.03.A.027	<i>Medical sociology</i>	1			+				+	+	+
U.03.A.028	<i>Medical psychology</i>	1			+				+	+	+
F.04.O.029	Biostatistics and research methodology	4		+		+	+	+	+	+	+
F.04.O.030	Pharmacology	5	+		+	+			+		
S.04.O.031	Human physiology	5	+		+	+	+	+			
F.04.O.032	General hygiene	5	+						+		
F.04.O.033	Microbiology, virology and immunology	5	+		+	+			+		
S.04.O.034	Internship (patients care)	5	+	+	+	+	+	+	+	+	+
U.04.A.035	<i>Leadership in medical services</i>	1			+				+		+
U.04.A.036	Personality psychology	1			+				+		+
S.05.O.037	Securing the sanitary and hygiene conditions in exceptional situations	4	+		+	+	+	+			
S05.O.038	Internal diseases – semiology	5	+	+	+		+	+	+	+	+
S.05.O.039	Surgical diseases – semiology	4	+	+	+	+	+	+	+	+	+
U.05.O.040	Bioethics	1							+	+	+
F.05.O.04I	Physiopathology	9	+	+					+		
F.0I.O.042	Human pathology	8	+						+		
S.05.O.043	Social medicine	5					+	+	+	+	+
S.05.A.044	<i>Clinical micro-biology</i>	1	+		+	+			+		
S.05.A.045	<i>Sanitary micro-biology</i>	1	+		+	+			+		
S05.O.046	Internal diseases – semiology	5	+	+	+	+	+	+	+	+	+
S.05.O.047	Surgical diseases – semiology	4	+	+	+	+	+	+	+	+	+
S.06.O.048	Hygiene of radiations	4	+		+	+	+	+			
S.06.O.049	Neurosciences	4	+	+	+	+	+	+	+	+	+
S.06.O.050	Radiology and imaging	3	+	+	+				+		
S.06.O.05I	Traumatology and orthopaedics	4	+	+		+	+	+	+	+	
S.0I.O.052	Internship (nurse)	5	+	+	+	+	+	+	+	+	+

S.06.A.053	<i>Economics of healthcare</i>										
S.06.A.054	<i>Financial management in healthcare</i>										
S.07.O.055	Anaesthesiology and intensive care	2	+	+	+	+	+	+	+	+	
S.07.O.056	General surgery	6	+	+	+		+	+	+	+	+
S.07.O.057	Environmental hygiene	10	+		+	+	+	+			
S.07.O.058	Management and marketing in healthcare	2							+	+	+
S.07.O.059	Obstetrics and gynecology	4	+	+	+	+	•	+	+	+	+
S.07.O.060	Ophthalmology	2	+	+	+	+	+	+	+	+	
S.07.O.061	Pulmonology and phtisiology	3	+	+	+	+	+	+	+	+	
S.07.A.062	<i>Medical information system</i>	1							+	+	+
S.07.A.063	<i>Military sanitary management. Military toxicology</i>	1		+	+	+		+	+	+	
S.08.O.064	Internal diseases	6	+	+	+		+	+	+		
S.08.O.065	Endocrinology	2	+	+	+	+	+	+	+	+	
S.08.O.066	Haematology	2	+	+	+	+	+	+	+	+	
S.08.O.067	Hygiene of human nutrition	9	+		+	+	+	+			
S.01.O.068	Oncology	2	+	+	+	+	+	+	+	+	
S.08.O.069	Psychiatry, Medical psychology and narcology	2	+	+	+	+	+		+	+	
S.08.O.070	Paediatric semiology. Child care. Paediatrics	6	+	+	+	+	+		+	+	
S.08.O.071	<i>Food safety and human health</i>	1	+		+	+	+	+			
S.08.O.072	<i>Nutrition in sports</i>	1	+		+	+	+	+			
S.09.O.073	Communicable diseases in adults	5	+	+	+	+	+	+	+	+	
S.09.O.074	Epidemiology	10					+	+	+		
S.09.O.075	Hygiene in children and adolescents	6	+		+	+	+	+			
S.09.O.076	Management of State Oversight in Public Healthcare	2							+	+	+
S.09.O.077	Medical parasitology and tropical communicable diseases	4	+	+	+	+	+	+	+		

S.09.O.078	Emergency medical situations	2	+	+	+	+	+	+	+		
S.09.A.079	<i>Hygiene within public healthcare facilities and prevention of nosocomial diseases</i>	1					+	+	+		
S.09.A.080	<i>Epidemiology and fighting of HIV</i>	1					+	+	+		
S.10.O.081	Communicable diseases in children	3	+	+	+		+	+	+	+	
S.10.O.082	Dermatology and venerology	3	+	+	+	+	+	+		+	
S.10.O.083	Clinical epidemiology	2					+	+	+	+	+
S.10.O.084	Epidemiology in exceptional situations	2					+	+	+		
S.10.O.085	Labour hygiene	10	+		+	+	+	+			
S.10.O.086	Forensics and medical law	3			+	+	+	+	+	+	
S.10.O.087	Otorhinolaryngology	4	+	+	+	+	+	+	+	+	
S.10.O.088	Promoting health and education for health	4			+		+		+	+	+
S.10.O.089	<i>Risk assessment</i>	1						+	+	+	+
S.10.O.090	<i>Chemical safety and toxicology</i>	1						+	+	+	+
S.11.O.091	Occupational diseases	4	+	+	+	+	+	+	+	+	
S.11.O.092	Epidemiologic diagnosis	4	+	+	+	+	+	+	+	+	
S.11.O.093	Human ecology	4				+		+	+	+	
S.11.O.094	Sanitary and hygiene laboratory	3			+	+		+	+	+	
S.11.O.095	Microbiology laboratory	3	+			+	+	+	+	+	
S.11.O.096	Laboratory medicine	3	+	+	+	+	+	+	+	+	
S.11.O.097	Family medicine	4	+	+	+	+	+	+	+	+	+
S.11.O.098	Health rehabilitation	2	+	+	+	+	+	+	+	+	+
S.11.O.099	Promoting community and family health – epidemiologic aspects	2					+	+	+		
S.11.A.100	<i>Methods for analysis and evaluation of occupational risks</i>	1			+	+	+			+	
S.11.A.101	<i>School of hospital epidemiologist</i>	1			+	+	+				

S.I2.O.102	Clinical internship (Hygienic oversight of the environment and health)	12	+	+	+	+	+	+	+		+
S.I2.O.I03	Clinical internship (Occupational healthcare)	4	+	+	+	+		+	+	+	+
S.I 2.0.104	Clinical internship (Epidemiologic oversight)	6	+	+	+		+	+		+	+
	Preparation and presentation of the Bachelor dissertation	8	+	+	+	+	+	+	+	+	+

DISTRIBUTION OF HOURS BY GROUPS OF COURSES

Groups of courses	Hours		Number of ECTS credits	Share (%) / hours
	Total	Including direct contact		
Basic courses (F)	2970	1737	99	27,5
compulsory (FO)	2970	1737	99	27,5
General courses (G)	150	60	5	1,4
- compulsory (GO)	150	60	5	1,4
Socio-humanitarian courses (U)	450	272	15	4,2
- compulsory	360	212	12	3,3
- optional (UA)	90	60	3	0,8
Specialty Courses (S)	6030	1870	201	55,8
- compulsory (SO)	5820	1730	194	53,9
- optional (SA)	210	140	7	1,9
Compulsory activities (AO)	1200	720	40	11,1
internships	960	660	32	8,9
Bachelor examinations	240	45	8	2,2
Total hours	10800	4659	360	100

INTERNSHIPS

Internships		Sem.	Duration/no. of weeks/hours	Period	Number of credits
1.	<i>Induction internship:</i> Sanitary-hygienic and bacteriologic laboratory • Nurse	IV	4 weeks/150 hours	02.07-27.07	5
		VI	4 weeks/150 hours	02.07-27.07	5
2.	<i>Clinical internship:</i> (Hygienic oversight of the environment and health. Occupational health. Epidemiologic oversight)	VII	12 weeks/660 hours	05.02-06.05	22

GRADUATION EXAMINATION/BACHELOR DISSERTATION

#	Name of activity	Period
1.	Presentation of the Bachelor Dissertation	May
2. 3.	Written test	May
	Verbal test for the specialty 0910.1 Preventive Medicine	June

Dean of the Medicine Faculty

Associate professor
Gheorghe Placinta

Provost of the medicine Faculty.
 Preventive Medicine Specialty

Cazacu-Stratu Angela

Annex 6: The advertising flyer of the study programme 2017

Erasmus+

UNIVERSITATEA DE STAT DE MEDICINĂ ȘI FARMACIE
„NICOLAE TESTEMIȚANU” DIN REPUBLICA MOLDOVA

Problem-Based Learning

**ETAPELE PRINCIPALE ALE
PREDĂRII-INVĂȚĂRII CENTRATE
PE CAZ CLINIC**

- Obținerea informațiilor inițiale;
- Generarea unei ipoteze clinice inițiale;
- Evidențierea datelor suplimentare importante pentru confirmarea ipotezei inițiale;
- Selectarea testelor de laborator și elaborarea unui plan de investigație pentru precizarea diagnosticului;
- Formularea unui diagnostic prezumptiv sau definitiv;
- Elaborarea unui plan de tratament;
- Sinteza lucrului efectuat și identificarea surselor informaționale necesare pentru o mai bună înțelegere a problemei prezentate.

Accesează:
<http://www.pblmd.aau.dk/>

Bd. Ștefan cel Mare și Sfânt, 165
MD-2004, Chișinău, Republica Moldova
Tel.: (+373) 22 243 408
Fax: (+373) 22 242 344
Email: contact@usmf.md
www.usmf.md

**SĂNĂTATE PUBLICĂ –
învățare bazată pe probleme**

Specialitatea Sănătate publică asigură pregătirea specialiștilor de înaltă calificare pentru monitorizarea sănătății publice și îmbunătățirea calității vieții populației prin prevenirea bolilor și informarea societății.

- Durata studiilor universitare integrate – 6 ani
- Oportunități de angajare la absolvire – centrele de sănătate publică, instituțiile medico-sanitare publice și private

METODE DE INSTRUIRE

- Prelegeri
- Lecții practice
- Învățare bazată pe probleme (PBL)
- Stagii practice

În premieră, studenții de la specialitatea Sănătate publică vor beneficia de un mod de învățare integrat - *Neuroștiințe* predat în format PBL (*Problem Based Learning*) grație Proiectului „Introducerea în Republica Moldova a metodelor de învățare bazate pe probleme: Sporirea competitivității și angajabilității studenților” (*Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability*), finanțat de Comisia Europeană în cadrul Programului Erasmus+.

DURATA MODULULUI
1 semestru (17 săptămâni)

**CREDITE DE STUDIU/
ECTS**
4 credite

LIMBI DE INSTRUIRE
Română și Engleză

**PARTICULARITĂȚI DE PREDARE-
INVĂȚARE**

- Formarea competențelor în echipă;
- Antrenarea și încurajarea gândirii critice, a creativității și a competitivității intelectuale;
- Schimbul de idei și colaborarea activă a studenților atât la nivel de grup, cât și cu facilitatorul.

OPORTUNITĂȚI

- Studenții vor beneficia de mobilitați academice (semestriale) în universitățile partenere din UE (Instruirea în limba engleză);
- Cooptarea și antrenarea în procesul de instruire a profesorilor din instituțiile partenere.

**CONTINUTUL
PROGRAMULUI**

- Anatomia omului
- Histologie
- Fiziologia omului
- Biochimie
- Fiziologie patologică
- Morfopatologie
- Imagistica
- Neurologie
- Psihiatrie

**SĂNĂTATE PUBLICĂ -
învățare bazată pe probleme**

Bachelor's degree programme in „Software Engineering” at TUM

Technical University of Moldova

Work Package 4

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Summary

Within this Work Package - WP4 - the sustainability strategy for the implementation of PBL, active teaching and learning centered on student at the Technical University of Moldova is presented. This report details the new bachelor's degree programme based on PBL - Software Engineering, a road map and an action plan that will guide staff and university management in their efforts to fully implement PBL, active student-centered teaching and learning in the study programme and university.

The report begins by presenting the TUM's *vision* of the Bachelor's Degree Programme based on PBL - Software Engineering, in particular, with a general description of the study programme, learning objectives and outcomes, and then a presentation of each semester including its learning objectives and learning outcomes, the transition from one semester to another, a description of the work on the project and the semestrial projects, including learning objectives, outcomes and their developments.

In line with the objectives of the PBLMD project to have a 50/50 structure (project / course) it was proposed to develop the educational plan where each semester has a separate project module of 10 ECTS, another 5 credits are included as design works within the disciplines of the semester.

Each semester has a well-defined theme and a supervisor who coordinates the activities of teachers and students so that:

- The theme of the introductory semester is *Problem-based learning of science, technology and society*.
- The theme of the semester 2 is *Engineering and scientific basis of computation*.
- The theme of the semester 3 is *The basics of applications development*.
- Theme of the semester 4 is *Formal languages and compilers*.
- The theme of the semester 5 is *Networks and security*.
- The theme of the semester 6 is *Internet of things (IoT)*.
- The theme of the semester 7 is *Information systems*.
- Semester 8 is dedicated to the bachelor's degree project, which is allocated 15 ECTS.

The professional competencies developed by the study programme are determined by the definition of the Software Engineering specialty in accordance with the ACM standard - Association for Computing Machinery and the IEEE Computer Society (ACM and the IEEE-Computer Society, 2015) and require a mix of skills to solve some categories of problems outlined by key competences on:

- the scientific and engineering fundamentals of information technologies;
- the organizational and informational aspects of the systems;
- applications technologies;
- software development methods and technologies;
- architecture and infrastructure of computing systems.

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1. INTRODUCTION

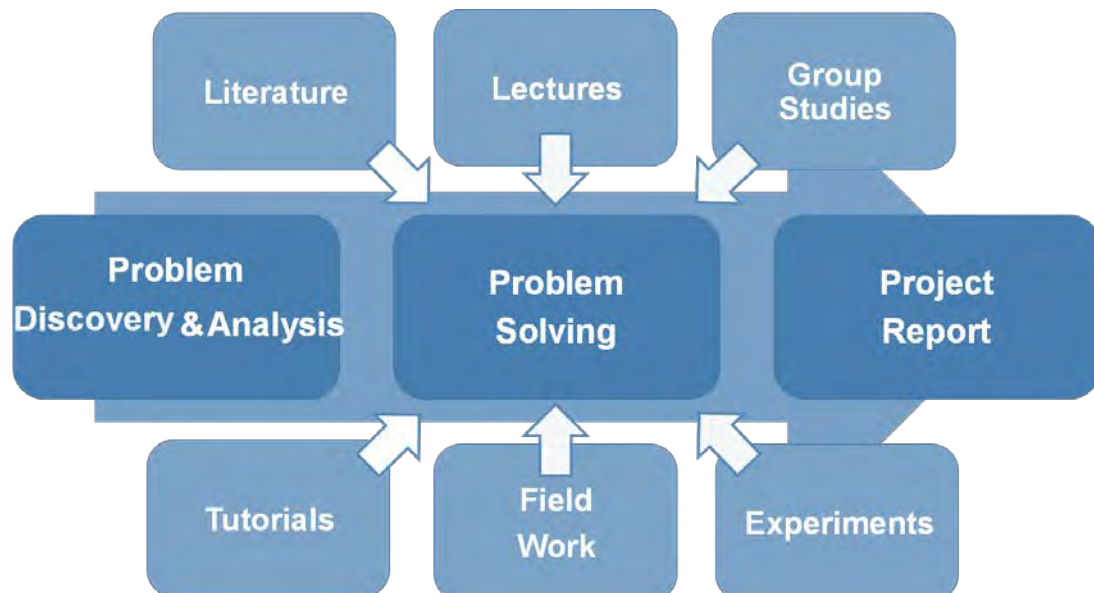
The purpose of this Work Package - PL4 - is to develop a sustainability strategy for the implementation of PBL, active teaching and learning centered on student at the Technical University of Moldova. Specifically, this report will propose an innovative bachelor's degree programme based on PBL Software Engineering, a road map and a detailed action plan that will guide staff and university management in their efforts to fully implement PBL, active student-centered teaching and learning in the study programme and university.

In this report, we rely on WP2 and WP3 that we developed in the period of 2015-2017. We also rely on the experience we have accumulated during our study visits and staff mobility at EU partner universities as well as during the PBL training sessions offered by EU project partners in Chisinau.

1.1 KEY ASSUMPTIONS

There is no PBL model suitable for all purposes. However, PBL-based models are mainly based on two key assumptions. The first assumption is that work on the project is in the *center*, at the basis, consisting of discovery and problem analysis, problem solving and project report (Figure 1). The second assumption assumes that other teaching and learning (face-to-face) activities such as literature, lectures, group studies and tutorials are designed to *support* work on the project. These two assumptions will also be at the base of our PBL, PBL-based bachelor's degree programme in Software Engineering, teaching and student-centered learning, active learning.

Figure 1: PBL Model at AAU: An example

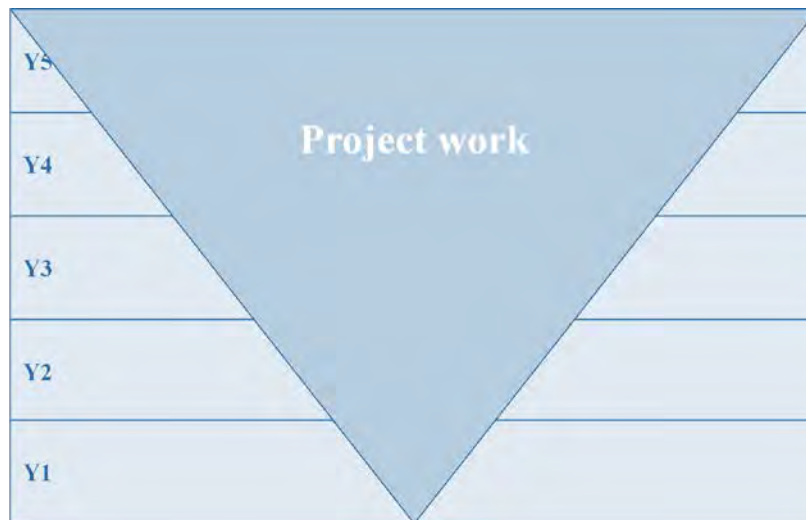


Source: AAU, 2017 (the word 'Discovery' is introduced by Romeo V. Turcan)

Another assumption relates to the relationship between work on the project and face-to-face activities. In the context of this report, wholly based on PBL, this means a study programme in which there is a 50:50 sharing between student work on the project and face-to-face activities (such as

lectures, seminars, workshops, laboratories and experiments). An example of progression is presented in Figure 2. Of course, there are many ways to distribute the relationship between work on the project and face-to-face activities during the semesters; the main purpose is to achieve an approximate 50:50 time sharing for the duration of the study programme.

Figure 2: An example of 50:50 time sharing between project work and face-to-face activities



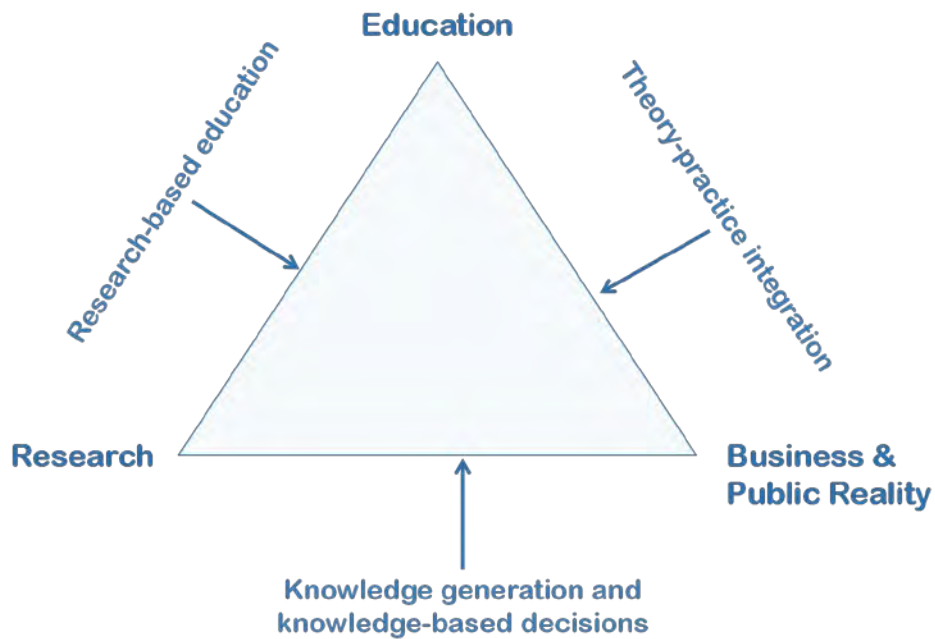
Source: Louise Faber, PBLMD 2016

1.2 EXPECTED OUTCOMES

A number of results are foreseen by the successful implementation of the Bachelor's Degree Programme Software Engineering based on PBL, student-centered and active. It is expected that by 2020, this study programme will become internationally recognized, which will attract European and international students as full-time or exchange students. It is also expected that by 2020 at least five Bachelor's Degree Programmes at our university will be redesigned based on PBs, with active and student-centered teaching and learning methodologies and methods, and that prospective students will be enrolled at these programmes from 1 September 2020. It is also expected to better adapt students' knowledge, skills and abilities to the needs of labor markets.

Successful implementation of the study programme as well as its spread across the university effects will contribute to the further development and consolidation of the integration of education, research and business environment / policy makers' collaboration (Figure 3). Academic staff will excel in engaging in research-based teaching, our students will learn and be able to apply theories in practice, whether in the private or public sector, and our researchers will work with private and public organizations to create and transfer new knowledge.

