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**Introducing Problem Based Learning in Moldova:  
Toward Enhancing Students' Competitiveness and  
Employability**  
[www.pblmd.aau.dk](http://www.pblmd.aau.dk)

## **Work Package 3**

### **Study programme**

### **Consolidated Report**

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## **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: benchmarking methodology, analysis of the situation at the level of the higher education system, of the institution, and of the study programme, a comparative analysis of higher education systems in the Republic of Moldova, Great Britain and Denmark; conclusions from the analysis based on clear criteria for comparison, development and implementation of PBL-based Pilot study programmes.

The report shows the consolidation of the reports drawn up by each university in part on its characteristic bachelor's degree study programme. The purpose of the Work Package 3 consisted in conducting a study with reference to the implementation in the universities of problem-based learning (PBL). Special attention was given to studying the educational plan of the specialties included in the project from each university and comparing according to certain indicators of similar plans at the University of Aalborg and Gloucester.

As a result, based on the defined indicators, cross-analysis was generalised and systematized for all universities, common moments were highlighted, as well as the particularities that appear. It was found that the particularities, largely, are determined by the traditions in higher education, the degree of academic freedom available to universities, mind-set, but also certain legislative and normative acts regarding the university education in that country.

Following the analysis carried out, each university in the Republic of Moldova, a partner in the project, developed a pilot educational plan for the selected speciality, which has been implemented since 1 September 2017.

When drafting it, it was started from the experience of universities in the European Union, investigated in Work Package 2, from the educational plan of the aforementioned specialties at the time of the project launch, from the observance of certain regulatory provisions in force in the Republic of Moldova. The synthesis of the roadmap, which is an action plan, is also presented, with a view to implementing the educational plan, indicating both respective measures and the terms of achievement, the necessary resources and responsible persons.

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## 1. Introduction

The consolidated report reflects the outcome of the work carried out by the members of the working teams from the universities – member of the project consortium in the Work Package 3.

The objective of this Work Package is to carry out a thorough analysis of the needs identified for the study programme chosen by each partner in the Republic of Moldova.<sup>1</sup> To achieve this goal, the work teams analyse:

- The structure, how to approach the teaching-learning process in the partner universities in Moldova;
- Resources and links with the business environment / society of each study programme
- Content of those study programmes

Following the template methodology (Annex 7), each university in the Republic of Moldova has produced a report on bachelor's degree studies in a previously selected area - the student-centred active learning pilot programme. Thus, the Academy of Economic Studies of Moldova elaborated the report for the pilot programme “Business and Administration” (Annex 1), State University “Alecu Russo” of Balti – for the pilot programme “Public Administration” (Annex 2), State University of Cahul – for the pilot programme “Entrepreneurship and Business Administration” (Annex 3), State University of Medicine and Pharmacy „Nicolae Testemitanu” for the pilot programme “Public Health” (Annex 4), State University of Moldova – for the pilot programme “Law” (Annex 5), Technical University of Moldova – for the pilot programme “Software Engineering” (Annex 6).

An important element of the aforementioned reports, but also a major concern was the use and valorisation of a current bibliography, the research of internationally recognised specialists with reference to the use of student-centred learning methods, in general, and of problems-based learning, in particular. In this respect, team members have studied a set of books related to the use of problem-based learning (PBL). The analysis on their specific directions is presented in the individual university reports.

Also, based on the analysis of the legislation and the multiple normative acts regulating the didactic activity of universities, a great deal of attention has been paid to the practical aspects, which represent a consistent, appreciable part of the work.