Figure 3: Socially committed university



Source: Olav J. Sorensen, 2015

1.3 THE PLAN

The report begins by presenting the TUM's *vision* of the Bachelor's Degree Programme Software Engineering based on PBL, in particular, with a general description of the study programme, objectives and learning outcomes, and then a presentation of each semester including its learning objectives and learning outcomes, the transition from one semester to another, a description of the work on the project and the semestrial projects, including learning objectives, outcomes and developments [Annex 1]. Subsequently, the road map [Annex 7] that will guide the process of implementing the Bachelor's Degree Programme Software Engineering based on PBL is presented and detailed. It will be continued by presenting and discussing the action plan that will detail, for example, the specific activities, resources and internal policies needed to successfully implement the visionary study programme. It will conclude by providing university management and university council with a set of policy recommendations on how to improve teaching and learning by introducing PBL, methodologies and active teaching and learning methods centered on student at

2. Our vision of the Bachelor's Degree Programme based on PBL - Software Engineering

In accordance with the objectives of the PBLMD project to have a 50/50 structure (project / course) it was proposed to develop the educational plan in accordance with Annex 1. Therefore, each semester has a separate project module of 10 ECTS, another 5 credits are included as design works within the semesters' disciplines, as observed in the plan (design column). The distribution of the disciplines included in the programme corresponds exactly to the framework plan, and the structure on components is presented in Annex 4.

2.1 OVERVIEW

Software Engineering (IS), along with *Information Technology*, is part of the science of information processing methods and tools (*computing*) to solve specific problems related to the organization of human activities. In relation to Information Technology, the *Software Engineering* programme is a more theoretical and specialists training-oriented, whose core mission is the development of software production models and techniques, but the scope of which extends to both system infrastructure and organizational and information aspects of companies.

The more theoretical aspect of the field results from the fact that the studied software development processes have a theoretical substrate better grounded in the Software Engineering study programme.

But the programme also includes information application procedures for a specific purpose in the design, construction and use of IT products and services, so there are areas common to the Information Technology programme.

2.1.1 The purpose of the programme

The relevance of the new study programme is also provided by the USAID survey data (O'Sullivan & Bercu, 2016), which highlights the need for more qualified specialists in programme product development.

The high pace of globalization of human society is largely due to information technologies, which provide new opportunities for capitalizing on information. The recognition of this is materialized in various national and international acts:

- The *Europe 2020 Digital Agenda* (European Commission, 2010) is one of seven outstanding initiatives under the European Sustainable and Comprehensive Development Strategy and aims to bring major economic and social benefits from a digital single market that already needs to be implemented to ensure: a) 50% of the population to use e-commerce; b) 33% of small and medium enterprises to make online sales; c) 50% of citizens to benefit from e-Government services; d) most public services are accessible online in all EU countries, etc.
- The transformation of the Republic of Moldova into a modern and efficient state is possible only through *technological modernization at the level of society, organizations and*

individuals, actions, also found in the Strategic Technology Modernization Programme of the country (Government Decision, 2011).

Therefore, the primary purpose of the study programme is determined by the need for well-trained engineers in line with the field of professional training, able to offer advanced software solutions and innovations applied to various fields of human activity.

The Technical University of Moldova, through the Software Engineering and Automatics Department, is *the first university* that since 1993 has trained for the national economy engineers with Bachelor’s Degree in Information Technologies. But consultations with partners (public institutions, private companies and students) highlighted the need for new approaches: *teamwork and interdisciplinarity*.

Continuous consultation is manifested through collaborative activities in various workshops and inter-institutional projects involving the members of the department. Private companies that have actively collaborated in consulting or support partnerships include Orange, Starnet, Allied Testing, Endava, Pentalog, JMD Planet, Winify, Evisoft, TenerLab, and Dekart.

2.1.2 Profile of the educational plan

The educational plan for the Bachelor’s Degree Programme (Cycle I) - Software Engineering [Annex 2] corresponds to ISCED level 6, being part of:

- Fundamental field of science, culture and technology: *06 Information and communication technologies*
- General field of study: *061 Information and communication technologies*
- Professional training area: *0613 Development of programme products and applications.*

The plan is approved by the Ministry of Education on 24 July 2017 and published on the website of the University (Technical University of Moldova, Department of Software Engineering and Automatics, 2017).

The study programme is oriented towards training engineers, which would allow the obtaining of the qualification corresponding to level 6 of the National Qualifications Framework / European Qualifications Framework (NQF / EQF). The key features of the professional training programme are presented in Table 2.1 and correspond to the 6th level of the National Qualifications Framework (National Qualifications Framework: Higher Education, 2013).

Table 2.1 - Essential characteristics corresponding to the level 6 of NQF

<i>Level</i>	Bachelor’s degree (Cycle 1) - EQF / NQF level 6
<i>Length of studies</i>	4 years
<i>ECTS study credits</i>	240 credits
<i>Form of organization</i>	full-time / part-time education
<i>Access conditions</i>	Baccalaureate diploma, secondary school diploma, higher education diploma
<i>Preconditions</i>	Achieving the pre-university learning outcomes
<i>Internships</i>	Compulsory (35 ECTS)
<i>Examination and assessment rules</i>	Current-formative; final-summative assessments are mandatory;

	The current-formative assessment is done through seminars, internships, self-evaluation and assessment of individual work and / or teams; The methodology of final-summative assessment is geared towards evaluating learning outcomes expressed in terms of competencies.
<i>Final assessment method</i>	Bachelor's Degree exam, defence of the Bachelor's Degree thesis
<i>Certification</i>	Bachelor's degree
<i>Title awarded</i>	BSc engineer
<i>Rights for graduates</i>	Apply for master degree programmes; Apply for continuous training programmes; Employment.
<i>Body responsible for authorizing programmes</i>	Ministry of Education, ANACIP

2.1.3 Competences developed under the study programme

The professional competences developed under the study programme are determined by the definition of the Software Engineering specialty in accordance with the standard ACM - Association for Computing Machinery and the IEEE Computer Society (2015) and require a mix of skills to solve some categories of problems outlined by key competences through:

- scientific and engineering fundamentals of information technologies;
- organizational and informational aspects of the systems;
- application technologies;
- software development methods and technologies;
- architecture and infrastructure of computing systems.

The professional and transversal competences are covered by fundamental, general, socio-humanistic and specialty disciplines, the weighting of which is in line with the framework plan (Normative acts, Framework Plan for Higher Education, 2015). Explained competences as well as their distribution on content areas can be consulted in the grids of Annexes 3 and 4.

2.1.4 Employability of graduates

Taking into account the increasing need of qualified specialists on the national and regional market, TUM graduates have a high rate of employability, in line with the USAID survey. The Classification of Occupations of the Republic of Moldova approved on 03.03.2014 by the Government of the Republic of Moldova through the major subgroup 25 Specialists in information technology and communications with the minor group 251 Programmers analysts in the field of software (2511 System analysts, 2512 Software designers, 2513 Web and multimedia system designers, 2514 Application programmers, 2519 Software programmer analysts not classified in the previous core groups) covers the core functions / professions of the graduates from the Software Engineering programme.

Taking into account the competences of the programme, software engineers are able to occupy other functions than those mentioned: from teachers and researchers to executives and managers of different levels.

2.1.5 Further training opportunities

The Software Engineering study programme through the stated competences necessary to be achieved allows graduates to continue in their master's degree in ICT specialties at any university in the country and abroad within existing national and international partnerships.

2.1.6 Methods and criteria for assessing competences

The minimum standards for the assessment of competences are presented in the grid 1L [Annex 4], the key assessment methods comprising: papers, laboratory works for engineering skills training, projects with individual tasks or teamwork with practical completion, tests / exams, exam and a bachelor's degree thesis.

The criteria for the assessment of competences, in accordance with the Regulation for the organization of studies in higher education based on SNCS (Order ME 726 of 20.09.2010), are established by the norms of the institution. Thus, the Regulation on the organization of the evaluation of students' learning activity (Order of TUM's Rector, entered into force in 2011/2012) by paragraph 2.3 The evaluation criteria describes in detail the general and specific assessment criteria (to which may be added attitudinal and motivational aspects).

2.1.7 Rules of academic promotion

Promotion in the next year of study is conditioned by the accumulation of the number of compulsory credits foreseen in the educational plan during the academic year. Obtaining allocated credits is only possible with the "5" to "10" grades, according to the grading scale found in the Regulation on the organization of the assessment of students' learning activity.

In order to obtain the Bachelor's degree, it is necessary to fully complete the educational plan and to promote the evaluation tests (including the Bachelor's degree exam and the defence of the Bachelor's degree thesis) with at least the grade "5".

2.1.8 Expected learning outcomes

The study programme in Software Engineering trains engineers who have to demonstrate the following qualities:

- Have knowledge and skills of software engineering, know the professional standards required to start the engineering practice;
- Demonstrate understanding and can apply theories, models and techniques that define the foundations for identifying, analyzing, designing, realizing, implementing, checking and documenting the problems of the field;
- Can work both on their own and in team to develop and deliver quality software products;
- Demonstrate understanding, and give importance, for negotiation, leadership and communication with beneficiaries, indispensable components to a typical software development environment;
- Can provide solutions for various application domains using software engineering methods integrating ethical, social, legal and economic aspects;
- Can find acceptable solutions, matching contradictory objectives of the project, taking into account costs, time, knowledge, and existing systems.

Therefore, as expected outcomes of the study programme 0613.3 Software Engineering, it is expected that young specialists, holders of the title of BSc engineer, will demonstrate the transversal and professional knowledge, skills and competences corresponding to the requirements of the employers, confirmed by the degree with 240 transferable credits and providing employment opportunity and / or continuing studies in the second cycle (Master's degree studies).

2.2 SEMESTERS

The distribution of disciplines on areas of knowledge, their grouping on professional competences, establishing interdependence relations are presented in Annex 4. The following is a grouping of disciplines on semesters defining a common theme.

2.2.1 Semester 1

The theme of the introductory semester is *Problem-based learning of science, technology and society*.

The content areas covered by semester disciplines are: Exact and applied sciences

– 10 ECTS, General and socio-humanistic areas – 9 ECTS, Programming – 5 ECTS, Software development – 4 ECTS, Information management – 1 ECTS, Architectures, platforms and technologies – 1 ECTS.

The semester project is awarded 10 ECTS and is carried out in the module *Conceptual design of an IT application*. Course units related to semester projects are Computer programming and *Personal and professional development / Computer science and society*.

Code	Module / course unit name	Total hours			Number of hours by type of activity			Assessment form	No. credits
		total	direct contact	individual study	course	Internships	project		
G.01.O.013	Conceptual design of an IT application	300	150	150			150	PA	10
F.01.O.001	Mathematics	150	75	75	45	30		E	5
F.01.O.002	Computer programming	150	75	75	30	15	30	E	5
F.01.O.003	Special mathematics 1	150	75	75	30	45		E	5
U.01.A.021	Personal and professional development	150	75	75	30	30	15	E	5
U.01.A.022	<i>Computer science and society</i>								
	Total semester 1:	900	450	450	135	120	195	4E, 1PA	30
					450				

2.2.2 Semester 2

The theme of the semester is the *Engineering and scientific basis of computation*. The areas of content covered by the semesters are: Exact and applied sciences - 15 ECTS, Programming - 6 ECTS, Architectures, platforms and technologies - 5 ECTS, General and socio-humanistic fields - 4 ECTS.

The semester project is awarded 10 ECTS and is made under the *Equivalent models* module. Course units related to the semester project are *Applied sciences*, *Special mathematics 2* and *Data structures and algorithms*.

Code	Module / course unit name	Total hours			Number of hours by type of activity			Assessment form	No. credits
		total	direct contact	individual study	course	Internships	project		
F.02.O.004	Equivalent models	300	150	150			150	PA	10
F.02.O.005	Applied sciences	150	75	75	30	15	30	E	5
F.02.O.006	Special mathematics 2	150	75	75	30	15	30	E	5
F.02.O.007	Computer architecture	150	75	75	30	45		E	5
F.02.O.008	Data structures and algorithms	150	75	75	30	30	15	E	5
	Total semester 2:	900	450	450	120	105	225	4E, 1PA	30
					450				

2.2.3 Semester 3

Theme of the semester *The basics of applications development*. The content areas covered by the semesters are: Programming - 13 ECTS, Software development - 4 ECTS, Networks and data communications - 3 ECTS, Architectures, platforms and technologies - 2 ECTS, Exact and applied sciences - 2 ECTS, Information management - 3 ECTS, General and socio-humanistic fields - 3 ECTS.

The semester project is awarded 10 ECTS and is carried out under the *Equivalent models* module. Course units related to the semester project are *Applied sciences*, *Special mathematics 2* and *Data structures and algorithms*.

Code	Module / course unit name	Total hours			Number of hours by type of activity			Assessment form	No. credits
		total	direct contact	individual study	course	internships	project		
S.03.O.027	The Basics of Applications Development	300	150	150			150	PA	10
S.03.O.028	Object Oriented Programming	150	75	75	30	15	30	E	5
S.03.O.029	Computer networks	150	75	75	30	45		E	5
S.03.O.030	Databases	150	75	75	30	15	30	E	5
S.03.A.039 S.03.A.040	Data analysis and visualization <i>Computer graphics</i>	150	75	75	30	30	15	E	5
	Total semester 3:	900	450	450	120	105	225	4E, 1PA	30
					450				

2.2.4 Semester 4

Theme of the semester *Formal Languages and Compilers*. The content areas covered by the semester are: Software Development - 1 ECTS, Programming - 18 ECTS, Architectures, Platforms and Technologies - 8 ECTS, General and Socio-Humanistic Fields - 3 ECTS.

The semester project is awarded 10 ECTS and is realized within the module *Development of domain specific languages*. Course units related to semester project are *Formal Languages and Compiler Design*, *Computability and Complexity* and *Multimedia Technologies / Simulation and Modeling Techniques*.

Code	Module / course unit name	Total hours			Number of hours by type of activity			Assessment form	No. credits
		total	direct contact	individual study	course	Internships	Project		
F.04.O.009	Developing domain-specific languages	300	150	150			150	PA	10
F.04.O.010	Formal languages and compiler design	150	75	75	30	15	30	E	5
F.04.O.011	Computability and complexity	150	75	75	30	15	30	E	5
S.04.O.031	Operating systems: internal mechanisms and design principles	150	75	75	30	45		E	5

S.04.A.041 S.04.A.042	Multimedia technologies <i>Simulation and modeling techniques</i>	150	75	75	30	30	15	E	5
Total semester 4:		900	450	450	120	105	225	4E, 1PA	30
					450				

Production internship (to be made at student's choice based on modules Basics of applications development and Development of domain-specific languages)

2.2.5 Semester 5

Theme of the semester *Networks and Security*. The content areas covered by the semesters are: Programming - 10 ECTS, Software Development - 6 ECTS, Exact and Applied Sciences - 1 ECTS, Information Security - 4 ECTS, Software Quality - 3 ECTS, General and Socio-Humanistic Fields - 6 ECTS.

The semester project is awarded 10 ECTS and is realized within the module *Developing Secure Applications*. Course units related to the semester project are *Network programming, Cryptography and Security, and Techniques and Software Design Mechanisms / Programme Verification and Validation*.

Code	Module / course unit name	Total hours			Number of hours by type of activity			Assessment form	No. credits
		total	direct contact	individual study	course	internships	project		
S.05.O.032	Developing secure applications	300	150	150			150	PA	10
S.05.O.033	Network programming	150	75	75	30	15	30	E	5
S.05.O.034	Cryptography and security	150	75	75	30	15	30	E	5
G.05.O.020	Ethics, communication and law	150	75	75	45	30		E	5
S.05.A.043 S.05.A.044	Techniques and mechanisms of software design <i>Verification and validation of programme products</i>	150	75	75	30	30	15	E	5
Total Semester 5:		900	450	450	135	90	225	4E, 1PA	30
					450				

2.2.6 Semester 6

The theme of the semester *Internet of Things (IoT)*. The content areas covered by the semester's disciplines are: Programming - 13 ECTS, Networks and data communications - 1 ECTS, Architectures, platforms and technologies - 8 ECTS, Exact and Applied Sciences - 5 ECTS, General and Socio-Humanistic fields - 3 ECTS.

The semester project is awarded 10 ECTS and is implemented within the *IoT Projects* module. All course units of the semester are related to the semester project, accumulating 255 hours of study guided by the supervisor.

Code	Module / course unit name	Total hours			Number of hours by type of activity			Assessment form	No. credits
		total	direct contact	individual study	course	internships	project		
S.06.O.035	IoT projects	300	150	150			150	PA	10
S.06.O.036	Embedded systems	150	75	75	30	15	30	E	5
F.06.O.012	Signal processing	150	75	75	30	30	15	E	5
S.06.A.045 S.06.A.046 S.06.A.045 S.06.A.046	Man-computer interaction <i>Real time programming</i>	150	75	75	30	15	30	E	5
S.06.A.047 S.06.A.048	Mobile application programming <i>Web programming</i>	150	75	75	30	15	30	E	5
	Total semester 6:	900	450	450	120	75	255	4E, 1PA	30
					450				

Technological internship (to be made at student's choice based on Secure Applications Development modules, semester 5, or IoT Projects, semester 6)

2.2.7 Semester 7

Theme of the semester *Information Systems*. The content areas covered by the semester's disciplines are: Programming - 8 ECTS, Software Development - 4 ECTS, Software Quality - 5 ECTS, Exact and Applied Sciences - 4 ECTS, Information Management - 2 ECTS, General and Socio-Humanistic fields - 7 ECTS.

The semester project is awarded 10 ECTS and is realized in the module *Information Systems Design*. All course units of the semester are related to the semester project, accumulating 225 hours of study guided by the supervisor.

Code	Module / course unit name	Total hours			Number of hours by type of activity			assessment form	No. credits
		total	direct contact	individual study	course	internships	project		
S.07.O.037	Design of information systems	300	150	150			150	PA	10
S.07.O.038	Programming Distributed Applications	150	75	75	30	15	30	E	5
U.07.A.023 U.07.A.024	Software Project Management <i>Company Management</i>	150	75	75	30	30	15	E	5
U.07.A.025 U.07.A.026	Electronic marketing <i>Digital entrepreneurship</i>	150	75	75	30	30	15	E	5
S.07.A.049 S.07.A.050	Software quality <i>Analysis and specification of software requirements</i>	150	75	75	30	30	15	E	5
Total semester 7:		900	450	450	120	105	225	4E, 1PA	30
					450				

2.2.8 Semester 8

Theme of the semester *The bachelor's degree project*. The content areas covered by the semester's disciplines are: Programming - 12 ECTS, Software Development - 12 ECTS, Information Management - 2 ECTS, General and Socio-Humanistic Fields - 4 ECTS.

The semester is dedicated to the bachelor's degree project, which is given 15 ECTS. The project will be publicly defended in front of a commission with at least one external examiner, and the chairman of the bachelor's degree commission.

Code	Module / course unit name	Total hours			Number of hours by type of activity			assessment form	No. credits
		total	direct contact	individual study	course	internships	project		
S.08.A.051 S.08.A.052	Fundamentals of Artificial Intelligence <i>Unrelated databases</i>	150	75	75	30	45		E	5
S.08.A.053 S.08.A.054	Fundamentals of Game Development <i>Mixed reality technologies</i>	150	75	75	30	45		E	5

S.08.O.055	Internship and bachelor's degree project	450		450				E	15
S.08.O.056	Theoretical synthesis test: <i>Algorithms, programming and databases</i>	120		120				E	4
S.08.O.057	Defence of the bachelor's degree project	30		30				E	1
	Total semester 8:	900	150	750	60	90		5E	30
					150				

3. Roadmap

3.1 Introduction

The Roadmap [Annex 7] is a consolidated list of measures, commitments and timelines for implementing actions to overcome the challenges identified in the “Software Engineering” pilot study programme for implementing Problem Based Learning. Its purpose is to establish an institutional foundation to overcome certain barriers or certain threats to the implementation of the project in question.

In order to implement the pilot study programme, the Roadmap was developed [Annex 7]. This includes several activities required to be implemented at the institutional level in order to successfully implement the “Software Engineering” pilot study programme. The implementation of this Action Plan has already begun, some activities being carried out, others being started. These activities could formally be divided into three periods:

Period 1: Preparation process.

Period 2: Implementation process.

Period 3: Promoting.

3.2 PERIOD 1

Period 1: The duration of the period is up to 2 years (2015 - summer 2017) and the goal is to prepare the legal framework, the physical environment and the teaching staff for the launch of the new “Software Engineering” study programme.

In order to start the learning process under the new “Software Engineering” study programme, the following steps need to be taken:

1. The Software Engineering specialty is a new specialty that is not in the *Nomenclature of Professional Training Areas and Specialties of 2005*, which is why it must be introduced and approved in the new *Nomenclature of Professional Training Areas and Specialties of 2017*.
2. Elaboration of the educational plan for the training of the specialist in Software Engineering according to the provisions of the *TUM’s Regulation regarding the organization of studies based on the National Study Credits System*, having regard to the *Regulation for the organization of studies in higher education based on the National Study Credits System*, so that the programme is linked to national and international standards of training of specialists in the field and corresponds to the Framework Plan.
3. Approval of the Study Programme within the Software Engineering and Automatics Department; Faculty of Computer Science, Informatics and Microelectronics and TUM Senate.
4. The internal evaluation (self-evaluation) of the study programme for authorization of provisional functioning shall be carried out autonomously by the Technical University of Moldova.

5. The advertising of the new study programme through leaflets [Annex 9], the website of the Technical University of Moldova (<http://utm.md/studii/planuri/2016/fcim/Plan%20ISW.pdf>), social networks.
6. Based on the Order of the Ministry of Education of the Republic of Moldova on the organization of the admission 2017, admission to the Software Engineering specialty (<http://utm.md/admitarea-utm/admiterea-utm-licenta/>).

Content change:

The launch of the new study programme envisages certain activities aimed at modifying the paradigm of higher education, namely:

1. Elaboration of the new educational plan, which corresponds to the Framework Plan and is based on a linear progress determined by relations at the semester level rather than at the level of disciplines.
2. Identifying companies that will assume support to provide knowledge transfer support at the content level, teachers and internship placements for students.
3. Preparing the infrastructure for teaching based on the PBL methodology consists in procuring the equipment and preparing the lecture halls, which will be team-oriented.
4. Identifying the teachers who will be involved in the teaching process within the new study programme and preparing them for the use of the PBL teaching methodology.
5. Elaboration of educational documents: curriculum by disciplines (analytical programmes), fact sheets, guides, case studies, evaluation etc. (for the first year of study).

3.3 PERIOD 2

The implementation period foresees the launch of the new study programme from 1 September 2017.

The new study programme is launched on the basis of an educational plan that is based on a linear progress determined by relationships at the semester level rather than at the level of disciplines. Each semester has a well-defined theme and a supervisor (tutor) who coordinates the activities of teachers and students:

- Learning based on science, technology and society problems
- The engineering and scientific basics of the calculation
- The basics of applications development
- Formal languages and compilers
- Networks and security
- The Internet of Things (IoT)
- Information systems
- Bachelor's degree project.

Unique themes conclude the modules of the semester (courses / lectures, seminars, other activities), giving them a common sense, a motivation to study. To which is added the semester project, which is given 10 ECTS credits (out of 30 per semester) and the other recommended subjects - other 20. The approach allows the decongestion of the study programme from the modules offered

by the department (compulsory or optional) and the offering of greater academic freedom for students in projects, in the spirit of PBL principles.

This period also provides for an external evaluation of the study programme for the provisional authorization by the National Agency for Quality Assurance in Professional Education (ANACIP).

The external evaluation commission shall verify, through a visit to the requesting institution, the fulfillment of requirements with respect to accreditation standards, performance criteria and performance indicators, approved by ANACIP. If all accreditation standards “meet the requirements”, the Governing Board of ANACIP proposes to ***authorize the provisional functioning*** of the study programme for a period of five years.

The final decision on the authorization or non-authorization of provisional functioning is adopted: by Government Decision, at the proposal of the Ministry of Education, based on the decision of the Governing Board of ANACIP.

3.4 PERIOD 3

This period implies the promotion of the ERASMUS + PBLMD project and the new Software Engineering study programme.

The promotion plan of the project and the study programme is presented in Annex 10.

4. ACTION PLAN

4.1 INTRODUCTION

The Action Plan represents the activities undertaken to launch the new Software Engineering study programme at the Faculty of Computer Science, Informatics and Microelectronics, Annex 6.

4.2 ACTIVITIES

4.2.1 Period 1

Activities related to the development of the educational offer. During their elaboration, the experience gained during the visits to the partner universities of the European Union (Aalborg University of Denmark, University of Glasgow, UK) and the legislative and normative acts regulating the activity in higher education in the Republic of Moldova were taken into account.

4.2.2 Period 2

Activities related to the training of the teachers in order to use the PBL method. In this respect, a part of the teaching staff, who provide lectures in the respective groups, were and are involved in the trainings organized at TUM. Also, several teachers have benefited from academic mobility at the European Universities of the European Union (assoc. prof., PhD, Dumitru Ciorba; assoc. prof., PhD, Cojuhari Elena; assoc. prof., PhD, Cojuhari Irina, etc.), where they had the opportunity to get acquainted with the PBL teaching methodology.

4.2.3 Period 3

Activities related to the preparation of the legal framework, elaboration of the educational plan for the training of the specialist in Software Engineering, approval of the study programme at department, faculty and the TUM Senate levels.

Development of the curriculum on disciplines (analytical programmes), guides, case studies, evaluation, etc. Identifying companies that will assume support to provide knowledge transfer support at the level of content, teaching staff and internship placements for students.

4.2.4 Period 4

Preparing the infrastructure for teaching based on the PBL methodology consists in procuring the equipment and opening the PBL rooms within the Faculty of Computer Science, Informatics and Microelectronics.

4.2.5 Period 5

Activities related to the dissemination of good practice. In this respect, TUM's newspaper "Mesager Universitar" will be used in which will be published information about the project implementation, with the participation of the project team members with speeches at various conferences, workshops. At the same time, activities under the SI study programme are also reflected on facebook.com.

4.2.6 Period 6

Extension of PBL for other specialties within TUM.

5. POLICY RECOMMENDATIONS

5.1 INTRODUCTION

The implementation of the PBLMD project highlighted some *important aspects* of the developed study programme, which are listed below in the perspective of the SWOT analysis (and which can define the plan of measures needed to develop the programme at institutional levels):

Aspects	Notes
Strengths (internal source)	
TUM is an institution with traditions	<i>Transfer of authority and well-established processes</i>
Recognized for good training	<i>The USAID Survey</i>
Internationalization actions	<i>Plan created in the spirit of the international ACM standard Programmes in English</i>
Teachers with good professional experience	<i>There are also teachers employed in IT companies</i>
Large number of students	<i>The relatively higher number of students offers opportunities to optimize the didactic workload</i>
Alternatives to education	<i>Interdisciplinary approach, teamwork, etc.</i>
Experience with Anglophone groups	<i>The existence of the Anglophone students community, which allows multiple extra-curricular activities</i>
Weaknesses (internal source)	
Few teachers have PhD degrees	<i>Diminishes the academic value of the programme evaluation</i>
Few teachers speak English fluently	
Few teachers involved in research topics	<i>Decreases from the scientific value of the programme evaluation</i>
Uncompetitive salary to an IT teacher compared to a specialist in the field	<i>The difference between the salary of a beginner in the field and a teacher becomes significant</i>
Insufficient technical endowment to cover new directions	<i>The local industry is already actively seeking for IoT, VR, GameDev, etc. specialists</i>
Insufficient use of institutional collaboration relationships with IT associations / companies	<i>Programme engagement, technical endowment, etc</i>
Opportunities (external source)	
Internationalization of the study programme	<i>Cooperation agreements Academic mobility through programmes, like Erasmus +</i>
External financing for technical means	<i>The PBLMD project Collaboration USAID - IoT Laboratory Collaboration Orange - Mobile Technologies</i>
Internships / workshops for staff training	
IT career promotion campaigns of domain affiliated associations	<i>I Choose a Career in IT (ATIC)</i>
Required professional field (dynamic sector in RM)	<i>Admission contest Extensive internship / collaboration base</i>

Aspects	Notes
<i>Threats (external source)</i>	
Reducing the number of high school graduates	<i>Especially from those with a real profile</i>
Migration of students after the beginning of the study year	<i>In particular, Romania</i>
Confusions with related specialties	<i>Information Technologies, Informatics, Computers, Automatics</i>
Competition with “accelerated studies” training IT specialists	<i>Continuous training programmes, ...</i>
Worsening of the social-political situation in the country	<i>Decrease in budget funding Retaining salaries and scholarships</i>

5.2 STUDY PROGRAMME LEVEL

At the basis of the organization of the educational process are: educational standards, the nomenclature of specialties, educational plans and study programmes.

The university departments have a conventional independence in the development of the educational plans for the study programmes initiated, which results from the institutional organization and higher education studies in the Republic of Moldova. However, some actions can be done at departmental level:

Recommendations	Planned measures
Continuous adaptation of study programmes and content of course units to the needs of students and society	<ul style="list-style-type: none"> - Using the best teaching and examination methods based on the experience and specificity of our university (intensifying the use of new e-learning technologies). - Strengthening the groups of disciplines depending on the areas of knowledge and identifying supervisors of competences to ensure consistency in the flow of studies. - Using non-formal education methods (through workshops, meetings with specialists in the field / former graduates). - Developing the transversal skills needed for a successful ICT employee. - Consultation of businesses and economic agents on the content of the educational plans.

5.3 DEPARTMENT AND FACULTY LEVELS

The faculties (according to the TUM Statute) are university didactic-scientific and administrative subdivisions, which aim at organizing and carrying out the training-education process in the first cycle (Bachelor), the second cycle (Master) and the third cycle (PhD), continuous education of engineering staff, carrying out methodical, educational and scientific research, innovation and development for one or more fields / specialties / specializations. The organizational structure of the faculty includes departments, teaching and scientific laboratories, centers and other subdivisions.

The department / chair is the functional academic unit that assures the production, transmission and capitalization of knowledge in one or more training / specialty fields.

At the department and faculty level, the following recommendations and measures are proposed:

Nr. crt.	Recommendations	Planned measures
1	Active involvement in the activity of teacher training and increase of the number of staff holding scientific degrees and scientific-didactic titles.	<ul style="list-style-type: none"> - Didactic staff training within the PBL pedagogical module. - More teachers enrolled in English courses organized by TUM for teachers. - Internships / workshops for staff training. - Continuous training of teaching staff. - Organization of the basis for more active involvement of teachers in the research process. - Conducting scientific seminars at the department. - Carrying out didactic seminars with the sharing of teaching experience based on the PBL methodology.
2	Active involvement of teachers in research with wider involvement of students in the scientific research process.	<ul style="list-style-type: none"> - Consolidation of the scientific research directions carried out within the department in research groups. - Orientation of departmental research directions to Horizon 2020 priority research themes. - Attracting students to scientific activities.
3	Promoting the image of the department and study programme	<ul style="list-style-type: none"> - Career promotion campaigns. - Internationalization of the study programme. - Strengthening academic partnerships. - Promoting the image of the department.
4	Developing the technical and material basis for laboratory work and scientific research.	<ul style="list-style-type: none"> - Finanțare externă pentru mijloace tehnice. - <i>External financing for technical means.</i> - Îmbunătățirea infrastructurii de predare și de cercetare. - <i>Improving the teaching and research infrastructure.</i>
5	Expanding the area of internship placements.	<ul style="list-style-type: none"> - Concluding new collaboration protocols with businesses to ensure student placements. - Mobility programmes for students.

5.4 STAFF LEVEL

At the staff level, the following recommendations and measures are proposed:

Nr. crt.	Recommendations	Planned measures
1	Active involvement in continuous training.	<ul style="list-style-type: none"> - Training within the pedagogical training module PBL. - More teachers enrolled in English courses organized by TUM for teachers. - Internships / workshops for staff training. - Continuous training courses.
2	Active involvement in the research process.	<ul style="list-style-type: none"> - Active involvement of teaching staff in the research process. - Active participation in scientific seminars organized within the department.

5.5 Administration and management levels

The executive manager of TUM is the Rector, who legally represents TUM in relations with third parties and runs the University.

The governing structures in TUM are:

- a) at university level: the University Senate, the Institutional Strategic Development Council, the Scientific Council and the Administration Council of the University;
- b) The faculty council;
- c) Department council;
- d) the structure of student self-government;
- e) Council of the Doctoral School.

At the level of administration and management, the following recommendations and measures are proposed:

Nr. crt.	Recommendations	Planned measures
1	Developing the technical and material basis for laboratory work and scientific research.	- External financing for technical means. - Facilities adapted for active learning.
2	Planning PBL education in other study programmes.	- Identifying study programmes and providing support for the legal framework, infrastructure.
3	Expanding institutional collaboration relationships with IT associations / companies.	- Concluding new collaboration agreements with IT Associations / Companies.

6. CONCLUDING REMARKS

The educational system in the Republic of Moldova works by inerting a traditional framework in which education is regarded as a production process. The production of prepared and disciplined staff according to standardized educational processes. This approach fits perfectly into a fully industrialized society, but not in a post-industrialized one that faces great socio-economic challenges. The need for change in society is also fully reflected in education, where the curriculum appears as a transformation of an effort (individually and collectively) into the skills necessary for society. The objectives of any current programme target these characteristics for an employee. But these not being practiced, not being part of the learning model, can not be fully achieved. Therefore, another learning model, a reorganization of the interdisciplinary study programme (achieved through real projects), flexibility (provided by information technologies) and freedom (to choose the problem individually depending on individual capacities and interests) (Balan, Calin, & Ciorba, 2016) is required.

Student centered teaching methods change the focus of activity from teacher to student. These methods include active learning where students solve problems, ask questions, formulate their own questions, discuss, explain, discuss or suggest brainstorming sessions during the lesson; collaborative learning, where students work in teams on problems and projects under conditions that ensure both positive interdependence and individual responsibility; inductive teaching and learning, where students are first presented with the challenges (questions or problems) and then they have to learn the course material in the context of solving the challenges.

Problem Based Learning (PBL) is an approach that encourages active learning through the creation of environments and tasks offered by social-constructivist learning theory (Karami, Karami, & Attaran, 2013). Active learning is generally defined as any training method that involves students in the learning process. In other words, active learning requires students to make meaningful learning activities and think about what they are doing. The basics of active learning are student activity and involvement in the learning process. Active learning is often in contrast to the traditional lesson where students passively receive information from the teacher (Prince, 2004).

There are different implementation models for PBL, but in the context of software engineer training, the experience in (Zapater, Malagon, Goyeneche, & Moya, 2013) is worth mentioning. The authors used the SCRUM methodology, widely used in the software industry, in an experimental group of students. Therefore, in addition to pedagogical objectives, students were also required to learn version control tools (to share code between teammates), divide complex tasks into smaller ones, analyze and measure the time required for each task, develop communication skills to ensure effective interaction with their colleagues. Qualitative and quantitative analyzes of Agile-PBL experiences results versus traditional methodologies have shown students' satisfaction and motivation. However, the same measurements show that there are negative effects related to the additional planning and coordination time (planning overhead) and the tools imposed in use. The key conclusion is that information technologies must be an ally in gaining freedom in learning and not a new constraint.





A society can only be free and democratic if every individual is free and responsible in his/her choices. These important qualities a man only achieves by “practicing” them, being placed at the center of the learning context. Education in this sense can be understood as a framework for creating the best conditions for personal development (Illeris, 2007; Balan, Călin, & Ciorbă, 2016).

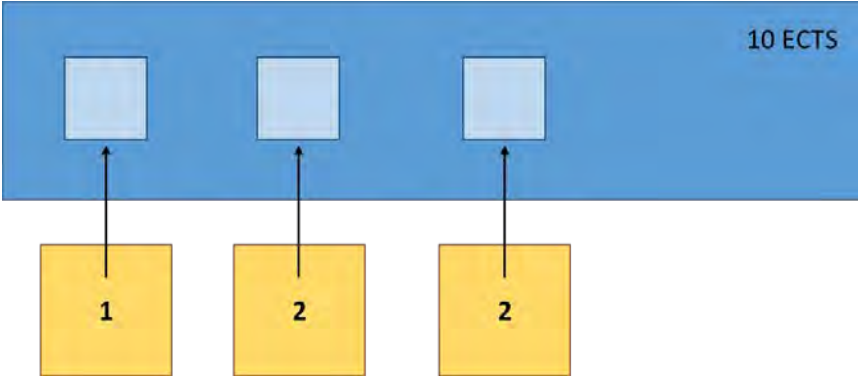
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Annex 1: Our vision on the Bachelor's Degree Programme

<i>ECTS</i>	<i>10</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>5</i>
Sem. 1	Project	Project development within the course unit	Course unit	Course unit	Course unit
Sem. 2	Project	Project development within the course unit	Course unit	Course unit	Course unit
Sem. 3	Project	Project development within the course unit	Course unit	Course unit	Course unit
Sem. 4	Project	Project development within the course unit	Course unit	Course unit	Course unit
Sem. 5	Project	Project development within the course unit	Course unit	Course unit	Course unit
Sem. 6	Project	Project development within the course unit	Course unit	Course unit	Course unit
Sem. 7	Project	Project development within the course unit	Course unit	Course unit	Course unit
Sem. 8	Project	Project development within the course unit	Course unit	Course unit	Bachelor's degree exams

-  Project
-  Project development within the course unit
-  Course unit
-  Bachelor's degree exams



Credits distribution model within three course units

Annex 2: Bachelor`s Degree Programme on Software Engineering

Ministerul Educației al Republicii Moldova
Universitatea Tehnică a Moldovei
Facultatea Calculatoare, Informatică și Microelectronică

„APROBAT”

Ședința Senatului UTM
proces verbal nr. 4
din „27” decembrie 2016

Președintele Senatului UTM

Rector, dr. hab.

Viorel Bostan



„COORDONAT”

Ministerul Educației al Republicii Moldova



nr. 10/Regis. 2017

2017
252-01-18130

PLAN DE ÎNVĂȚĂMÂNT pentru ciclul I, studii superioare de licență (nivelul 6 conform ISCED)

Domeniul general de studiu: 061 Tehnologii ale informației și comunicațiilor

Domeniul de formare profesională: 0613 Dezvoltarea produselor program și a aplicațiilor

Programul de studiu: 0613.3 Ingineria software

Nr. total de credite de studiu ECTS: 240

Titlul conferit: Inginer licențiat

Certificare: Diploma de licență

Baza admiterii: diploma de bacalaureat sau un act echivalent de studii;
diploma de studii superioare

Limba de instruire: română, rusă, engleză

Forma de organizare a învățământului: învățământ cu frecvență

1. CALENDARUL UNIVERSITAR

Anul de studii	Activități didactice		Sesiuni de examene		Stagii de practică	Vacanțe		
	Sem. I	Sem. II	Sem. I	Sem. II		Iarnă	Primăvara	Vară
I	15 săptămâni	15 săptămâni	4 săptămâni	4 săptămâni	-	2 săptămâni	Vacanța pentru sărbătorile de Paști, 1 săptămână (conform calendarului creștin)	10 săptămâni
II	15 săptămâni	15 săptămâni	4 săptămâni	4 săptămâni	15 săptămâni	2 săptămâni		6 săptămâni
III	15 săptămâni	15 săptămâni	4 săptămâni	4 săptămâni	15 săptămâni	2 săptămâni		6 săptămâni
IV	15 săptămâni	7 săptămâni	4 săptămâni	2 săptămâni	10 săptămâni	2 săptămâni		9 săptămâni

SDey
coordonat



Agenția Națională de Asigurare
a Calității în Educație și Cercetare

AFFILIATE OF
ENQA

CERTIFICAT

de evaluare externă a calității

Nr. 000117

eliberat Universității Tehnice a Moldovei, cu sediul în mun. Chișinău, bd. Ștefan cel Mare, 168, MD - 2004, înregistrată la Camera Înregistrării de Stat nr. 1007600001506 din 29 ianuarie 2007.

În baza rezultatelor evaluării externe, Consiliul de Conducere al Agenției Naționale de Asigurare a Calității în Educație și Cercetare a luat decizia nr. 15 din 23.02.2018 de acreditare a programului de studii superioare de licență 0613.3 *Inginerie software, forma de învățământ cu frecvență* pentru o perioadă de 5 ani.

Președinte



Andrei CHICIUC

Eliberat la 20 noiembrie 2018



Chișinău

2. Planul de învățământ pe semestre/ani de studiu

Anul I

Semestrul I

Învățarea bazată pe probleme ale științei, tehnologiei și societății

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe tipuri de activități				Forma de evaluare	Nr. credite
		total	contact direct	studiu individual	C	S/P	Pr	pe săptămână		
G.01.O.013	Proiectare conceptuală a unei aplicații IT	300	150	150			150		PA	10
F.01.O.001	Matematica	150	75	75	45	30			E	5
F.01.O.002	Programarea calculatoarelor	150	75	75	30	15	30		E	5
F.01.O.003	Matematici speciale I	150	75	75	30	45			E	5
U.01.A.021 U.01.A.022	Dezvoltarea personală și profesională Știința calculatoarelor și societatea	150	75	75	30	30	15		E	5
G.01.O.014	Limba străină 1**	90	45	45		45			E*	3
G.01.O.015	Limba română (alolingvi) 1*	60	30	30		30			T*	2
G.01.O.016	Educație fizică 1*	60	30	30		30			T*	
Total semestrul I:		900	450	450	135	120	195	0	4E, 1PA	30
					450					

Semestrul II

Bazele ingineresti și științifice ale calculului

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe tipuri de activități				Forma de evaluare	Nr. credite
		total	contact direct	studiu individual	C	S/P	Pr	pe săptămână		
F.02.O.004	Modele echivalente	300	150	150			150		PA	10
F.02.O.005	Științe aplicate	150	75	75	30	15	30		E	5
F.02.O.006	Matematici speciale 2	150	75	75	30	15	30		E	5
F.02.O.007	Arhitectura calculatoarelor	150	75	75	30	45			E	5
F.02.O.008	Structuri de date și algoritmi	150	75	75	30	30	15		E	5
G.02.O.017	Limba străină 2*	90	45	45		45			E*	3
G.02.O.018	Limba română (alolingvi) 2*	60	30	30		30			T*	2
G.02.O.019	Educație fizică 2*	60	30	30		30			T*	
Total semestrul II:		900	450	450	120	105	225	0	4E, 1PA	30
					450					
Total anul I de studii:		1800	900	900	255	225	420	0	8E, 2PA	60

* - Nu se calculează în suma totală a formelor de evaluare (unitățile de curs se realizează în regim extracurricular și li se alocă credite suplimentar celor 240 de credite per program, iar unitatea de curs „Educația fizică” nu se cuantifică cu credite).

T* - Test, cu calificativul admis/respins.