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<sup>1</sup> <http://www.pblmd.aau.dk/pblmd-ro/pachete-de-lucru/pl3/>

## 2. Methodology

### 2.1 Benchmarking methodology

The purpose of this report is to conduct an analysis of the existing situation in the field of student-centred learning in universities in the Republic of Moldova, having the example of 6 universities, members of the PBLMD project: State University of Moldova (MSU), Technical University of Moldova (TUM), Academy of Economic Studies of Moldova (AESM), State University "Alecu Russo" of Balti (USARB); State University of Cahul (CSU), State University of Medicine and Pharmacy "Nicolae Testemițanu" (SUMPH). The type methodology developed within the project served both as a basis for the document and as a starting point for conducting comparative analysis of problem-based learning in the partner countries of the European Union: Denmark and the United Kingdom, presented in the report on Work Package 2.

For this purpose, there was identified the relation between the university's internal structures and study programmes, including how the elaboration and support of the study programme are integrated throughout the university. The cohesion of the elaboration of the study programme with its support was examined at different levels: level of education system, level of university, faculty, and study programme level.

The next step was to highlight common criteria for all study programmes, which, to a degree, eased work and allowed cross-analysis to be carried out with similar study programmes in the partner universities in the European Union.

The study of the experience of the partner universities in the field of the use of student-centred learning methods, in general, and of the one based on problems, in particular, but also of the entire education system, led to the elaboration of several variants of educational plans for the programmes analysed, which will eventually allow for the implementation of this method.

Also, the legislation of the Republic of Moldova, normative acts, regulating the work of universities in general and, of those, which lead to the initiation, conduct, monitoring and updating of the educational plans in particular was studied.

An important support, in order to accomplish these activities, had the study visits, the mobility of teaching staff from partner universities in the European Union, who participated with various trainings for teachers, as well as for students. Table 1 contains data on the number of study visits, the number of persons in mobility, the number of persons who participated in the trainings.

**Table 1. Key methodological activities**

Number of study visits of EU teachers in universities in RM	Number of mobilities of teachers from the EU in universities in RM	Number of trainings organised for teachers and students	Number of participants in the trainings
43	9	19	642

The number of participants in the trainings includes all persons registered in the trainings organized in the country, both teachers and students.

Teachers from the European Union during study visits or mobilities in universities in the Republic of Moldova attended different courses for teachers, that contributed to the training of their competences in the field of PBL use. They also had classes in front of the pilot group students. The courses referred to both the initiation into the PBL and some specialized lectures.

People in mobility in the universities of Moldova were from the University of Aalborg: Michael Fast, Marianne Stockholm, Romeo V. Turcan, Erling Jensen, Henrik Find Fladkjær; Alex Fomcenco, Andreea Ioana Bujac. From the University of Siegen: Steffen Jaschke, Tamara Riehle.

## **2.2 Situation analysis**

To carry out the analysis of the situation in the field, following the methodology presented, legislative and normative acts, regulating the activity of the university in the Republic of Moldova, were analysed.

Thus, the analysis was carried out on the following levels:

- ✓ National level (higher education sector, system level)
- ✓ Institutional level (university management, faculty level, department level)

The analysis referred to the relations between different institutional levels concerning the elaboration, approval and implementation of the educational plans.

### **2.2.1 Level of the higher education sector / system level**

Universities in the Republic of Moldova have university autonomy, which gives them a relatively wider freedom in various activities, including the elaboration of study programmes. At the same time, the role of national authorities in the field of higher education has been analysed in the elaboration, implementation, and evaluation of educational plans by elaborating the respective regulations, monitoring their compliance, but also by the external evaluation procedure of the study programmes by the national competent body – ANACEC.

### **2.2.2 Institutional level**

The institutional level was analysed in the light of the tangents the internal structures have in the complex procedure of initiation, elaboration, implementation, evaluation and updating of study programmes, forming a certain hierarchy.

*Administration (university management).* It is described the role of the university management and its administrative structures, the approval procedure. It was necessary to analyse the role of the structures responsible for the quality management system of the university, the Senate, the Institutional Strategic Development Council.

*Faculty*. The analysis was based on the role of the faculty in the procedure outlined above.