Anul II

Semestrul III

Bazele dezvoltării aplicațiilor

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe tipuri de activități				Forma de evaluare	Nr. credite
		total	contact direct	studiul individual	C	S/P	Pr	pe săptămână		
S.03.O.027	Bazele dezvoltării aplicațiilor	300	150	150			150		PA	10
S.03.O.028	Programarea orientată pe obiecte	150	75	75	30	15	30		E	5
S.03.O.029	Rețele de calculatoare	150	75	75	30	45			E	5
S.03.O.030	Baze de date	150	75	75	30	15	30		E	5
S.03.A.039 S.03.A.040	Analiza și vizualizarea datelor Grafica pe calculator	150	75	75	30	30	15		E	5
Total semestrul III:		900	450	450	120	105	225	0	4E, 1PA	30
					450					

Semestrul IV

Limbaje formale și compilatoare

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe tipuri de activități				Forma de evaluare	Nr. credite
		total	contact direct	studiul individual	C	S/P	Pr	pe săptămână		
F.04.O.009	Elaborarea limbajelor specifice domeniului	300	150	150			150		PA	10
F.04.O.010	Limbaje formale și proiectarea compilatoarelor	150	75	75	30	15	30		E	5
F.04.O.011	Calculabilitate și complexitate	150	75	75	30	15	30		E	5
S.04.O.031	Sisteme de operare: mecanisme interne și principii de proiectare	150	75	75	30	45			E	5
S.04.A.041 S.04.A.042	Tehnologii multimedia Tehnici de simulare și modelare	150	75	75	30	30	15		E	5
Total semestrul IV:		900	450	450	120	105	225	0	4E, 1PA	30
					450					
Practica în producție (Se realizează la alegerea studentului pe baza modulelor <i>Bazele dezvoltării aplicațiilor</i> și <i>Elaborarea limbajelor specifice domeniului</i>)										
Total anul II de studii:		1800	900	900	240	210	450	0	8E, 2PA	60

Anul III

Semestrul V

Rețele și securitate

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe tipuri de activități				Forma de evaluare	Nr. credite	
		total	contact direct	studiul individual	C	S/P	Pr	pe săptămână			
S.05.O.032	Dezvoltarea aplicațiilor securizate	300	150	150			150		PA	10	
S.05.O.033	Programarea în rețea	150	75	75	30	15	30		E	5	
S.05.O.034	Criptografie și securitate	150	75	75	30	15	30		E	5	
G.05.O.020	Etică, comunicare și drept	150	75	75	45	30			E	5	
S.05.A.043 S.05.A.044	Tehnici și mecanisme de proiectare software Verificarea și validarea produselor program	150	75	75	30	30	15		E	5	
Total semestrul V:		900	450	450	135	90	225	0	4E, 1PA	30	
					450						

Semestrul VI

Internetul lucrurilor (IoT)

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe tipuri de activități				Forma de evaluare	Nr. credite	
		total	contact direct	studiul individual	C	S/P	Pr	pe săptămână			
S.06.O.035	Proiecte IoT	300	150	150			150		PA	10	
S.06.O.036	Sisteme incorporate	150	75	75	30	15	30		E	5	
F.06.O.012	Prelucrarea semnalelor	150	75	75	30	30	15		E	5	
S.06.A.045 S.06.A.046	Interacțiunea om-calculator Programarea în timp real	150	75	75	30	15	30		E	5	
S.06.A.047 S.06.A.048	Programarea aplicațiilor mobile Programare web	150	75	75	30	15	30		E	5	
Total semestrul VI:		900	450	450	120	75	255	0	4E, 1PA	30	
					450						
Practica tehnologică (Se realizează la alegerea studentului pe baza modulelor Dezvoltarea aplicațiilor securizate și Proiecte IoT)											
Total anul III de studii:		1800	900	900	255	165	480	0	8E, 2PA	60	

Anul IV

Semestrul VII

Sisteme informaționale

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe				Forma de evaluare	Nr. credite
		total	contact direct	studiu individual	C	S/P	Pr	pe săptămână		
S.07.O.037	Proiectarea sistemelor informaționale	300	150	150			150		PA	10
S.07.O.038	Programarea aplicațiilor distribuite	150	75	75	30	15	30		E	5
U.07.A.023 U.07.A.024	Managementul proiectelor software Managementul întreprinderii	150	75	75	30	30	15		E	5
U.07.A.025 U.07.A.026	Marketingul electronic Antreprenoriatul digital	150	75	75	30	30	15		E	5
S.07.A.049 S.07.A.050	Calitatea software-ului Analiza și specificarea cerințelor software	150	75	75	30	30	15		E	5
Total semestrul VII:		900	450	450	120	105	225	0	4E, 1PA	30
								450		

Semestrul VIII

Proiectul de licență

Cod	Denumirea unității de curs/modulului	Total ore			Numărul de ore pe				Forma de evaluare	Nr. credite
		total	contact direct	studiu individual	C	S/P	Pr	pe săptămână		
S.08.A.051 S.08.A.052	Fundamente ale inteligenței artificiale Baze de date nerelaționale	150	75	75	30	45			E	5
S.08.A.053 S.08.A.054	Fundamente ale dezvoltării jocurilor Tehnologii de realitate mixtă	150	75	75	30	45			E	5
S.08.O.055	Practica și proiectarea de licență	450		450					E	15
S.08.O.056	Proba teoretică de sinteză: Algoritmi, programări și baze de date	120		120					E	4
S.08.O.057	Susținerea proiectului de licență	30		30					E	1
Total semestrul VIII:		900	150	750	60	90	0	0	5E	30
Total anul IV de studii:		1800	600	1200	180	195	225	0	9E, 1PA	60
Total la programul de studiu:		7200	3300	3900	930	795	1575	0	33E, 7PA	240

3. Stagiile de practică

Stagiile de practică*		Semestrul	Durata, săpt/ore	Perioada	Număr de credite
1	Practica în producție	3/4	15	Septembrie-Decembrie/	10
2	Practica tehnologică	5/6	15	Februarie-Mai	10
3	Practica și proiectarea de	8	10	Martie-Mai	15
Total:			24/990		35

* Stagiile de practică se efectuează în baza unui modul de proiectare semestrială

4. Unități de curs la libera alegere (facultative)

Nr. crt.	Denumirea	Anul	Sem.	Numărul ore pe tipuri de activități pe săptămână			Evaluări	Număr de credite
				C	S/P	L		
1	Introducere în specialitate	1	2	30			E	2
2	Psihoinventica	2	4	30			E	2
3	Filozofia cognitivă	2	4	30			E	2
4	Reprezentarea grafică a datelor	3	5	30		30	E	4
5	Programarea în realitatea virtuală	3	5	30		30	E	4
6	Tehnici de inginerie inversă	3	6	30		30	E	4
7	Psihologia managerială	3	6	30			E	2
8	Gubernarea electronică	4	7	30			E	2
9	Limba română (alolingvi) 3	2	3		30		E	2
10	Limba română (alolingvi) 4	2	4		30		E	2
11	Limba română (alolingvi) 5	3	5		30		E	2
12	Limba română (alolingvi) 6	3	6		30		E	2
13	Limba străină 3	2	3		30		E	2
14	Limba străină 4	2	4		30		E	2
15	Limba străină 5	3	5		30		E	2
16	Limba străină 6	3	6		30		E	2
17	Limba străină 7	4	7		30		E	2
18	Educația fizică 3	2	3		30		T*	
19	Educația fizică 4	2	4		30		T*	
20	Educația fizică 5	3	5		30		T*	
21	Educația fizică 6	3	6		30		T*	
22	Educația fizică 7	4	7		30		T*	

T* – Test, cu calificativul admis/respins.

5. Examenul de licență

Nr. crt.	Denumirea activității	Perioada	Număr de credite
1	Proba teoretică de sinteză: <i>Algoritmi, programări și baze de date</i>	29.02. – 12.03	4
2	Susținerea proiectului de licență	06.06. – 25.06	1
Total:			5

Aprobat la ședința Senatului UTM, proces verbal nr. 4 din 27.12.2016

Ion BALMUȘ



Decanul Facultății CIM,
conf. univ., dr.

Dumitru CIORBĂ



Șeful departamentului Ingineria Software și Automatică
conf. univ., dr.

**FACULTATEA CALCULATOARE, INFORMATICĂ ȘI
MICROELECTRONICĂ**

DEPARTAMENTUL INGINERIA SOFTWARE ȘI AUTOMATICĂ

Programul de studii superioare de licență

0613.3 Ingineria software

Chișinău 2016

NOTĂ EXPLICATIVĂ
la Planul de învățământ pentru studii superioare de licență (ciclul I)

Domeniului fundamental al științei, culturii și tehnicii: 06 Tehnologii ale informației și comunicațiilor

Domeniului general de studiu: 061 Tehnologii ale informației și comunicațiilor

Domeniul de formare profesională: 0613 Dezvoltarea produselor program și a aplicațiilor

Programului de studiu: 0613.3 Ingineria software

Descrierea profilului specialității Ingineria software

Ingineria software (IS), alături de *Tehnologia Informației*, se încadrează în știința metodelor și instrumentelor de prelucrare a informației (*computing* – eng.) pentru soluționarea unor probleme specifice legate de organizarea activităților umane. În raport cu *Tehnologia informației*, programul *Ingineria software* are un caracter mai teoretic și orientat spre formarea de specialiști al căror misiune esențială este dezvoltarea de modele și tehnici pentru producerea de software, dar domeniul cărora se extinde atât spre infrastructura sistemelor, cât și spre aspecte organizaționale și informaționale ale întreprinderilor.

Aspectul mai teoretic al domeniului reiese din faptul că procedeele software de dezvoltare studiate au substrat teoretic mai bine fundamentat în programul de studii Ingineria Software.

Dar programul cuprinde și proceduri de aplicare a informației cu un scop specific în proiectarea, construirea și utilizarea produselor și serviciilor informatice, astfel existând domenii comune cu programul *Tehnologia Informației*.

Descrierea domeniului de formare profesională în Ingineria Software

De la începuturile calculului electronic al anilor 40 sistemele de calcul și toate cele ce implică acestea au avut o rată de utilizare în continuă creștere. Software-ul deja definește elementele esențiale ale activităților umane: guvernare, comunicații, producere, bănci și finanțe, educație, transport, divertisment, medicină, agricultură și drept. Produsele software ajută lumea să fie mai eficientă, mai productivă. Datele OECD arată sumele imense cheltuite pe dezvoltarea de software. În ciuda acestor succese, în această perioadă au existat probleme serioase în ceea ce privește costurile de dezvoltare, promptitudinea și calitatea multor produse software. În ghidul curricular ACM se menționează mai multe motive pentru aceste probleme, definitorii pentru apariția noului program:

- Produsele software sunt printre cele mai complexe sisteme făcute de om, și prin însăși natura sa, software-ul are proprietăți intrinseci, esențiale, care nu sunt abordate cu ușurință;
- Tehnicile de programare care funcționează în echipe mici și pentru dezvoltarea de produse moderate nu mereu se potrivesc bine și pentru producerea sistemelor mari și complexe;
- Ritmul schimbărilor în domeniul TIC conduce spre produse noi și avansate. Prin urmare așteptările beneficiarilor și alte forțe motrice ale domeniului pun presiune pe dezvoltarea calitativă și în termen;
- Disponibilitatea de ingineri software calificați nu a ținut pasul cu cererea din industrie, astfel încât sistemele sunt proiectate și construite deseori de oameni fără o pregătire potrivită sau experiență.

Relevanța noului programului de studiu este oferită și de datele sondajului USAID (Updating the IT skills gap – O’Sullivan și Bercu, 2016), care scoate în evidență necesitatea în mai mulți specialiști calificați anume în dezvoltarea de produse program.

Ritmul înalt de globalizare a societății umane este în mare parte datorat tehnologiilor informaționale, care asigură noi oportunități de valorificare a informației. Recunoașterea acestui fapt este materializat în diverse acte naționale și internaționale:

- Agenda digitală *Europa 2020* face parte din cele șapte inițiative remarcabile în cadrul strategiei europene de dezvoltare durabilă și cuprinzătoare și are drept scop să aducă beneficii majore economice și sociale din partea unei piețe unice digitale, care deja spre mijlocul implementării trebuie să asigure: a) 50% de populație să utilizeze comerțul electronic; b) 33% din întreprinderi mici și mijlocii să realizeze vânzări online; c) 50% de cetățeni să beneficieze de servicii e-Guvernare; d) majoritatea serviciilor publice să fie accesibile online în toate țările membre ale UE etc.
- Transformarea Republicii Moldova într-un start modern și performant este posibilă doar prin *modernizarea tehnologică* la nivelul societății, al organizațiilor și al indivizilor (*acțiuni, regăsite și în Programul strategic de modernizare tehnologică a țării*).

Prin urmare **scopul primar al programului de studiu este determinat de necesitatea în inginerii bine pregătiți în corespundere cu domeniului de formare profesională, apti să ofere soluții și inovații avansate software aplicate diverselor domenii de activitate umană.**

Universitatea Tehnică a Moldovei, prin departamentul Ingineria Software și Automatică, este prima universitate care începând cu 1993 pregătește pentru economia națională inginerii licențiați în Tehnologii Informaționale. Dar consultările cu partenerii (instituții publice, companii private și studenți) au scos în evidență necesitatea în noi abordări: *lucru în echipă și interdisciplinaritate*.

Consultarea având un caracter continuu se manifestă prin activități de colaborare în cadrul diferitor seminare de lucru și proiecte inter-instituționale în care sunt implicați membrii departamentului. Printre companiile private care au colaborat activ în parteneriate de consultare sau de suport se pot enumera Orange, Starnet, Allied Testing, Endava, Pentalog, JMD Planet, Winify, Evisoft, TenerLab, Dekart.

Asigurarea calității educaționale

Calitatea activităților educaționale reprezintă prioritatea continuă a departamentului Ingineria Software și Automatică, în calitate de unitate furnizoare a multiplelor programe de studii: *Tehnologii Informaționale, Securitatea Informațională*, precum și *Automatică și Informatică*. Evaluarea calității consta în examinarea multicriterială a rezultatelor de studii exprimate în *cunoștințe, aptitudini și competențe*. Printre componentele de examinare se regăsesc următoarele:

- corespunderea cu Plan-cadrul pentru studii superioare (*aprobat prin Ordinul Min. Educație nr. 1045 din 29 octombrie 2015*),
- corespunderea cu standarde de referință (*Software Engineering 2014/ Curriculum Guidelines for Undergraduate Degree Programs in Software Engineering, Association for Computing Machinery (ACM), IEEE Computer Society*),
- conținutul și structura materiei predate – actualitatea științifică, integrarea rezultatelor de cercetare, dezvoltarea abilităților de a aplica cunoștințele în situații noi;

Asigurarea cu personal didactic

Profesorii noștri au reușit să participe în multiple activități științifice și didactice încadrate în proiecte *instituționale, naționale și internaționale*, colaborând în ultimii ani cu cercetători ai instituțiilor similare din România, Rusia, Danemarca, Germania, Franța, Marea Britanie, Suedia, Israel etc. Caracterul multidisciplinar al domeniului include activitățile mai multor cercetători cu grade științifice implicați în programul de studiu:

Total unități de curs/module	Numărul de titulari de curs cu funcții de			
	Profesori universitari	Conferențieri universitari	Lectori universitari	Asistenți universitari
54	2	11	6 + 1 (cu grad științific)	-

Competențe dezvoltate de programul de studii și coordonarea dintre acestea și unitățile de curs/module

Competențele profesionale dezvoltate de programul de studiu sunt determinate de definiția specialității Ingineria Software în corespundere cu standardul *ACM - Association for Computing Machinery* și *IEEE Computer Society*, și presupun un mixaj de abilități pentru soluționarea unor categorii de probleme conturate prin *competențe-cheie* privind:

- fundamentele științifice și ingineresti ale tehnologiilor informaționale ;
- aspectele organizaționale și informaționale ale sistemelor;
- tehnologiile aplicațiilor;
- metodele și tehnologiile de dezvoltare software;
- arhitectura și infrastructura sistemelor de calcul.

Competențele profesionale și transversale sunt acoperite de discipline fundamentale, generale, de orientare socio-umanistică și de specialitate, ponderile cărora sunt conformate Plan-cadrului. Explicarea competențelor dezvoltate, precum și distribuția acestora pe arii de conținut pot fi consultate în grilele din anexele 1 și 2.

Angajabilitatea absolvenților

Luând în calcul necesitatea crescândă în specialiști calificați pe piața națională și regională absolvenții UTM au o rată mare de angajabilitate, în conformitate și cu sondajul USAID. Clasificatorul Ocupațiilor din Republica Moldova aprobat în 03.03.2014 de Guvernul RM prin subgrupa majoră 25 *Specialiști în tehnologia informației și comunicațiilor* cu grupa minoră 251 *Analiști programatori în domeniul software* (2511 Analiști de sistem, 2512 Proiectanți de software, 2513 Proiectanți de sisteme web și multimedia, 2514 Programatori de aplicații, 2519 Analiști programatori în domeniul software neclasificați în grupele de bază anterioare) acoperă funcțiile/profesiile de bază ale absolvenților programului Ingineria Software.

Luând în considerare competențele programului *inginerii software* sunt apti să ocupe și alte funcții decât cele menționate: de la profesori și cercetători la directori și conducători de diferit nivel.

Posibilitățile de formare ulterioară

Programul de studiu în Ingineria Software prin competențele declarate și necesare de a fi atinse permit absolvenților să continue studiile universitare de masterat la specialitățile domeniului TIC în orice universitate din țară și peste hotarele ei în cadrul parteneriatelor existente naționale și internaționale.

Metodele și criteriile de evaluare a competențelor

Standardele minimale de evaluare a competențelor sunt prezentate în grila 1L (anexa 1), metodele esențiale de evaluare cuprinzând: referate, lucrări de laborator destinate formării abilităților ingineresti, proiecte cu sarcini individuale sau de lucru în echipă cu finalizare practică, teste/examene, examen și teză de licență.

Criteriile de evaluare a competențelor, în conformitate cu Regulamentul de organizare a studiilor în învățământul superior în baza SNCS (ordin ME 726 din 20.09.2010), sunt stabilite prin norme ale instituției. Astfel Regulamentul privind organizarea evaluării activității de învățare a studenților (ordin Rector UTM, intrat în vigoare a.u. 2011/2012) prin paragraful 2.3 *Criterii de evaluare* descrie în detaliu criteriile generale și specifice de evaluare (la care se pot adăuga și aspecte atitudinale și motivaționale).

Reguli de promovare academică

Promovarea în următorul an de studii este condiționată de acumularea pe parcursul anului universitar a numărului de credite obligatorii prevăzute în planul de studiu. Obținerea creditelor alocate

este posibilă doar în cazul evaluării cu notele de la „5” până la „10”, conform scalei de notare regăsită în Regulamentul privind organizarea evaluării activității de învățare a studenților.

Pentru a obține diploma de licență este necesară realizarea integrală a planului de studiu și promovarea probelor de evaluare (inclusiv examenele de licență și susținerea proiectului de licență) cu cel puțin nota "5".

Finalități de studii preconizate

Programul de studiu în Ingineria Software formează ingineri care trebuie să demonstreze următoarele calități:

- Posedă cunoștințe și abilități ale ingineriei software, cunoaște standardele profesionale necesare pentru a începe practica inginerescă;
- Demonstrează înțelegerea și poate aplica teorii, modele și tehnici care definesc fundamentele pentru identificarea, analiza, proiectarea, realizarea, implementarea, verificarea și documentarea problemelor ale domeniului obiectiv;
- Poate lucra atât de sine stătător, cât și în echipă la dezvoltarea și livrarea produselor software calitative;
- Demonstrează înțelegerea, și acordă importanță, pentru negociere, liderism și comunicare cu beneficiarii, componente indispensabile unui mediu tipic de dezvoltare software;
- Poate oferi soluții pentru diverse domenii de aplicații utilizând metode ale ingineriei software integrând aspecte etice, sociale, juridice și economice;
- Poate găsi soluții acceptabile, privind obiective contradictorii ale proiectului, luând în considerare costurile, timpul, cunoștințele, dar sistemele existente.

Prin urmare drept finalități scontate ale programului de studiu 0613.3 Ingineria Software se preconizează formarea tinerilor specialiști, deținători ai titlului de inginer-licențiat, care dau dovadă de cunoștințe, abilități și competențe transversale și profesionale care corespund cerințelor angajatorilor, confirmate prin diploma de licență cu 240 de credite transferabile și care asigură oportunitatea de angajare în câmpul muncii și/sau continuarea studiilor la ciclul II (studii superioare de master).

Șeful departamentului
Ingineria software și automată,
Universitatea Tehnică a Moldovei

conf. univ. dr. Dumitru Ciorbă

Anexa 1. Grila 1L - Descrierea domeniului/programului de studii prin competențe profesionale și transversale

Domeniul general de studiu:
061 Tehnologii ale informației și comunicațiilor

Domeniul de formare profesională:
0613 Dezvoltarea produselor program și a aplicațiilor

Programului de studiu:
0613.3 Ingineria software

Denumirea calificării: <i>Ingineria software</i> Nivelul calificării: Licență	Ocupații posibile (în conformitate cu CORM): <i>25 Specialiști în tehnologia informației și comunicațiilor</i> • 251 Analisti programatori în domeniul software (2511 Analisti de sistem, 2512 Proiectanți de software, 2513 Proiectanți de sisteme web și multimedia, 2514 Programatori de aplicații, 2519 Analisti programatori în domeniul software neclasificați în grupele de bază anterioare)
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Competențe profesionale Descriptori de nivel ai elementelor structurale ale competențelor profesionale	C1 Privind fundamentele științifice și ingineresti ale tehnologiilor informaționale	C2 Privind aspectele organizaționale și informaționale ale sistemelor	C3 Privind tehnologiile aplicațiilor	C4 Privind metodele și tehnologiile de dezvoltare software	C5 Privind arhitectura și infrastructura sistemelor de calcul
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Cunoștințe

D1 Cunoașterea, înțelegerea conceptelor, teoriilor și metodelor de baza ale domeniului și ale ariei de specializare; utilizarea lor adecvata în comunicarea profesionala	C1.1 Identificarea și definirea conceptelor, teoriilor și metodelor de <i>științe fundamentale și aplicative</i> suport pentru ingineria tehnologiilor informaționale	C2.1 Identificarea și definirea conceptelor, teoriilor și metodelor folosite în realizarea de <i>analize focusate pe oameni și informație</i> privind sistemele ce operează la nivel de organizații	C3.1 Identificarea și definirea conceptelor, procedurilor și metodelor de procesare a informației folosite în realizarea de <i>aplicații ce reies din necesități</i> ale activității umane	C4.1 Identificarea și definirea conceptelor și metodelor focusate pe <i>procesul de dezvoltare, implementare și utilizare a software-ului</i>	C5.1 Identificarea și definirea de componente arhitecturale hardware, software și de comunicații, precum și celor necesare la <i>descrierea unei infrastructuri de calcul</i>
D2 Utilizarea cunoștințelor de baza pentru explicarea și interpretarea unor variate tipuri de concepte, situații, procese, proiecte etc. asociate domeniului	C1.2 Explicarea soluțiilor ingineresti prin utilizarea tehnicilor, conceptelor și principiilor din științele exacte și aplicative	C2.2 Explicarea conceptelor, teoriilor și metodelor folosite în realizarea de analize privind sistemele ce operează la nivel de organizații	C3.2 Explicarea tehnologiilor potrivite pentru realizarea de aplicații necesare în activitățile organizațiilor	C4.2 Explicarea conceptelor și metodelor folosite pentru dezvoltarea, implementarea și utilizarea software-ului	C5.1 Explicarea interacțiunii și funcționării componentelor arhitecturale și de infrastructură

Competențe profesionale Descriptori de nivel ai elementelor structurale ale competențelor profesionale	C1 Privind fundamentele științifice și ingineresti ale tehnologiilor informaționale	C2 Privind aspectele organizaționale și informaționale ale sistemelor	C3 Privind tehnologiile aplicațiilor	C4 Privind metodele și tehnologiile de dezvoltare software	C5 Privind arhitectura și infrastructura sistemelor de calcul
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Abilități

D3 Aplicarea unor principii și metode de bază pentru rezolvarea de probleme/situații bine definite, tipice domeniului în condiții de asistență calificată	C1.3 Rezolvarea prob-lor din domenii de activitate umană prin aplicarea în special al tehnicilor și metodelor de calcul numeric	C2.3 Aplicarea conceptelor, teoriilor și metodelor de bază pentru <i>pregătirea informațiilor necesare elaborării de sisteme care să opereze la nivel de organizații</i>	C3.3 Utilizarea tehnologiilor moderne în definirea aplicațiilor software	C4.3 Aplicarea limbajelor de programare, a mediilor de modelare și dezvoltare, a metodologiilor pentru crearea de software	C5.3 Aplicarea metodelor de bază pentru specificarea de soluții arhitecturale și de infrastructură pentru probleme tipice de calcul
D4 Utilizarea adecvata de criterii și metode standard de evaluare pentru a aprecia calitatea, meritele și limitele unor procese, programe, proiecte, concepte, metode și teorii	C1.4 Alegerea criteriilor și metodelor pentru analiza avantajelor și dezavantajelor metodelor și procedurilor aplicate la soluționarea <i>problemelor de calcul numeric.</i>	C2.4 Alegerea criteriilor și metodelor de evaluare a calității, performanțelor și limitelor <i>sistemelor de elaborat</i> în corespundere cu necesitățile organizației de studiu, inclusiv celor necesare pentru definirea unui sistem de management al calității și securității	C3.4 Utilizarea de criterii și metode determinate de tehnologiile aplicațiilor pentru evaluarea conformității cu standardele de interoperabilitate	C4.4 Utilizarea de criterii și metode de evaluare a <i>procesului de elaborare</i> a sistemelor din punct de vedere a calității și performanțelor	C5.4 Utilizarea de criterii și metode de <i>evaluare a caracteristicilor funcționale și nefuncționale</i> ale componentelor de sistem
D5 Elaborarea de proiecte profesionale cu utilizarea unor principii și metode consacrate în domeniu	C1.5 Modelarea unor probleme tip din științele aplicative folosind aparatul matematic	C2.5 Elaborarea unui proiect (specificație de sistem) în condițiile existenței unui sistem de management al calității și securității.	C3.5 Dezvoltarea de aplicații software utilizând tehnologii moderne de transmitere, stocare și procesare date în corespundere cu necesitățile unei organizații	C4.5 Dezvoltarea și implementarea de software pentru probleme concrete din diverse domenii ale activității umane	C5.5 Implementarea unei soluții arhitecturale și de infrastructură în baza unor constrângeri enunțate de proiect.

Competențe profesionale	C1 Privind fundamentele științifice și ingineresti ale tehnologiilor informaționale	C2 Privind aspectele organizaționale și informaționale ale sistemelor	C3 Privind tehnologiile aplicațiilor	C4 Privind metodele și tehnologiile de dezvoltare software	C5 Privind arhitectura și infrastructura sistemelor de calcul
Descriptori de nivel ai elementelor structurale ale competențelor profesionale					
Standarde minimale de performanță pentru evaluarea competenței	Identificarea și aplicarea metodelor și algoritmilor învățați pentru probleme tip ale științelor fundamentale și aplicative.	Analiza și modelarea unui sistem orientat pe o problemă tip organizațională și/sau informațională a unui domeniu de activitate umană.	Identificarea și utilizarea tehnologiilor necesare dezvoltării unei aplicații software.	Analiza și modelarea și realizarea unui prototip funcțional în conformitate cu procesele tehnologice de dezvoltare	Identificarea componentelor hardware, software și de comunicații destinate aplicațiilor specifice domeniului selectat

Descriptori de nivel ai elementelor structurale ale competențelor profesionale	Competențe transversale	Standarde minimale de performanță pentru evaluarea competenței
D6. Executarea responsabilă a sarcinilor profesionale, în condiții de autonomie restrânsă și asistență calificată	CT1. Aplicarea principiilor, normelor și valorilor eticii profesionale	Realizarea proiectelor respectând normele deontologiei profesionale
D7. Familiarizarea cu rolurile și activitățile specifice muncii în echipă și distribuirea de sarcini pentru nivelurile subordonate	CT2. Identificarea, descrierea și derularea activităților organizate într-o echipă cu dezvoltarea capacităților de comunicare și colaborare, dar și cu asumarea diferitelor roluri (de execuție și conducere)	Realizarea unui proiect în echipă, cu asumarea responsabilă a unor roluri diferite
D8. Conștientizarea nevoii de formare continuă utilizarea eficientă a resurselor și tehnicilor de învățare pentru dezvoltarea personală și profesională	CT3. Demonstrarea spiritului de inițiativă și acțiune pentru actualizarea cunoștințelor profesionale, economice și de cultura organizațională	Elaborarea și aplicarea unui plan personal de dezvoltare personală; comunicare proiect în limba română/rusă și în limba engleză/franceză.

Anexa 2. Grila 2L – Coordonarea dintre competențele dezvoltate și unitățile de curs/module

Competențe profesionale	Competențe explicate prin descriptorii de nivel	Arii de conținut	Discipline de studii	Credite	
				Pe disciplină	Pe competență
1	2	3	4	5	6
C1 Privind fundamentele științifice și ingineresti ale tehnologiilor informaționale	C1.1 Identificarea și definirea conceptelor, teoriilor și metodelor de <i>științe fundamentale și aplicative</i> suport pentru ingineria tehnologiilor informaționale C1.2 Explicarea soluțiilor ingineresti prin utilizarea tehnicilor, conceptelor și principiilor din științele exacte și aplicative C1.3 Rezolvarea problemelor din domeniul de activitate umană prin aplicarea în special al tehnicilor și metodelor de calcul numeric C1.4 Alegerea criteriilor și metodelor pentru analiza avantajelor și dezavantajelor metodelor și procedurilor aplicate la soluționarea <i>problemei de calcul numeric</i> . C1.5 Modelarea unor probleme tip din științele aplicative folosind aparatul matematic	Științe exacte și aplicative	Matematica	5	68
			Matematici speciale 1	5	
			Matematici speciale 2	5	
			Modele echivalente	5	
			Științe aplicate	5	
			Prelucrarea semnalelor	5	
			Dezvoltarea personală și profesională/Știința calculatoarelor și societatea	3	
			Managementul proiectelor/Managementul întreprinderii	3	
			Marketingul electronic/Antreprenoriatul digital	3	
			Criptografie și securitate	1	
		Programare	Programarea calculatoarelor	5	
			Structuri de date și algoritmi	5	
			Limbaje formale și proiectarea compilatoarelor	5	
			Calculabilitate și complexitate	5	
			Analiza și vizualizarea datelor/ Grafica pe calculator	1	
			Elaborarea limbajelor specifice domeniului	4	
			Practica și proiectarea de licență	2	
Proba teoretică de sinteză	1				
C2 Privind aspectele organizaționale și informaționale ale sistemelor	C2.1 Identificarea și definirea conceptelor, teoriilor și metodelor folosite în realizarea de analize focusate pe oameni și informație privind sistemele ce operează la nivel de organizații C2.2 Explicarea conceptelor, teoriilor și metodelor folosite în realizarea de analize privind sistemele ce operează la nivel de organizații C2.3 Aplicarea conceptelor, teoriilor și metodelor de bază pentru pregătirea informațiilor necesare elaborării de sisteme care să opereze la nivel de organizații C2.4 Alegerea criteriilor și metodelor de evaluare a calității, performanțelor și limitelor sistemelor de	Securitatea informațională	Etică, comunicare și drept	2	17
			Dezvoltarea aplicațiilor securizate	1	
			Criptografie și securitate	1	
		Managementul informației	Managementul proiectelor/Managementul întreprinderii	1	
			Marketingul electronic/Antreprenoriatul digital	1	
		Dezvoltare software	Proiectare conceptuală a unei aplicații IT	3	
			Proiectarea sistemelor informaționale	3	
			Proba teoretică de sinteză	1	
			Practica și proiectarea de licență	2	

1	2	3	4	5	6	
	elaborat în corespundere cu necesitățile organizației de studiu, inclusiv celor necesare pentru definirea unui sistem de management al calității și securității C2.5 Elaborarea unui proiect (specificație de sistem) în condițiile existenței unui sistem de management al calității și securității.	Calitatea software	Calitatea software-ului/Analiza și specificarea cerințelor software	2		
C3 Privind tehnologiile aplicațiilor	C3.1 Identificarea și definirea conceptelor, procedurilor și metodelor de procesare a informației folosite în realizarea de <i>aplicații ce reies din necesități</i> ale activității umane C3.2 Explicarea tehnologiilor potrivite pentru realizarea de aplicații necesare în activitățile organizațiilor C3.3 Utilizarea tehnologiilor moderne în definirea aplicațiilor software C3.4 Utilizarea de criterii și metode determinate de tehnologiile aplicațiilor pentru evaluarea conformității cu standardele de interoperabilitate C3.5 Dezvoltarea de aplicații software utilizând tehnologii moderne de transmitere, stocare și procesare date în corespundere cu necesitățile unei organizații	Arhitecturi, platforme și tehnologii	Tehnologii multimedia/Tehnici de simulare și modelare Dezvoltarea personală și profesională/Știința calculatoarelor și societatea Proiecte IoT Sisteme încorporate Programarea aplicațiilor mobile/Programarea web	3 1 2 3 1	52	
		Managementul informației	Baze de date Proiectare conceptuală a unei aplicații IT Fundamente ale inteligenței artificiale/Baze de date nerelaționale	5 2 2		
		Programare	Bazele dezvoltării aplicațiilor Dezvoltarea aplicațiilor securizate Modele echivalente Elaborarea limbajelor specifice domeniului Programarea în rețea Programarea orientată pe obiecte Proiectarea sistemelor informaționale Programarea aplicațiilor distribuite Analiza și vizualizarea datelor/ Grafica pe calculator Tehnici și mecanisme de proiectare software Verificarea și validarea produselor program Programarea aplicațiilor mobile/Programarea web Fundamente ale dezvoltării jocurilor/ Tehnologii de realitate mixtă Practica și proiectarea de licență Proba teoretică de sinteză	4 4 2 2 2 2 3 2 2 2 2 2 2 2 2 1		
C4 Privind metodele și tehnologiile de dezvoltare software	C4.1 Identificarea și definirea conceptelor și metodelor focusate pe <i>procesul de dezvoltare, implementare și utilizare a software-ului</i>	Programare	Programarea orientată pe obiecte Programarea în rețea Proiecte IoT Sisteme încorporate Programarea aplicațiilor distribuite	3 2 4 2 2		54

1	2	3	4	5	6				
	<p>C4.2 Explicarea conceptelor și metodelor folosite pentru dezvoltarea, implementarea și utilizarea software-ului</p> <p>C4.3 Aplicarea limbajelor de programare, a mediilor de modelare și dezvoltare, a metodologiilor pentru crearea de software</p> <p>C4.4 Utilizarea de criterii și metode de evaluare a procesului de elaborare a sistemelor din punct de vedere a calității și performanțelor</p> <p>C4.5 Dezvoltarea și implementarea de software pentru probleme concrete din diverse domenii ale activității umane</p>		Analiza și vizualizarea datelor/ Grafica pe calculator	2					
			Tehnologii multimedia/Tehnici de simulare și modelare	2					
			Interacțiunea om-calculator/ Programarea în timp real	3					
			Programarea aplicațiilor mobile/Programarea web	1					
			Dezvoltare software	Bazele dezvoltării aplicațiilor		4			
				Dezvoltarea aplicațiilor securizate		3			
				Elaborarea limbajelor specifice domeniului		2			
				Proiectare conceptuală a unei aplicații IT		2			
				Criptografie și securitate		3			
				Proiectarea sistemelor informaționale		2			
				Fundamente ale inteligenței artificiale/Baze de date nereleționale		3			
				Fundamente ale dezvoltării jocurilor/Tehnologii de realitate mixtă		3			
				Proba teoretică de sinteză		1			
				Practica și proiectarea de licență		3			
				Susținerea proiectului de licență		1			
			Calitatea software	Tehnici și mecanisme de proiectare software Verificarea și validarea produselor program		3			
				Calitatea software-ului/Analiza și specificarea cerințelor software		3			
C5 Privind arhitectura și infrastructura sistemelor de calcul	<p>C5.1 Identificarea și definirea de componente arhitecturale hardware, software și de comunicații, precum și celor necesare la descrierea unei infrastructuri de calcul</p> <p>C5.1 Explicarea interacțiunii și funcționării componentelor arhitecturale și de infrastructură</p> <p>C5.3 Aplicarea metodelor de bază pentru specificarea de soluții arhitecturale și de infrastructură pentru probleme tipice de calcul</p> <p>C5.4 Utilizarea de criterii și metode de evaluare a caracteristicilor funcționale și nefuncționale ale componentelor de sistem</p> <p>C5.5 Implementarea unei soluții arhitecturale și de infrastructură în baza unor constrângeri enunțate</p>		Programarea aplicațiilor distribuite	1	24				
			Programarea aplicațiilor mobile/Programarea web	1					
			Programarea în rețea	1					
			Practica și proiectarea de licență	2					
			Rețele și comunicații de date	Rețele de calculatoare		5			
				Proiecte IoT		2			
			Arhitecturi, platforme și tehnologii	Arhitectura calculatoarelor		5			
				Sisteme de operare: mecanisme interne și principii de proiectare		5			
				Interacțiunea om-calculator/ Programarea în timp real		2			

Competențe transversale	Discipline de studii	Credite	
		Pe disciplină	Pe competență
CT1. Aplicarea principiilor, normelor și valorilor eticii profesionale	Etică, comunicare și drept	3	8
	Proiectare conceptuală a unei aplicații IT	1	
	Dezvoltarea personală și profesională/Știința calculatoarelor și societatea	1	
	Managementul proiectelor/Managementul întreprinderii	1	
	Marketingul electronic/Antreprenoriatul digital	1	
	Practica și proiectarea de licență	1	
CT2. Identificarea, descrierea și derularea activităților organizate într-o echipă cu dezvoltarea capacităților de comunicare și colaborare, dar și cu asumarea diferitelor roluri (de execuție și conducere)	Modele echivalente	2	9
	Elaborarea limbajelor specifice domeniului	1	
	Proiectare conceptuală a unei aplicații IT	1	
	Bazele dezvoltării aplicațiilor	1	
	Dezvoltarea aplicațiilor securizate	1	
	Proiecte IoT	1	
	Proiectarea sistemelor informaționale	1	
	Practica și proiectarea de licență	1	
CT3. Demonstrarea spiritului de inițiativă și acțiune pentru actualizarea propriilor cunoștințe profesionale, economice și de cultura organizațională	Modele echivalente	1	8
	Elaborarea limbajelor specifice domeniului	1	
	Proiectare conceptuală a unei aplicații IT	1	
	Bazele dezvoltării aplicațiilor	1	
	Dezvoltarea aplicațiilor securizate	1	
	Proiecte IoT	1	
	Proiectarea sistemelor informaționale	1	
	Practica și proiectarea de licență	1	
Total program de studiu			240

Annex 3: Bachelor`s Degree Programme on Software Engineering English Translation

**Ministry of Education of the Republic of Moldova
Technical University of Moldova
Faculty of Computers, Informatics and Microelectronics**

APPROVED
at the Senate Meeting of
Technical University of Moldova
Minutes No. 4
of 27 December 2016
Chairperson of Senate
Rector, PhD _____ (stamp)
Viorel BOSTAN

COORDINATED
Ministry of Education of the
Republic of Moldova
24 July 2017
Registration No. ISL-01-18130
(stamp)

CURRICULUM

Cycle I, Licentiate/Bachelor`s Degree (Level 6 according to ISCED)

General field of study:	<i>061 Information and Communication Technologies</i>
Field of professional study:	0613 Software and Application Development
Specialty/ Major:	0613.1 Software Engineering
Total number of credits:	240
Degree obtained upon the completion of studies:	Licentiate Engineer/Bachelor`s Degree
Certification:	Licentiate Diploma
Basis for Admission:	High school diploma or an equivalent education document; higher education diploma
Language of instruction:	Romanian, Russian, English
Form of education:	Full-time attendance

1. ACADEMIC CALENDAR

Academic year	Teaching activities		Examination period		Internships	Vacations		
	Semester I	Semester II	Semester I	Semester II		winter	spring	summer
I	15 weeks	15 weeks	4 weeks	4 weeks	-	2 weeks	Vacation on Easter – one week (according to the Christian calendar)	10 weeks
II	15 weeks	15 weeks	4 weeks	4 weeks	15 weeks	2 weeks		6 weeks
III	15 weeks	15 weeks	4 weeks	4 weeks	15 weeks	2 weeks		6 weeks
IV	15 weeks	7 weeks	4 weeks	2 weeks	10 weeks	2 weeks		9 weeks

2. Curriculum by semesters/academic years

Year I

Semester I. *Problem Based Learning in Science, Technology and Society*

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits
		total	direct instruction	individual work	C	S/P	Pr	per week		
G.01.O.013	Conceptual Design of an IT Application	300	150	150			150		PA	10
F.01.O.001	Math	150	75	75	45	30			E	5
F.01.O.002	Computer Programming	150	75	75	30	15	30		E	5
F.01.O.003	Special Math 1	150	75	75	30	45			E	5
U.01.A.021 U.01.A.022	Personal and Professional Development <i>Computer Science and Society</i>	150	75	75	30	30	15		E	5
GM.O.014	<i>Foreign Language 1**</i>	90	45	45		45			E*	3
G.01.O.015	<i>Romanian (for non-speakers of Romanian) 1*</i>	60	30	30		30			T*	2
G.01.O.016	<i>Physical training 1*</i>	60	30	30		30			T*	
Total per Semester I:		900	450	450	135	120	195	0	4E, 1PA	30
					450					

Semester II. *Engineering and Scientific Bases for Computing*

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits
		total	direct instruction	individual work	C	S/P	Pr	per week		
F.02.O.004	Equivalent Models	300	150	150			150		PA	10
F.02.O.005	Applied Science	150	75	75	30	15	30		E	5
F.02.O.006	Special Math 2	150	75	75	30	15	30		E	5
F.02.O.007	Computer Architecture	150	75	75	30	45			E	5
F.02.O.008	Data Structures and Algorithms	150	75	75	30	30	15		E	5
G.02.O.017	<i>Foreign Language 2*</i>	90	45	45		45			E*	3
G.02.O.018	<i>Romanian (for non-speakers of Romanian) 2*</i>	60	30	30		30			T*	2
G.02.O.019	<i>Physical training 2*</i>	60	30	30		30			T*	
Total per Semester II:		900	450	450	120	105	225	0	4E, 1PA	30
					450					
Total per Year I:		1800	900	900	255	225	420	0	8E, 2PA	60

* - This is not included in the total sum of evaluation forms (the course units are provided in extracurricular regime, and those 240 credits per program are supplement with additional credits, while the course unit "Physical training" is not quantified with credits).

Year II

Semester III. Application Development Bases

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits
		total	direct instruction	individual work	C	S/P	Pr	per week		
S.03.O.027	<i>Application Development Basics</i>	300	150	150			150		PA	10
S.03.O.028	Object Oriented Programming	150	75	75	30	15	30		E	5
S.03.O.029	Computer Networks	150	75	75	30	45			E	5
S.03.O.030	Databases	150	75	75	30	15	30		E	5
S.03.A.039 S.03.A.040	Data Analysis and View; <i>Computer Graphics</i>	150	75	75	30	30	15		E	5
Total per Semester III:		900	450	450	120	105	225	0	4E, 1PA	30
								450		

Semester IV. Formal Languages and Compilers

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits
		total	direct instruction	individual work	C	S/P	Pr	per week		
F.04.O.009	Developing Industry Specific Languages	300	150	150			150		PA	10
F.04.O.010	Formal Languages and Compiler Design	150	75	75	30	15	30		E	.. 5
F.04.O.011	Calculability and Complexity	150	75	75	30	15	30		E	5
S.04.O.031	Operating Systems: Internal Mechanisms and Design Principles	150	75	75	30	45			E	5
S.04.A.041 S.04.A.042	Multimedia Technologies <i>Simulation and Modelling Techniques</i>	150	75	75	30	30	15		E	5
Total per Semester IV:		900	450	450	120	105	225	0	4E, 1PA	30
								450		
Internship in Production (It shall be carried out at the Student's choice on the basis of Modules Application Development Basics and Developing Industry Specific Languages)										
Total per Year II:		1800	900	900	240	210	450	0	8E, 2PA	60

Year III

Semester V. Network and Security

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits
		total	direct instruction	individual work	C	S/P	Pr	per week		
S.05.O.032	Developing Secure Applications	300	150	150			150		PA	10
S.05.O.033	Network Programming	150	75	75	30	15	30		E	5
S.05.O.034	Cryptography and Security	150	75	75	30	15	30		E	5
G.05.O.020	Ethics, Communication and Law	150	75	75	45	30			E	5
S.05.A.043 S.05.A.044	Software Design Techniques and Mechanisms <i>Software Verification and Validation</i>	150	75	75	30	30	15		E	5
Total per Semester V:		900	450	450	135	90	225	0	4E, 1PA	30
					450					

Semester VI. Internet of Things (IoT)

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits
		total	direct instruction	individual work	C	S/P	Pr	per week		
S.06.O.035	IoT Projects	300	150	150			150		PA	10
S.06.O.036	Embedded Systems	150	75	75	30	15	30		E	5
F.06.O.012	Signal Processing	150	75	75	30	30	15		E	5
S.06.A.045 S.06.A.046	Human-Computer Interaction <i>Real Time Programming</i>	150	75	75	30	15	30		E	5
S.06.A.047 S.06.A.048	Mobile Application Development <i>WEB Programming</i>	150	75	75	30	15	30		E	5
Total per Semester VI:		900	450	450	120	75	255	0	4E, 1PA	30
					450					
Technological Internship (It shall be carried out at the Student's choice on the basis of Modules <i>Developing Secure Applications and IoT Projects</i>)										
Total per Year III:		1800	900	900	255	165	480	0	8E, 2PA	60

Year IV

Semester VII. Information Systems

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits	
		total	direct instruction	individual work	C	S/P	Pr	per week			
S.07.O.037	Information System Design	300	150	150			150		PA	10	
S.07.O.038	Programming of Distributed Applications	150	75	75	30	15	30		E	5	
U.07.A.023 U.07.A.024	Software Project Management <i>Enterprise Management</i>	150	75	75	30	30	15		E	5	
U.07.A.025 U.07.A.026	Electronic Marketing <i>Digital Entrepreneurship</i>	150	75	75	30	30	15		E	5	
S.07.A.049 S.07.A.050	Software Quality <i>Analysis and Specification of Software Requirements</i>	150	75	75	30	30	15		E	5	
Total per Semester VII:		900	450	450	120	105	225	0	4E, 1PA	30	
		450									

Semester VIII. Licentiate Project

Code	Name of the Course Unit/Module	Total number of hours			Number of hours by types of activity				Type of final assessment	Number of credits
		total	direct instruction	individual work	C	S/P	Pr	per week		
S.Q8.A.051 S.V8.A.052	Foundations of Artificial Intelligence <i>Non-relational Databases</i>	150	75	75	30	45			E	5
S.08.A.053 S.08.A.054	Foundations for Game Development <i>Technologies of Mixed Reality</i>	150	75	75	30	45			E	5
S.08.O.055	Licentiate Internship and Design	450		450					E	15
S.08.O.056	Summary Theory Exam: <i>Algorithms, Programming and Databases</i>	120		120					E	4
S.08.O.057	Defending the Licentiate Project	30		30					E	1
Total per Semester VIII:		900	150	750	60	90	0	0	5E	30
Total per Year IV:		1800	600	1200	180	195	225	0	9E, 1PA	60
Total for the Study Programme:		7200	3300	3900	930	795	1575	0	33E, 7PA	240

3. Internships

Internships*		Semester	Duration, number of weeks/hours	Period	Number of credits
1	Internship in Production	3/4	15	September - December/ February - May	10
2	Technological Internship	5/6	15		10
3	Licentiate Internship and Design	8	10	March - May	15
Total:			24/990		35

* Internships shall be carried out on the basis of a Semestrial Design Module.

4. Free choice (optional) course units

Criterion #	Name	Year	Sem.	Number of hours by types of activity per week			Type of final assessment	Number of credits
				C	S/P	L		
1	Introduction into the Specialty	1	2	30			E	2
2	Psychology of Invention	2	4	30			E	2
3	Cognitive Philosophy	2	4	30			E	2
4	Graphical Representation of Data	3	5	30		30	E	4
5	Programming in Virtual Reality	3	5	30		30	E	4
6	Techniques for Reverse Engineering	3	6	30		30	E	4
7	Managerial Psychology	3	6	30			E	2
8	E-Governance	4	7	30			E	2
9	Romanian (for non-speakers of Romanian) 3	2	3		30		E	2
10	Romanian (for non-speakers of Romanian) 4	2	4		30		E	2
11	Romanian (for non-speakers of Romanian) 5	3	5		30		E	2
12	Romanian (for non-speakers of Romanian) 6	3	6		30		E	2
13	Foreign Language 3	2	3		30		E	2
14	Foreign Language 4	2	4		30		E	2
15	Foreign Language 5	3	5		30		E	2
16	Foreign Language 6	3	6		30		E	2
17	Foreign Language 7	4	7		30		E	2
18	Physical training 3	2	3		30		T*	
19	Physical training 4	2	4		30		T*	
20	Physical training 5	3	5		30		T*	
21	Physical training 6	3	6		30		T*	
22	Physical training 7	4	7		30		T*	

5. Licentiate Exam

Criterion #	Name of activity	Period	Number of credits
1	Summary Theory Exam: <i>Algorithms, Programming and Databases</i>	29.02. - 12.03	4
2	Defending the Licentiate Project	06.06. - 25.06	1
Total:			5

Approved at the TUM Senate meeting, Minutes No. 4 of 27.12.2016.

Ion BALMUS	Dean of CIM Faculty, Dr., Associate Professor
Dumitru CIORBA	Head of Department of Software Engineering and Automatics, Dr., Associate Professor

**FACULTY OF COMPUTERS, INFORMAICTS AND
MICROELECTRONICS**

DEPARTMENT OF SOFTWARE ENGINEERING AND AUTOMATICS

**Curriculum for Licentiate Course
0613.3 Software Engineering**

Chisinau 2016

EXPLANATORY NOTE

to the Curriculum for Licentiate Studies (Cycle I)

Fundamental Area of Science, Culture and Technique: 06 Information and Communication Technologies

General Area of Study: 061 Information and Communication Technologies

Area of Professional Education: 0613 Software and Application Development

Programme of Study: 0613.3 Software Engineering

Description of Software Engineering Specialty Profile

Software Engineering (SE), along with Information Technology, falls within the Computer Science area, which pursues the goal to address certain issues related to organising human activities. Relative to Information Technology, Software Engineering has got a more theoretical approach focused on training professionals whose essential mission is to develop models and techniques for software production, which scope covers systems infrastructure, as well as organisation and information aspects of enterprises.

This theoretical aspect of Software Engineering stems from the fact that the studied software development procedures have a theoretical sublayer, which is better founded under the Software Engineering Study Programme.

At the same time, the *Software Engineering Study Programme* covers procedures for using the information with the specific aim to design, build and use IT products and services, thus, having established common areas with the *Information Technology Programme*.

Description of professional training in Software Engineering

Since the beginning of electronic computing in the 40s of the past Century, the computing systems and all the sectors involving them have showed an ever-growing utilization rate. Nowadays, software already defines the essential elements of human activity: governance, communications, production, banks and finances, education, transportation, entertainment, healthcare, agriculture and law. Software products help the world be more efficient and more productive. The OECD data show huge amounts of money spent on software development. Despite such successes, there are serious challenges in terms of development costs, timeliness and quality of many software products. The ACM curricular Guidelines mentions several reasons explaining these challenges, which are definitional for the emergence of a new programme:

- Software products are among the most complex man-made systems, and by its nature, software has got intrinsic, essential properties, which cannot be easily tackled;
- The programming techniques that work well in small teams and for developing moderate products may be not suitable for producing large and complex systems;
- The pace of changes in the area of information and communication technologies (ICT) leads towards new and more advanced/sophisticated products. Therefore, the expectations of beneficiaries and other driving forces put pressure on quality and timeliness of developed products;

- The availability of highly qualified software engineers has not kept pace with the industry demand; therefore, pretty frequently the systems are designed and built by people who lack appropriate training or experience.

The relevance of the new Study Programme is underpinned also by the data of the USAID Survey (Updating the IT skills gap - O'Sullivan and Bercu, 2016), which revealed the stringent need for even more professionals in the area of software development.

The high pace of globalization has been largely due to information technologies, which provide opportunities for exploiting the information. The acknowledgment of this fact has been embodied in diverse national and international acts:

- Digital Agenda for *Europe 2020* is part of those seven remarkable initiatives of the European Strategy for Sustainable and Comprehensive Development and is aimed at bringing major economic and social benefits to be generated by a digital single market, which by the middle of its implementation term shall provide the following: a) 50% of population buying online; b) 33% of small and medium-sized enterprises selling online; c) 50% of citizens benefiting from e-Governance services; d) most public services being accessible online in all EU-member countries, etc.
- Transformation of the Republic of Moldova in a modern and effective country is possible only through *technological modernisation* at the level of society, organisations and individuals (*actions that are envisaged also in the Strategic Programme for Technological Modernisation of Governance*).

Therefore, the primary goal pursued by the Study Programme is determined by the demand for highly trained engineers in compliance with the area of professional training, who are able to offer advanced software solutions and innovations applied in diverse areas of human activity.

The Technical University of Moldova (TUM), through its Department on Software Engineering and Automatics, is the *first University that has trained licentiate engineers in Information Technologies for the national economy since 1993*. However, the consultations held with its partners (public organisations, private companies and students) have revealed the need for new approaches: *team work and interdisciplinarity*.

As consultations are carried out on a continuous basis, collaboration events are conducted through different workshops and inter-institutional projects involving the Department staff. Among the private companies engaged in the process of consultation or support partnership we can mention Orange, StarNet, Allied Testing, Endava, Pentalog, JMD Planet, Winify, Evisoft, TenerLab, Dekart, etc.

Ensuring Quality Education

The quality of educational activities is a permanent priority of the Department of Software Engineering and Automatics as the unit delivers many study programmes: *Information Technologies, Information Security*, as well as *Automatics and Informatics*. The quality evaluation process comprises a multi-criteria approach, which considers the study results expressed in *knowledge, skills and competences*. The approach components cover the following aspects:

- compliance with the Higher Education Framework Plan (*approved by the Ministry of Education Order No. 1045 of 29 October 2015*);
- compliance with referenced standards (*Software Engineering 2014/ Curriculum Guidelines for Undergraduate Degree Programs in Software Engineering, Association for Computing Machinery (ACM), IEEE Computer Society*),
- in terms of the content and structure of the subjects taught – their topicality, integration of research outcomes, developing the skills on how to apply the knowledge in new situations;

Providing with Teaching Staff

Our teaching staff managed to take part in many scientific and didactic activities embedded in *institutional, national and international projects*, by collaborating lately with researchers of similar institutions from Romania, Russia, Denmark, Germany, France, Great Britain, Sweden, Israel, etc. The multidisciplinary feature of this area includes the works of many researchers with academic degrees who have been involved in the study programme:

Total course units/modules	Number of Course Holders with the functions of			
	University Professors	Associate Professors	University Lecturers	University Assistants
54	2	11	6 + 1 (with academic degree)	-

Competences developed by the Study Programme and coordination between them and the course units/modules

Professional competences developed by the Study Programme are determined by the definition of Software Engineering Specialty in compliance with the *ACM Standard – Association for Computing Machinery and IEEE Computer Society, involving a mixture of skills aimed at addressing certain categories of issues outlined through key competences related to:*

- scientific and engineering foundations of information technologies;
- organisation and information aspects of systems;
- application technologies;
- software development methods and technologies;
- architecture and infrastructure of computing systems.

The professional and crosscutting competences are covered by fundamental, general, socio-humanistic and specialty subjects, which shares have been set in compliance with the Framework Plan. Further specification of competences developed, as well as their distribution by the content areas is displayed in the matrixes presented in Annexes 1 and 2.

Graduates' Employability

Taking account of the growing need in qualified professionals on the national and regional markets, the TUM graduates have shown a high rate of employability, which is proved also by the USAID Survey. The Classifier of Occupations in the Republic of Moldova, approved by the Government of the RM on 03.03.2014, through the major subgroup *25 Professionals in Information and Communication Technology with the minor group 251 Software Programmers Analysts (2511 System Analysts, 2512 Software Designers, 2513 Designers of WEB Systems and Multimedia, 2514*

Programmers of Applications, 2519 Software Programmers Analysts not assigned to any of the previous main groups) covers the basic functions/professions of the Software Engineering Programme graduates.

Taking into account the competences acquired following the completion of the *Software Engineer* Programme, the graduates may hold positions other than those mentioned above: from teachers and researchers to director and managers of different levels.

Possibilities for *Subsequent Education*

Through the stated competences to be attained by the graduates, the Software Engineering Study Programme enables the latter to continue their university studies (Cycle II, Master's Degree) in the ICT area in any local or foreign university within the existing national and international partnerships.

Methods and criteria for competence evaluation

The minimum standards for competence evaluation are displayed in Matrix 1L (Annex 1), the essential evaluation methods comprising: papers/essays, laboratory works intended to develop engineering skills, projects with individual or team tasks with practical completion, tests/exams, licentiate exams and licentiate thesis.

The criteria for competence evaluation, in compliance with the Regulation for organizing the higher education studies on the basis of the National Credit System (the Ministry of Education Order No.726 of 20.09.2010), have been defined through the TUM regulatory acts. Hence, the Regulation for organizing the evaluation of students' learning activity (Order issued by the TUM Rector, entered in force during the 2011/2012 academic year), paragraph 2.3 *Evaluation Criteria*, describes in great details the general and specific evaluation criteria (to be supplemented by attitudinal and motivation aspects).

Rules for academic promotion

Promotion to the next year level is conditioned by the accumulation of the mandatory number of credits throughout the academic year foreseen by the Study Plan. It is possible to acquire the allocated credits only when students have been evaluated with marks ranging from "5" to "10", as per the grading scale outlined in the Regulation for organizing the evaluation of students' learning activity.

To be awarded the Licentiate Diploma, students shall fulfil the Study Plan and pass the evaluation tests/exams (including the licentiate exams) and defend their licentiate project/thesis with the mark "5" at least.

Foreseen Study Objectives

The Software Engineering Study Programme is aimed at training engineers who shall be able to demonstrate the following qualities:

- Have knowledge and skills in software engineering, be familiar with professional standards required to start the engineering practical activity;
- Demonstrate the understanding and ability to apply theories, models and techniques, which define the foundations for identifying, analyzing, designing, building, implementing, verifying and documenting objectively the industry issues;

- Be able to work both independently and in teams with the aim to develop and deliver high quality software products;
- Demonstrate understanding and pay attention to leadership and communication abilities for negotiations with beneficiaries, which are indispensable components of a typical environment for software development;
- Be able to offer solutions for different areas of application, using software engineering methods and integrating ethic, social, legal and economic aspects;
- Be able to find acceptable solutions, matching the project contradictory objectives, taking into account the existing costs, time, knowledge and systems.

Hence, the Study Programme 0613.3 Software Engineering pursues the following objectives: to train professionals – holders of Licentiate Engineer' degree, who are able to demonstrate knowledge, skills and crosscutting and professional competences that meet the employers' requirements, corroborated by the Licentiate Diploma comprising 240 transferable credits and ensuring their employability and/or continuation of Cycle II (Master's Degree) studies.

Head of Department of Software Engineering and Automatics, Technical University of
Moldova

Associate Professor, Dr. Dumitru CIORBA

Annex 4. Matrix 1L – Description of the Study field/Programme via professional and crosscutting competences.

General Area of Study: Area of Professional Education: Study Programme:
061 Information and 0613 Development of Software 0613.3 Software Engineering
Communication Technologies and Applications

<p>Qualification: <i>Software Engineering</i></p> <p>Level of qualification: Licentiate/Bachelor's Degree</p>	<p>Possible occupations (in compliance with the Classifier of Occupations in the RM): <i>25 Professionals in Information and Communication Technology</i></p> <ul style="list-style-type: none"> • <i>251 Software Programmers Analysts (2511 System Analysts, 2512 Software Designers, 2513 Designers of WEB Systems and Multimedia, 2514 Programmers of Applications, 2519 Software Programmers Analysts not assigned to any of the previous main groups).</i>
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Professional Competences	C1 Scientific and engineering foundation of information technologies	C2 Systems organisation and information aspects	C3 Application technologies	C4 Software development methods and technologies	C5 Computing systems architecture and infrastructure
Level Descriptors of structural elements of professional competences					
Knowledge					
D1 Knowledge, understanding the basic industry and specialty concepts, theories and methods; their appropriate use during the professional communication.	C1.1 Identifying and defining <i>fundamental scientific and applied</i> concepts, theories and methods supporting the information technology engineering.	C2.1 Identifying and defining concepts, theories and methods used to conduct <i>human and information focused analyses</i> on systems operated at the level of organisations.	C3.1 Identifying and defining concepts, procedures and methods for information processing used in <i>application development depending on the human activity needs</i> .	C4.1 Identifying and defining concepts and methods focused on <i>software development, implementation and utilization process</i> .	C5.1 Identifying and defining hardware, software and communication architecture components, as well as those required for the <i>description of a computing infrastructure</i> .
D2 Using the basic knowledge for explaining and interpreting various types of concepts, situations, processes, projects, etc. associated with the industry.	C1.2 Explaining engineering solutions by using techniques, concepts and principles from pure and applied science.	C2.2 Explaining concepts, theories and methods used to conduct analyses of systems operated at the level of organisations.	C3.2 Explaining technologies appropriate for developing applications required for the organizations activities.	C4.2 Explaining concepts and methods used for software development, implementation and use.	C5.1 Explaining the interaction and functioning of architecture and infrastructure components.
Skills					

D3 Applying certain basic principles and methods to address well defined issues/situations, specific for the field under qualified assistance conditions.	C1.3 Addressing the issues related to human activity by applying, in particular, numerical computation techniques and methods.	C2.3 Applying basic concepts, theories and methods to <i>prepare the information necessary</i> to develop systems operated at the level of organisations.	C3.3 Using modern technologies to define software applications.	C4.3 Applying programming languages, modelling and development environment, methodologies to produce software.	C5.3 Applying basic methods to specify architecture and infrastructure solutions for typical computing issues.
D4 Appropriate use of standard evaluation criteria and methods to assess the quality, performance and limits/constraints of certain processes, programmes, projects, concepts, methods and theories.	C1.4 Selecting criteria and methods for analysing the advantages and disadvantages of methods and procedures applied in resolving <i>typical computing issues</i> .	C2.4 Selecting criteria and methods to assess the quality, performance and limits/constraints of <i>systems to be developed in compliance with the needs of the organisation subject to study</i> , including those necessary for defining a quality and security management system.	C3.4 Using criteria and methods determined by the application technologies to assess compliance with interoperability standards.	C4.4 Using criteria and methods to assess the <i>system development process in terms of its quality and performance</i> .	C5.4 Using criteria and methods to <i>assess the functional and non-functional features of system components</i> .
D5 Devising professional projects using proven industry related principles and methods.	C1.5 Modelling certain standard issues from applied science using math tools.	C2.5 Devising a project (system specification) under the conditions of having a quality and security management system in place.	C3.5 Developing software applications using advanced technologies to convey, store and process data in compliance with the organisation needs.	C4.5 Developing and implementing software for specific problems from diverse areas of human activity.	C5.5 Implementing architecture and infrastructure solutions based on constraints defined by the project.
Minimum Performance Standards for Competence Evaluation.	Identifying and applying methods and algorithms learned for standard issues of pure and applied science.	Analysing and modelling a system focused on standard organisation and/or information issues in an area of human activity.	Identifying and using technologies necessary for developing software applications.	Analysing, modelling and devising a functional prototype in compliance with the technological development processes.	Identifying hardware, software and communication components intended for the applications specific for a selected area.

Level descriptors for structural elements of professional competences	Crosscutting Competences	Minimum Performance Standards for Competence Evaluation
D6. Carrying out professional tasks with due diligence under limited	CT1. Applying principles, rules and values of professional ethics	Carrying out projects, having complied with the rules of professional deontology.

autonomy and qualified support.		
D7. Getting acquainted with team work specific roles and activities and assigning the tasks to subordinated levels.	CT2. Identifying, describing and unrolling the team activities aimed to develop communication and collaboration skills and to undertake different roles (executive and management roles).	Carrying out team projects, having undertaken different roles.
D8. Acknowledging the need for continuous education; efficient use of resources and learning techniques for personal and professional development	CT3. Demonstrating the spirit of initiative and action for refreshing the professional, economic and organizational culture knowledge.	Devising and applying an individual plan for personal development; communication project in Romanian/Russian and English/French.

Annex 5. Matrix 2L – Coordination between the acquired competences and the course units/module.

Professional Competences	Competences Explained by Level Descriptors	Content Areas	Subjects of Study	Credits	
				per subject	per competence
1	2	3	4	5	6
C1 Scientific and engineering foundation of information technologies	<p>C1.1 Identifying and defining <i>fundamental scientific and applied</i> concepts, theories and methods supporting the information technology engineering.</p> <p>C1.2 Explaining engineering solutions by using techniques, concepts and principles from pure and applied science.</p> <p>C1.3 Addressing the issues related to human activity by applying, in particular, numerical computation techniques and methods.</p> <p>C1.4 Selecting criteria and methods for analysing the advantages and disadvantages of methods and procedures applied in resolving <i>typical computing issues</i>.</p> <p>C1.5 Modelling certain standard issues from applied science using math tools.</p>	Pure and Applied Science	Math	5	68
			Special Math 1	5	
			Special Math 2	5	
			Equivalent Models	5	
			Applied Science	5	
			Signal Processing	5	
			Personal and Professional Development/Computer Science and Society	3	
			Project Management/Enterprise Management	3	
			Electronic Marketing/Digital Entrepreneurship	3	
			Cryptography and Security	1	
	Programming	Computer Programming	5		

			Data Structures and Algorithms	5	
			Formal Languages and Compiler Design	5	
			Calculability and Complexity	5	
			Data Analysis and View/Computer Graphics	1	
			Developing Industry Specific Languages	4	
			Licentiate Internship and Design	2	
			Summary Theory Exam	1	
C2 Systems organisation and information aspects	<p>C2.1 Identifying and defining concepts, theories and methods used to conduct <i>human and information focused analyses</i> on systems operated at the level of organisations.</p> <p>C2.2 Explaining concepts, theories and methods used to conduct analyses of systems operated at the level of organisations.</p> <p>C2.3 Applying basic concepts, theories and methods to <i>prepare the information necessary</i> to develop systems operated at the level of organisations.</p> <p>C2.4 Selecting criteria and methods to assess the quality, performance and limits/constraints of <i>systems to be developed in compliance with the needs of the organisation subject to study</i>, including those necessary for defining a quality and security management system.</p> <p>C2.5 Devising a project (system specification) under the conditions of having a quality and security management system in place.</p>	Information Security	Ethics, Communication and Law	2	17
			Developing Secure Applications	1	
			Cryptography and Security	1	
		Information Management	Project Management/Enterprise Management	1	

			Electronic Marketing/Digital Entrepreneurship	1	
		Software Development	Conceptual Design of an IT Application	3	
			Information System Design	3	
			Summary Theory Exam	1	
			Licentiate Internship and Design	2	
		Software Quality	Software Quality/Analysis and Specification of Software Requirements	2	
C3 Application technologies	<p>C3.1 Identifying and defining concepts, procedures and methods for information processing used in <i>application development depending on the human activity needs.</i></p> <p>C3.2 Explaining technologies appropriate for developing applications required for the organizations activities.</p> <p>C3.3 Using modern technologies to define software applications.</p> <p>C3.4 Using criteria and methods determined by the application technologies to assess compliance with interoperability standards.</p> <p>C3.5 Developing software applications using advanced technologies to convey, store and process data in compliance with the organisation needs.</p>	Architectures, Platforms and Technologies	Multimedia Technologies/Simulation and Modelling Techniques	3	52
			Personal and Professional Development/Computer Science and Society	1	
			IoT Projects	2	
			Embedded Systems	3	
			Mobile Application Development/WEB Programming	1	
			Databases	5	
		Information Management	Conceptual Design of an IT Application	2	
			Foundations of Artificial Intelligence/Non-relational Databases	2	
			Programming	Basics for Application Development	
		Developing Secure Applications		4	
		Equivalent Models		2	
		Developing Industry Specific Languages		2	
		Network Programming		2	
		Object Oriented Programming		2	
		Information System Design		3	
		Programming of Distributed Applications		2	
		Data Analysis and View/Computer Graphics		2	
		Software Design Techniques and Mechanisms		2	
Software Verification and Validation	2				
Mobile Application Development/WEB Programming	2				
Foundations for Game Development/ Technologies of Mixed Reality	2				
Licentiate Internship and Design	3				

			Summary Theory Exam	1	
C4 Software development methods and technologies	C4.1 Identifying and defining concepts and methods focused on <i>software development, implementation and utilization process</i> . C4.2 Explaining concepts and methods used for software development, implementation and use. C4.3 Applying programming languages, modelling and development environment, methodologies to produce software. C4.4 Using criteria and methods to assess the <i>system development process in terms of its quality and performance</i> . C4.5 Developing and implementing software for specific problems from diverse areas of human activity.	Programming	Object Oriented Programming	3	54
			Network Programming	2	
			IoT Projects	4	
			Embedded Systems	2	
			Programming of Distributed Applications	2	
			Data Analysis and View/Computer Graphics	2	
			Multimedia Technologies/Simulation and Modelling Techniques	2	
			Human-Computer Interaction/Real Time Programming	3	
			Mobile Application Development/WEB Programming	1	
			Basics for Application Development	4	
		Developing Secure Applications	3		
		Developing Industry Specific Languages	2		
		Conceptual Design of an IT Application	2		
		Cryptography and Security	3		
		Information System Design	2		
		Foundations of Artificial Intelligence/Non-relational Databases	3		
		Foundations for Game Development/technologies of Mixed Reality	3		
		Summary Theory Exam	1		
		Licentiate Internship and Design	3		
		Defending the Licentiate Project	1		
Software Quality	Software Design Techniques and Mechanisms Software Verification and Validation	3			
	Software Quality/Analysis and Specification of Software Requirements	3			
C5 Computing systems architecture and infrastructure	C5.1 Identifying and defining hardware, software and communication architecture components, as well as those required for <i>the description of a computing infrastructure</i> . C5.2 Explaining the interaction and functioning of architecture and infrastructure components.	Programming	Programming of Distributed Applications	1	24
			Mobile Application Development/WEB Programming	1	
			Network Programming	1	
			Licentiate Internship and Design	2	
		Networks and Data Communications	Computer Network IoT Projects	5 2	

<p>C5.3 Applying basic methods to specify architecture and infrastructure solutions for typical computing issues.</p> <p>C5.4 Using criteria and methods to <i>assess the functional and non-functional features of system components</i>.</p> <p>C5.5 Implementing architecture and infrastructure solutions based on constraints defined by the project.</p>	Architectures, platforms and Technologies	Computer Architecture	5	
		Operating Systems: Internal Mechanisms and Design Principles	5	
		Human-Computer Interaction/Real Time Programming	2	

Crosscutting Competences	Subjects of Study	Credits	
		Per Subject	Per Competence
CT1. Applying principles, rules and values of professional ethics	Ethics, Communication and Law	3	8
	Conceptual Design of an IT Application	1	
	Personal and Professional Development/Computer Science and Society	1	
	Project Management/Enterprise Management	1	
	Electronic Marketing/Digital Entrepreneurship	1	
	Licentiate Internship and Design	1	
CT2. Identifying, describing and unrolling the team activities aimed to develop communication and collaboration skills and to undertake different roles (executive and management roles).	Equivalent Models	2	9
	Developing Industry Specific Languages	1	
	Conceptual Design of an IT Application	1	
	Basics for Application Development	1	
	Developing Secure Applications	1	
	IoT Projects	1	
	Information System Design	1	
	Licentiate Internship and Design	1	
CT3. Demonstrating the spirit of initiative and action for refreshing the professional, economic and organizational culture knowledge.	Equivalent Models	1	8
	Developing Industry Specific Languages	1	
	Conceptual Design of an IT Application	1	
	Basics for Application Development	1	
	Developing Secure Applications	1	
	IoT Projects	1	
	Information System Design	1	
	Licentiate Internship and Design	1	
Total per Study Programme			240

Annex 6: Educational plan on components implemented from 1 September 2017

Technical University of Moldova

Faculty of Computer Science, Informatics and Microelectronics

„APPROVED”

TUM Senate meeting

minutes no. 4

of „27” december 2016

Chairman of the UTM Senate

Rector, dr. hab.

Viorel Bostan _____

„ APPROVED”

Minister of Education of the Republic of Moldova

_____ 2017

” ” _____ 2017

Registration nr. _____

EDUCATIONAL PLAN

for the first cycle, Bachelor’s degree studies (level 6 according to ISCED)

General field of study: 061 Information and communication technologies

Professional training field: 0613 Development of programme products and applications

Study programme: 0613.3 Software Engineering

Total no. of ECTS study credits: 240

Title conferred: Bachelor engineer

Certification: Bachelor's degree

Admission basis: baccalaureate diploma or equivalent study document; higher education diploma

Language of instruction: Romanian, Russian, English

Form of organization of education: full-time education

1. UNIVERSITY CALENDAR

Year of study	Didactic activities		Examination sessions		Internships	Holidays		
	sem. I	sem. II	sem. I	sem. II		Winter	Spring	Summer
I	15 weeks	15 weeks	4 weeks	4 weeks		2 weeks	Holiday for Easter holidays, 1 week (according to the Christian calendar)	10 weeks
II	15 weeks	15 weeks	4 weeks	4 weeks	15 weeks	2 weeks		6 weeks
III	15 weeks	15 weeks	4 weeks	4 weeks	15 weeks	2 weeks		6 weeks
IV	15 weeks	7 weeks	4 weeks	2 weeks	10 weeks	2 weeks		9 weeks

2. Educational plan by components

Code	Name of the study discipline	Department	assessments		Credit points	Number of contact hours				Individual work	Year I		Year II		Year III		Year IV	
			Exam	Year project		Total	Lectures	Seminars / Internships	Project		Sem 1	Sem 2	Sem 3	Sem 4	Sem 5	Sem 6	Sem 7	Sem 8
Fundamental disciplines																		
F.01.O.001	Mathematics	ISA	1		5	75	45	30		75	75							
F.01.O.002	Computer programming	ISA	1		5	75	30	15	30	75	75							
F.01.O.003	Special Mathematics 1	ISA	1		5	75	30	45		75	75							
F.02.O.004	Equivalent models	ISA		2	10	150			150	150		150						
F.02.O.005	Applied Sciences	ISA	2		5	75	30	15	30	75	75							
F.02.O.006	Special Mathematics 2	ISA	2		5	75	30	15	30	75	75							
F.02.O.007	Computer architecture	ISA	2		5	75	30	45		75	75							
F.02.O.008	Data Structures and Algorithms	ISA	2		5	75	30	30	15	75	75							
F.04.O.009	Developing domain-specific languages	ISA		4	10	150			150	150			150					
F.04.O.010	Formal languages and compilers design	ISA	4		5	75	30	15	30	75			75					
F.04.O.011	Calculability and complexity	ISA	4		5	75	30	15	30	75			75					
F.06.O.012	Signal processing	ISA	6		5	75	30	30	15	75						75		
Total fundamental disciplines:			10	2	70	1050	315	255	480	1050	225	450	0	300	0	75	0	0
Disciplines for general skills and competences training																		
G.01.O.013	Conceptual design of an IT application	ISA		1	10	150			150	150	150							
G.01.O.014	Foreign language 1	ISA	1		3	45		45		45	45							
G.01.O.015		Romanian language (for speakers of other languages) 1 *	ISA	1		2	30		30		30	30						
G.01.O.016	Physical Education 1 *	ISA	1			30		30		30	30							
G.02.O.017	Foreign Language 2	ISA	2		3	45		45		45	45		45					
G.02.O.018		Romanian language (for speakers of other languages) 2 *	ISA	2		2	30		30		30	30						
G.02.O.019	Physical Education 2 *	ISA	2			30		30		30	30							
G.05.O.020	Ethics, communication and law	ISA	5		5	75	45	30		75					75			
Total disciplines of general skills and competences training:			7	1	15	225	45	30	150	225	150	0	0	0	75	0	0	0
Socio-humanistic orientation disciplines																		
U.01.A.021	Personal and professional development <i>Computer science and society</i>	ISA																
U.01.A.022		1		5	75	30	30	15	75	75								

U.07.A.023 U.07.A.024	Project Management <i>Enterprise Management</i>	ISA	7	5	75	30	30	15	75								75	
U.07.A.025 U.07.A.026	Electronic marketing <i>Digital entrepreneurship</i>	ISA	7	5	75	30	30	15	75								75	
Total social-humanistic orientation disciplines:			3	0	15	225	90	90	45	225	75	0	0	0	0	0	150	0
Compulsory specialization orientation disciplines																		
S.03.O.027	The Basics of Applications Development	ISA		3	10	150			150	150				150				
S.03.O.028	Object Oriented Programming	ISA	3		5	75	30	15	30	75				75				
S.03.O.029	Computer networks	ISA	3		5	75	30	45		75				75				
S.03.O.030	Database	ISA	3		5	75	30	15	30	75				75				
S.04.O.031	Operating systems: internal mechanisms and design principles	ISA	4		5	75	30	45		75				75				
S.05.O.032	Developing secure applications	ISA		5	10	150			150	150							150	
S.05.O.033	Network programming	ISA	5		5	75	30	15	30	75							75	
S.05.O.034	Cryptography and security	ISA	5		5	75	30	15	30	75							75	
S.06.O.035	IoT projects	ISA		6	10	150			150	150								150
S.06.O.036	Embedded systems	ISA	6		5	75	30	15	30	75							75	
S.07.O.037	Design of information systems	ISA		7	10	150			150	150								150
S.07.O.038	Programming Distributed Applications	ISA	7		5	75	30	15	30	75								75
Total disciplines of compulsory specialization orientation:			8	4	80	1200	240	180	780	1200	0	0	375	75	300	225	225	0
Disciplines of optional specialization orientation																		
S.03.A.039 S.03.A.040	Data analysis and visualization <i>Computer Graphics</i>	ISA	3		5	75	30	30	15	75				75				
S.04.A.041 S.04.A.042	Multimedia technologies <i>Simulation and modeling techniques</i>	ISA	4		5	75	30	30	15								75	
S.05.A.043 S.05.A.044	Techniques and mechanisms of software design <i>Verification and validation of programme products</i>	ISA	5		5	75	30	30	15	75							75	75
S.06.A.045 S.06.A.046	Man-computer interaction <i>Real time programming</i>	ISA	6		5	75	30	15	30	75								75
S.06.A.047 S.06.A.048	Mobile applications programming <i>Web programming</i>	ISA	6		5	75	30	15	30	75								75
S.07.A.049 S.07.A.050	Software quality <i>Analysis and specification of software requirements</i>	ISA	7		5	75	30	30	15	75								75
S.08.A.051 S.08.A.052	Fundamentals of Artificial Intelligence <i>Unrelated databases</i>	ISA	8		5	75	30	45		75								75

S.08.A.053	Fundamentals of Games Development <i>Mixed reality technologies</i>	ISA	8	5	75	30	45		75									75
S.08.A.054																		
Total disciplines of optional specialization orientation:			8	0	40	600	240	240	120	600	0	0	75	75	75	150	75	150
Total number of study hours:						3300	930	795	1575	3300	450	450	450	450	450	450	450	150
S.08.O.055	Internship and Bachelor's degree project	ISA	8	15						450								450
S.08.O.056	Theoretical synthesis test: Algorithms, programming and databases	ISA	8	4						120								120
S.08.O.057	Defence of the Bachelor's degree project	ISA	8	1						30								30
Number of hours per week											30	30	30	30	30	30	30	
Number of examinations in examination sessions			33								4	4	4	4	4	4	4	5
Number of projects			7								1	1	1	1	1	1	1	
Number of credit points					240	3300	930	795	1575	3900	30	30	30	30	30	30	30	30

* It is not calculated in the total amount of the assessment forms (because the courses "Romanian Language" (for speakers of other languages) and "Physical Education" are done in extracurricular regime, the course unit "Romanian Language" (for speakers of other languages) is allocated additional credits to those 240 credits per programme, and the course unit "Physical Education" is not quantified with credits).

Approved at the TUM Senate meeting,
minutes no. 4 of 27.12.2016

Ion BALMUŞ

The Dean of the Faculty CSIM,
assoc. prof, PhD

Dumitru
CIORBĂ

Head of the Department of Software Engineering and
Automatics,
assoc. prof, PhD

Annex 7: Grid 1L - Description of the study field / programme through professional and transversal competences

Title of qualification: Software Engineering Level of qualification: Bachelor		Possible occupations (according to CORM): 25 Specialists in Information and Communication Technology <ul style="list-style-type: none"> 251 Software Programming Analysts (2511 System Analysts, 2512 Software Developers, 2513 Web and Multimedia Designers, 2514 Applications Programmers, 2519 Software Programme Analysts unclassified in earlier basic groups) 			
Professional competences Level descriptors of structural elements of professional competences	C1 On the scientific and engineering fundamentals of information technologies	C2 On the organizational and informational aspects of the systems	C3 On applications technologies	C4 On software development methods and technologies	C5 On the architecture and infrastructure of computer systems

Knowledge

D1 Knowledge, understanding of the concepts, theories and basic methods of the domain and of the specialization area; their proper use in professional communication	C1.1 Identifying and defining concepts, theories and methods of <i>fundamental and applied sciences</i> support for information technology engineering	C2.1 Identifying and defining the concepts, theories and methods used to carry out <i>human-centered analyzes and information</i> on systems operating at the level of organizations	C3.1 Identifying and defining the concepts, processes and methods of information processing used in the realization of <i>applications arising from the needs</i> of human activity	C4.1 Identifying and defining concepts and methods focused on the <i>development, implementation and use</i> of software	C5.1 Identifying and defining architectural hardware, software and communications components, as well as those needed to <i>describe a computing infrastructure</i>
D2 Using basic knowledge to explain and interpret various types of concepts, situations, processes, projects, etc. associated with the domain	C1.2 Explaining engineering solutions by using techniques, concepts and principles in exact and applicative sciences	C2.2 Explaining the concepts, theories and methods used to carry out analyzes of systems operating at the level of organizations	C3.2 Explaining the right technologies for making the necessary applications in organizations' activities	C4.2 Explaining the concepts and methods used to develop, implement and use the software	C5.1 Explaining the interaction and functioning of architectural and infrastructure components

Abilities

D3 Applying basic principles and methods for solving well-defined issues / situations, typical of the field under qualified assistance	C1.3 Solving problems in human activity fields by applying in particular numerical techniques and methods	C2.3 Applying concepts, theories and basic methods for preparing the information needed for system development	C3.3 Using modern technologies in defining software applications	C4.3 Applying programming languages, modeling and development environments, and methodologies for software creation	C5.3 Apply basic methods for specifying architectural and infrastructure solutions for computational problems
D4 Appropriate use of standard criteria and assessment methods to assess the quality,	C1.4 Choosing the criteria and methods for analyzing the	C2.4 Choosing the criteria and methods for assessing the	C3.4 Using criteria and methods determined by application	C4.4 Using criteria and methods to evaluate the system design process in	C5.4 Using criteria and methods to evaluate functional and non-functional features

merits and limits of processes, programmes, projects, concepts, methods and theories	advantages and disadvantages of the methods and procedures applied to solving the numerical calculus problems.	quality, performance and limits of the systems to be developed in accordance with the needs of the organization, including those needed to define a quality and security management system	technologies to assess compliance with interoperability standards	terms of quality and performance	of system components
D5 Developing professional projects with the use of established principles and methods in the field	C1.5 Modeling of typical problems in applied sciences using the mathematical apparatus	C2.5 Elaboration of a project (system specification) under the conditions of a quality and security management system.	C3.5 Developing software applications using modern technologies for transmitting, storing and processing data in accordance with what is needed	C4.5 Development and implementation of software for concrete problems in various fields of human activity	C5.5 Implementation of an architectural and infrastructure solution based on constraints of the project.
Minimum performance standards for competence assessment	Identifying and applying methods and algorithms learned for standard problems of fundamental and applied sciences.	Analysis and modeling of a system oriented on a organizational and / or informational problem of a human activity domain.	Identifying and using the technologies needed to develop a software application.	Analysis and modeling and realization of a functional prototype in accordance with technological development processes	Identifying hardware, software, and communications components for applications specific to the selected domain

Level descriptors of the structural elements of professional competences	Transversal competences	Minimum performance standards for competence assessment
D6. Responsible execution of professional tasks, in restricted conditions and qualified assistance	CT1. Applying the principles, norms and values of professional ethics	Carrying out projects in accordance with the rules of professional ethics
D7. Familiarizing with the roles and tasks specific to teamwork and the distribution of tasks for the subordinate levels	CT2. Identifying, describing and running the activities organized in a team with the development of the communication and collaboration capacities, as well as assuming the different roles (execution and leadership)	Carrying out a project in the team with the responsible assumption of different roles
D8. Awareness of the need for continuous training, the efficient use of resources and learning techniques for personal and professional development	CT3. Demonstrate the spirit of initiative and action to up-date professional, economic and organizational culture	Developing and implementing a personal development plan; project communication in Romanian / Russian and in English / French.

Annex 8: Grid 2L - Coordination between developed competences and course units / modules

Professional competences	competences explained by level descriptors	Content areas	Study disciplines	Credits	
				On discipline	On competence
1	2	3	4	5	6
C1 On the scientific and engineering foundations of information technologies	C1.1 Identifying and defining concepts, theories and methods of <i>fundamental and applied sciences</i> support for information technology engineering C1.2 Explanation of engineering solutions using techniques, concepts and principles from the exact and applicative sciences C1.3 Solving problems in human activities by applying in particular numerical computing techniques and methods C1.4 Choosing the criteria and methods for analyzing the advantages and disadvantages of the methods and procedures applied to the solution of <i>numerical computational problems</i> . C1.5 Modeling of typical problems in applied sciences using the mathematical apparatus	Exact and applicative sciences	Mathematics	5	67
			Special Mathematics 1	5	
			Special Mathematics 2	5	
			Equivalent models	5	
			Applied Sciences	5	
			Signal processing	5	
			Personal and professional development / Computer science and society	1	
			Project Management / Enterprise Management	2	
			Electronic Marketing / Digital Entrepreneurship	2	
			Cryptography and security	1	
		Database	2		
		Programming	Computer programming	5	
			Data Structures and Algorithms	5	
			Formal languages and compiler design	5	
			Calculability and complexity	5	
			Data Analysis and Visualization / Computer Graphics	2	
			Developing domain-specific languages	4	
Internship and Bachelor's degree project	2				
Theoretical synthesis test	1				
C2 Regarding organizational and informational aspects of systems	C2.1 Identifying and defining the concepts, theories and methods used to carry out human-focused analyzes and information on systems operating at the level of organizations C2.2 Explaining the concepts, theories and methods used to carry out analyzes on systems operating at the level of organizations C2.3 Application of concepts, theories and basic methods for the preparation of information necessary for the development of systems operating at the level of organizations C2.4 Choosing the criteria and methods for assessing the quality, performance and limits of the systems to be developed in accordance with the needs	Information security	Ethics, communication and law	2	15
			Developing secure applications	1	
			Cryptography and security	1	
		Information Management	Project Management / Enterprise Management	1	
			Electronic Marketing / Digital Entrepreneurship	1	
		Software development	Conceptual design of an IT application	2	
			Design of information systems	2	
			Theoretical synthesis test	1	
			Internship and Bachelor's degree project	2	

	of the organization, including those needed to define a quality and security management system C2.5 Elaboration of a project (system specification) under the conditions of a quality and security management system.	Software quality	Software Quality / Analyzing and Specifying Software Requirements	2	
C3 Regarding applications technologies	C3.1 Identifying and defining the concepts, processes and methods of information processing used in the realization of applications <i>arising from the needs</i> of human activity C3.2 Explaining the right technologies for making the necessary applications in organizations' activities C3.3 Use of modern technologies in defining software applications C3.4 Use of criteria and methods determined by application technologies to assess compliance with interoperability standards C3.5 Development of software applications using modern technologies for transmitting, storing and processing data according to the needs of an organization	Architectures, platforms and technologies	Multimedia Technologies / Simulation and Modeling Techniques	3	47
			Personal and professional development / Computer science and society	1	
			IoT projects	2	
			Embedded systems	3	
			Mobile Applications Programming / Web Programming	1	
			Computer networks	2	
		Information Management	Database	3	
			Conceptual design of an IT application	1	
			Fundamentals of Artificial Intelligence / Unrelated Databases	2	
		Programming	The Basics of Applications Development	3	
			Developing secure applications	3	
			Equivalent models	1	
			Developing domain-specific languages	2	
			Network programming	2	
			Object Oriented Programming	2	
			Design of information systems	3	
			Programming Distributed Applications	2	
			Data Analysis and Visualization / Computer Graphics	1	
			Techniques and mechanisms of software design Verification and validation of programme products	2	
			Mobile Applications Programming / Web Programming	2	
Fundamentals of Games Development / Mixed Reality Technologies	2				
Internship and Bachelor's degree project	3				
Theoretical synthesis test	1				
C4 Regarding software development	C4.1 Identifying and defining concepts and methods focused on the	Programming	Object Oriented Programming	3	52
			Network programming	2	
			IoT projects	4	

methods and technologies	<i>development, implementation and use of software</i> C4.2 Explaining the concepts and methods used to develop, implement and use the software C4.3 Application of programming languages, modeling and development environments, methodologies for software creation C4.4 Use of criteria and methods to evaluate the <i>process</i> of systems development in terms of quality and performance C4.5 Development and implementation of software for concrete problems in various fields of human activity		Embedded systems	2	
			Programming Distributed Applications	2	
			Data Analysis and Visualization / Computer Graphics	2	
			Multimedia Technologies / Simulation and Modeling Techniques	2	
			Human-computer interaction / real-time programming	3	
			Mobile Applications Programming / Web Programming	1	
		Software development	The Basics of Applications Development	4	
			Developing secure applications	3	
			Developing domain-specific languages	1	
			Conceptual design of an IT application	1	
			Cryptography and security	3	
			Design of information systems	2	
			Fundamentals of Artificial Intelligence / Unrelated Databases	3	
			Fundamentals of Games Development / Mixed Reality Technologies	3	
			Theoretical synthesis test	1	
			Internship and Bachelor's degree project	3	
			Defence of the Bachelor's degree project	1	
		Software quality	Techniques and mechanisms of software design Verification and validation of programme products	3	
			Software Quality / Analyzing and Specifying Software Requirements	3	
C5 Regarding the architecture and infrastructure of computing systems	C5.1 Identifying and defining architectural hardware, software and communications components, as well as those needed to <i>describe a computing infrastructure</i> C5.2 Explaining the interaction and functioning of architectural and infrastructure components C5.3 Application of basic methods for specifying architectural and infrastructure solutions for typical computing problems C5.4 Use of criteria and methods for evaluating <i>functional and non-</i>	Programming	Programming Distributed Applications	1	20 20
			Mobile Applications Programming / Web Programming	1	
			Network programming	1	
			Internship and Bachelor's degree project	1	
		Networks and data communication	Computer networks	3	
			IoT projects	1	
			Computer architecture	5	

	<i>functional features of system components</i> C5.5 Implementation of an architectural and infrastructure solution based on stated constraints	Architectures, platforms and technologies	Operating systems: internal mechanisms and design principles	5	
			Human-computer interaction / real-time programming	2	

Transversal competences	Study disciplines	Credits	
		On discipline	On competence
CT1. Applying the principles, norms and values of professional ethics	Ethics, communication and law	3	17
	Conceptual design of an IT application	2	
	Personal and professional development / Computer science and society	3	
	Project Management / Enterprise Management	1	
	Electronic Marketing / Digital Entrepreneurship	1	
	Equivalent models	1	
	The Basics of Applications Development	1	
	Developing domain-specific languages	1	
	Developing secure applications	1	
	IoT projects	1	
	Design of information systems	1	
Internship and Bachelor's degree project	1		
CT2. Identifying, describing and running the activities organized in a team with the development of the communication and collaboration capacities, as well as assuming the different roles (execution and leadership)	Equivalent models	2	10
	Developing domain-specific languages	1	
	Conceptual design of an IT application	2	
	The Basics of Applications Development	1	
	Developing secure applications	1	
	IoT projects	1	
	Design of information systems	1	
Internship and Bachelor's degree project	1		
CT3. Demonstrate the spirit of initiative and action to update own professional, economic and organizational culture knowledge	Project Management / Enterprise Management	1	12
	Electronic Marketing / Digital Entrepreneurship	1	
	Equivalent models	1	
	Developing domain-specific languages	1	
	Conceptual design of an IT application	2	
	The Basics of Applications Development	1	
	Developing secure applications	1	
	IoT projects	1	
	Design of information systems	1	
Internship and Bachelor's degree project	2		
Total study programme			240

Annex 9: Roadmap

	2015			2016											
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Beginning of the project	15														
The preparation stage															
Mobility to study the current situation at EU Partner Universities															
Teacher training during trainings organized by MD and EU partners															
Developing and approval of the legal framework for launching the new study programme															
Preparing infrastructure for teaching based on PBL Methodology															
Internal evaluation and obtaining provisional authorization															
Preparing curricula for disciplines for the first year of study															
Admission 2017															
Implementation stage															
1 September 2017 - Launch of the first year of study - SE specialty															
Initiating students in the new PBL teaching methodology															
Identifying team mentors															
Identifying and teamwork with students															
Conducting the learning process based on the PBL-based study programme															
Training of teachers involved in teaching															
Identifying and teamwork with students															
Accreditation of the study programme															
Study visits of MD students to Universities in the EU															
Teaching visits of EU teachers to MD															
Promotion															
Promoting the ERASMUS + PBLMD project															
Promotion of the Software Engineering study programme															

	2017											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Beginning of the project												
The preparation stage												
Mobility to study the current situation at EU Partner Universities												
Teacher training during trainings organized by MD and EU partners												
Development and approval of the legal framework for launching the new study programme												

Preparing infrastructure for teaching based on PBL methodology																		
Internal evaluation and obtaining provisional authorization																		
Preparing curricula for disciplines for the first year of study																		
Admission 2017																		
Implementation stage																		
1 September 2017 - Launch of the first year of study - SE specialty																		
Initiating students in the new PBL teaching methodology																		
Identifying team mentors																		
Identifying and teamwork with students																		
Conducting the learning process based on the PBL-based study programme																		
Training of teachers involved in teaching																		
Identifying and teamwork with students																		
Accreditation of the study programme																		
Study visits of MD students to Universities in the EU																		
Teaching visits of EU teachers to MD																		
Promotion																		
Promoting the ERASMUS + PBLMD project																		
Promotion of the Software Engineering study programme																		

	2018																	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
Beginning of the project																		
The preparation stage																		
Mobility to study the current situation at EU Partner Universities																		
Teacher training during trainings organized by MD and EU partners																		
Developing and approval of the legal framework for launching the new study programme																		
Preparing infrastructure for teaching based on PBL methodology																		
Internal evaluation and obtaining provisional authorization																		
Preparing curricula for disciplines for the first year of study																		
Admission 2017																		
Implementation stage																		
1 September 2017 - Launch of the first year of study - SE specialty																		
Initiating students in the new PBL teaching methodology																		
Identifying team mentors																		
Identifying and teamwork with students																		
Conducting the learning process based on the PBL-based study programme																		
Training of teachers involved in teaching																		
Identifying and teamwork with students																		
Accreditation of the study programme																		
Study visits of MD students to Universities in the EU																		
Teaching visits of EU teachers to MD																		

Promotion																	
Promoting the ERASMUS + PBLMD project																	
Promotion of the Software Engineering study programme																	

	2019									
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Beginning of the project										
The preparation stage										
Mobility to study the current situation at EU Partner Universities										
Teacher training during trainings organized by MD and EU partners										
Developing and approval of the legal framework for launching the new study programme										
Preparing infrastructure for teaching based on PBL methodology										
Internal evaluation and obtaining provisional authorization										
Preparing curricula for disciplines for the first year of study										
Admission 2017										
Implementation stage										
1 September 2017 - Launch of the first year of study - SE specialty										
Initiating students in the new PBL teaching methodology										
Identifying team mentors										
Identifying and teamwork with students										
Conducting the learning process based on the PBL-based study programme										
Training of teachers involved in teaching										
Identifying and teamwork with students										
Accreditation of the study programme										
Study visits of MD students to Universities in the EU										
Teaching visits of EU teachers to MD										
Promotion										
Promoting the ERASMUS + PBLMD project										
Promotion of the Software Engineering study programme										

Annex 10: Action plan

Preparing for the launch of the new study programme	
Action 1	Documentation visits to partner universities: Royal Institute of Technology, Sweden (KTH), Aalborg University in Denmark, (AAU), University of Gloucestershire (UoG). Cross analysis of study programmes at AAU, UoG, KTH.
Action 2	Training of teachers to use the PBL methodology. Participating in trainings organized under the project at TUM or AESM during 2016-2018. Academic mobility of teachers at the partner universities of the European Union.
Action 3	Preparing infrastructure for teaching based on the PBL methodology consists in purchasing equipment and preparing study rooms, which will be team-oriented.
Action 4	Inclusion of the new specialty in the Nomenclature of Professional Training Fields and Specializations for Training of Staff in Higher Education Institutions, 1st Cycle
Action 5	Elaboration of the educational plan for "Software Engineering"
Action 7	Approval of the Study Programme at: - the department / chair - The faculty - The TUM Senate
Action 4	Internal and external evaluation of the study programme
Action 5	Obtaining authorization for provisional operation
Action 6	Advertising the new study programme
Action 7	Identifying the teachers who will be involved in the teaching process within the new study programme and train them for their use of the PBL teaching methodology.
Action 8	Elaboration of educational documents: curriculum by disciplines (analytical programmes), guides, case studies, evaluation etc. (for the first year of study).
Action 9	Admission to the "Software Engineering" study programme
Implementation	
Action 1	Admission 2017
Action 2	September 1, 2017 launching the new study programme.
Action 3	Conducting the study process, based on TUM regulations
Action 4	Obtaining accreditation for the next 5 years
Action 5	Elaboration of discipline sheets and curricula on disciplines for the next years of study
Action 6	Admission 2018
Promotion	
Action 1	Promoting the PBLMD project
Action 2	Promoting the study programme "Software Engineering"

Annex 11: The advertising flyer of the study programme 2017

Mobilitate academică

În cadrul programului PBLMD „Introducing Problem Based Learning in Moldova: Toward Enhancing Students Competitiveness and Employability”, programul Erasmus+, studenții cu rezultate academice înalte vor studia timp de un semestru (anul II) la Universitatea din Aalborg, Danemarca sau Gloucestershire, Marea Britanie.

Stagii de practică

Programul de studii prevede desfășurarea stagiilor de practică pe parcursul semestrului, în cadrul modulului de proiectare semestrială.

Ce vei face după?

După finalizarea programului vei activa în calitate de:

- ◆ programator,
- ◆ dezvoltator web,
- ◆ specialist în dezvoltarea jocurilor.

Sală dedicată pentru active learning

Activități sociale

- ◆ Tekwill – Centru de excelență în domeniul TIC
- ◆ iHUB – Centru de inovare și antreprenariat în domeniul IT
- ◆ Parcul dendrologic – muzeu al tehnicii în aer liber

Bd. Ștefan cel Mare și Sfânt, 168
Chișinău, R. Moldova, MD-2004
Comisia de admitere
022 23 51 85
admiterea@adm.utm.md

Program de studii re-proiectat în cadrul proiectului PBLMD: Introducing Problem Based Learning in Moldova: Toward Enhancing Students' Competitiveness and Employability

Departamentul Inginerie Software și Automatică



Programul de studii

Ingineria software

>>>



FACULTATEA
CALCULATOARE, INFORMATICA
ȘI MICROELECTRONICĂ



Programul de studii *Ingineria software* se încadrează în știința metodelor și instrumentelor de prelucrare a informației (*computing* – eng.) pentru soluționarea unor probleme specifice legate de organizarea activităților umane. Acesta cuprinde proceduri de aplicare a informației cu un scop specific în proiectarea, construirea și utilizarea produselor și serviciilor informatice.

>>>

Durata studiilor – 4 ani
Forma de învățământ – cu frecvență
Limba de predare – română/engleză
Titlul obținut – inginer licențiat
Numărul de credite transferabile – 240 ECTS
Admiterea – în baza diplomei de bacalaureat

Programul de studiu prevede învățarea bazată pe soluționarea de probleme (PBL)

Metoda de învățare PBL, aplicată în programul de studii *Ingineria Software*, se bazează pe identificarea și soluționarea unei probleme în grup, urmată de susținerea rezultatelor acesteia. Astfel, studenții devin motivați și combină munca în echipă la rezolvarea problemelor (activități practice, teoretice), care, conform studiilor, îmbunătățește capacitatea de a reflecta și de a comunica.





Fiecare semestru de studiu are o tematică proprie:

>>>

- ◆ Învățarea bazată pe probleme ale științei, tehnologiei și societății
- ◆ Bazele ingineresti și științifice ale calculului
- ◆ Bazele dezvoltării aplicațiilor
- ◆ Limbaje formale și compilatoare
- ◆ Rețele și securitate
- ◆ Internetul lucrurilor (IoT)
- ◆ Sisteme informaționale
- ◆ Proiectul de licență.

Annex 12: Dissemination plan

ANNUAL DISSEMINATION PLAN

Dissemination activities	WP(s)	Dissemination vehicle, incl. link to the source	Timing/frequency	Minimum number	Main target group(s)
REALIZED ACTIVITIES					
Article about ERASMUS + Key Action 2 – Capacity Building in Higher Education with mentioning the partners and objectives of the new project PBLMD	WP1: Launch	http://utm.md/blog/2015/11/06/erasmus-actiunea-cheie-2-consolidarea-capacitatilor-in-domeniul-invatamintului-superior/	November 6, 2015	All interested parties (professors, students etc.).	Academic staff, students.
Article about the launching of a new project	WP1: Launch	http://utm.md/blog/2015/11/20/la-utm-a-demarat-un-nou-proiect-didactic-in-cadrul-programului-erasmus/	November 19, 2015	All interested parties (professors, students etc.).	Academic staff, students.
Publication in Academic Messenger newspaper from Technical University of Moldova. About the start of the new programme ERASMUS+	WP1: Launch	Academic Messenger Year XVIII, No. 9 (179) Newspaper, TUM. Web-publication: http://utm.md/mesager/2015/mu-noiembrie-2015.pdf	November, 2015	All interested parties (professors, students etc.).	Academic staff, students.
Project booklet	WP1: Launch	http://www.pblmd.aau.dk/fileadmin/user_upload/PBLMD_booklet_eng_print_2016_12.pdf	Winter, 2015	All interested parties (professors, students etc.).	Academic staff, students.
Study visit	WP2: Training in PBL methodology and methods	http://utm.md/blog/2016/02/20/schimb-de-experienta-in-cadrul-proiectului-erasmus-pblmd-la-universitatea-din-aalborg-danemarca/	February , 2016	All interested parties (professors, students etc.).	Academic staff, students.
Publication in Academic Messenger newspaper from Technical University of Moldova.	WP2: Training in PBL methodology and methods	Academic Messenger Year XIX, No. 3 (183) Newspaper, TUM. Web-publication: http://utm.md/mesager/2016/mu-martie-2016.pdf	March, 2016	All interested parties (professors, students etc.).	Academic staff, students.
Publication in Academic Messenger newspaper from Technical University of Moldova.	WP2: Training in PBL methodology and methods	Academic Messenger Year XIX, No. 4 (185) Newspaper, TUM http://utm.md/mesager/2016/mu-mai-iunie-2016.pdf	May-June 2016	All interested parties (professors, students etc.).	Academic staff, students.

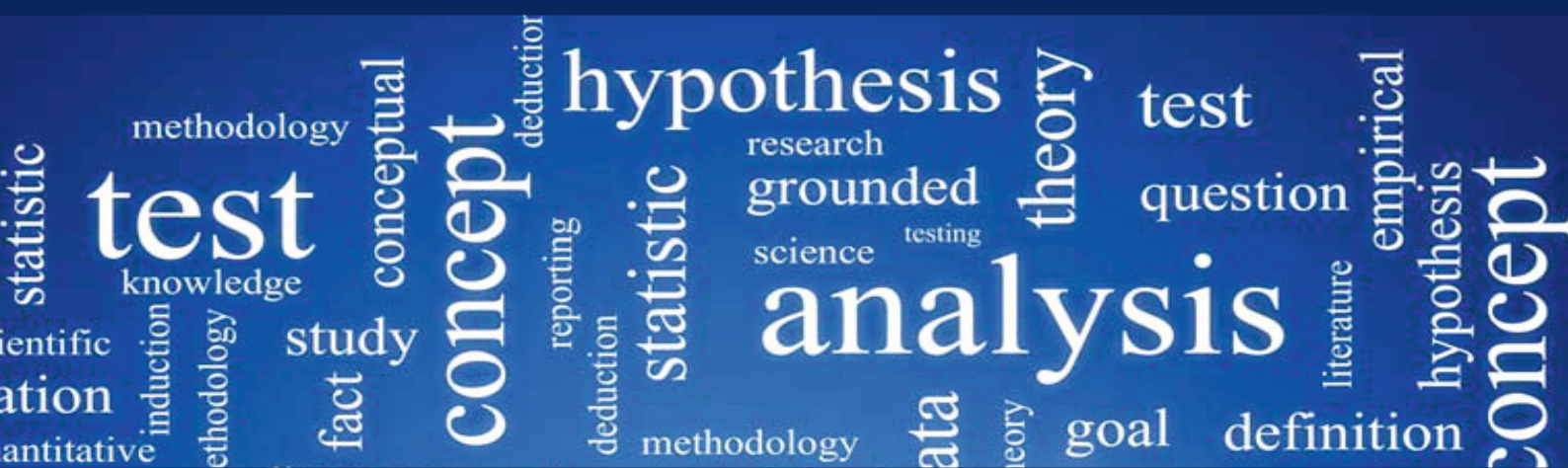
Europe day in Chisinau, Moldova Promotion of the PBLMD project	WP2: Training in PBL methodology and methods	http://utm.md/blog/2016/06/29/eur-pe-day-in-chisinau-moldova/	June, 2016	All interested parties (professors, students etc.).	Academic staff, students.
Study visit	WP2: Training in PBL methodology and methods	http://utm.md/blog/2016/09/28/profesorii-utm-insusesc-metode-moderne-de-predare-in-suedia/	September, 2016	All interested parties (professors, students etc.).	Academic staff, students.
Article “The consortium assesses the ERASMUS + implementation”	WP2: Training in PBL methodology and methods	http://utm.md/blog/2016/10/25/consortiul-evalueaza-implementarea-proiectului-erasmus-privind-pbl/	October, 2016	All interested parties (professors, students etc.).	Academic staff, students.
International conference “When Students Take the Lead: Enhancing Quality and Relevance of Higher Education through Innovation in Student-Centered Problem-Based Active Learning”	WP3: In depth analysis of context factors and curricular content	http://utm.md/blog/2016/11/07/inovatiile-in-invatarea-bazata-pe-pbl/	October 27-28, 2016	All interested parties (professors, students etc.).	Academic staff, students.
Publication in Academic Messenger newspaper from Technical University of Moldova.	WP3: In depth analysis of context factors and curricular content	Academic Messenger Year XVIII, No. 8 (188) Newspaper, TUM http://utm.md/mesager/2016/mu-octombrie-2016.pdf	October ,2016	All interested parties (professors, students etc.).	Academic staff, students.
Mobility visits	WP3: In depth analysis of context factors and curricular content	http://utm.md/blog/2016/11/23/noi-mobilitati-la-universitatea-din-aalborg/	November, 2016	All interested parties (professors, students etc.).	Academic staff, students.
Publication in Academic Messenger newspaper from Technical University of Moldova.	WP3: In depth analysis of context factors and curricular content	Academic Messenger Year XVIII, No. 9 (189) Newspaper, TUM http://utm.md/mesager/2016/mu-noiembrie-2016.pdf	November, 2016	All interested parties (professors, students etc.).	Academic staff, students.
Mobility visit, pedagogical team	WP3: In depth analysis of context factors and curricular content	https://www.facebook.com/pg/pbl.md.erasmusplus/photos/?tab=album&album_id=690464361146214	March-April ,2017	All interested parties (professors, students etc.) who accesses the utm.md website.	Academic staff, students.
Mobility visit	WP4: PBL study programme and curricula development	http://utm.md/blog/2017/04/23/vizita-de-studiu-la-kth-royal-institute-of-technology-stockholm/ https://www.facebook.com/SEAD.Moldova/?fref=mentions&pnref=story https://www.facebook.com/pg/UTMoldova/posts/?ref=page_internal	April ,2017	All interested parties (professors, students etc.).	Academic staff, students.

Article "PBLMD: Training about using the Adobe Connect"	WP4: PBL study programme and curricula development	http://utm.md/blog/2017/04/29/pbl-md-training-privind-utilizarea-platformei-adobe-connect/ https://www.facebook.com/pg/UTMoldova/posts/?ref=page_internal	April ,2017	All interested parties (professors, students etc.).	Academic staff, students.
Promotion of the project PBLMD and the new study programme at the Amdaris StandUP	WP4: PBL study programme and curricula development	https://www.facebook.com/photo.php?fbid=10155260361567290&set=a.10155260361542290.1073741837.837082289&type=3&theater	April ,2017	All interested parties (professors, students etc.).	Academic staff, students.
Press conference	WP4: PBL study programme and curricula development	https://www.youtube.com/watch?v=laZ9jRr3Hf8&feature=share https://www.facebook.com/pblmd.rasmusplus/ http://utm.md/blog/2017/05/29/pbl-md-6-programe-de-studii-reproiectate-in-baza-unui-concept-nou/ https://www.facebook.com/pg/UTMoldova/posts/?ref=page_internal https://www.facebook.com/SEADMoldova/?fref=mentions&pnref=story	May 29, 2017	All interested parties (professors, students etc.).	Academic staff, students.
Publication in Academic Messenger newspaper from Technical University of Moldova.	WP4: PBL study programme and curricula development	Academic Messenger Year XIX, No. 5 (195) Newspaper, TUM http://utm.md/mesager/2017/mu-mai-iun-2017.pdf	May-June 2017	All interested parties (professors, students etc.).	Academic staff, students.
Publication of the new study programme plan and admission to the new study programme	WP5:Implementation of the study programmes and sustainability actions	http://utm.md/studii/planuri/2016/fcim/Plan%20ISW.pdf	Summer, 2017	All interested parties (professors, students etc.).	Academic staff, students.
Admission to the new study programme	WP5:Implementation of the study programmes and sustainability actions	utm.md/admiterea-utm/	July-August, 2017	All interested parties (professors, students etc.).	Students
Launching the new study programme	WP5:Implementation of the study programmes and sustainability actions	https://www.facebook.com/SEADMoldova/?fref=mentions&pnref=story	September, 2017	All interested parties (professors, students etc.).	Students
PLANNED ACTIVITIES					
Organization of the methodical seminars at the ISA department with invitation of the professors from other departments.	WP5:Implementation of the study programmes and sustainability actions	www.facebook.com	Once in one-two months	Up to 6-8 people	Academic staff.

Presentation of the scientific article at the International Conference on Microelectronics and Computer Science, Technical University of Moldova.	WP5: Implementation of the study programmes and sustainability actions	www.icmcs.utm.md	19-21 October	All interested parties (professors, students etc.).	Academic staff, students.
Publications in the Academic Messenger newspaper from Technical University of Moldova.	WP5: Implementation of the study programmes and sustainability actions	utm.md/mesager/anii.html	Autumn 2017, Winter 2018, Spring 2018, Autumn 2018	All interested parties (professors, students etc.).	Academic staff, students.
Publications at the institutional website.	WP5: Implementation of the study programmes and sustainability actions	www.utm.md	Autumn 2017 Spring 2018 Autumn 2018	All interested parties (professors, students etc.).	Academic staff, students.
Visits the IT companies with promotion the new study programme	WP5: Implementation of the study programmes and sustainability actions	www.facebook.com	Autumn 2017 Spring 2018 Autumn 2018	All interested parties (professors, students etc.).	Academic staff, students.
Promotion the events and activities that take place at the IS speciality.	WP5: Implementation of the study programmes and sustainability actions	www.facebook.com	Autumn 2017 Spring 2018 Autumn 2018	All interested parties (professors, students etc.).	Academic staff, students.

*Tell me and I forget,
Teach me and I may remember,
Involve me and I learn.*

Folklore



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