The *Department* is the basic subdivision in the development of study programmes. The analysis in the report is carried out by demonstrating the importance of this subdivision and the responsibility it carries, including through the involvement of teachers, students, graduates, employers.

### **2.2.3 The approval process of the study programme**

The methodology presented allows for a meaningful analysis of the process of approval of the study programme at all levels provided for by the legislation in force.

### **2.3 Comparative analysis of the study programmes**

Each University developed pilot educational plans at the speciality set out in the project. All universities based on legislative and normative acts in force, on institutional regulations. The development of the pilot plans was based on the experience of the partner universities in the European Union. Although they is based on problem-based learning, each programme has its peculiarities. The comparative analysis of study programmes is carried out according to certain criteria, each university-member of the project in the Republic of Moldova with the universities of Aalborg, Denmark and Gloucestershire in the UK.

### **2.4 Development and implementation of pilot study programmes based on PBL and roadmaps**

Each university has developed new educational plans, taking into account the experience of European universities in these specialties. Teachers were prepared to work with students in PBL-based courses through the visits and mobilities they had in the partner universities in the European Union, but also in the trainings that took place in the country. The courses were provided by teachers from universities in the European Union. Once again, it was found that more time is needed to implement this type of study. Each university provided for the programme developed a slower or faster transitional period, a more revolutionary or more evolutionary approach. The above-mentioned methodology allowed to mention the degree of implementation of problem-based learning in the developed programmes and to pursue their future.



### **3. Situation analysis**

#### **3.1 The higher education sector / system level**

In order to ensure minimum quality standards of the educational process, the accreditation of the study programme or/and the educational institution is a compulsory external evaluation procedure in the Republic of Moldova. Thus, the university gets the right to conduct the educational process, to organise admission to studies and exams to complete studies, as well as the right to issue diplomas, certificates and other study documents recognized by the Ministry of Education only if it has been accredited or has the authorisation for provisional operation.

The quality management in the higher education shall be ensured:

- a) at the national level – by the Ministry of Education, Culture and Research (MECC), and the National Agency for Quality Assurance in Education and Research (ANACEC);
- b) at the institutional level – by internal structures for quality assurance.

##### **3.1.1. National accreditation body**

According to Art. 115 of the Education Code of the Republic of Moldova, No. 152 of the 17.07.2014<sup>2</sup>, the accreditation of the study programmes or/and educational institutions is carried out by the National Agency for Quality Assurance in Education and Research (ANACEC), which is an administrative authority of national interest, with legal personality, autonomous to the Government, independent in its decisions and organization, and funded from the state budget and own revenues.

The National Agency for Quality Assurance in Education and Research shall have the following duties and responsibilities:

- a) to enforce the state policies in the quality area of vocational, higher and continuous education;
- b) to develop in line with the European standards in the area and make public its own methodology of assessment and accreditation of the institutions providing professional training programmes and their programmes, and to propose them for Government's approval;
- c) to formulate and revise periodically, based on the European and international best practices, the accreditation standards, the national standards of reference and performance indicators used in assessing and assuring quality in education;
- d) to assess, on contractual basis, the institutions providing professional training programmes, as well as their programmes for the purpose of provisional authorization, accreditation, and reaccreditation in the vocational, higher and continuous education;
- e) to carry out, on contractual basis, upon the request of the Ministry of Education the quality assessment of some programmes and institutions providing professional training programmes in the vocational, higher and continuous education;
- f) to ensure the objectiveness and validation of the results obtained during the external assessment of the institutions providing training programmes and of their programmes;
- g) to ensure transparency in the process of external assessment, including through publication of assessment results etc.

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<sup>2</sup> [Codul Educației al Republicii Moldova, nr. 152 din 17.07.2014](#)

The National Agency for Quality Assurance in Education and Research shall be composed of:

- a) Management Board,
- b) Profile Commissions;
- c) Administrative Apparatus.

The National Agency for Quality Assurance in Education and Research shall be composed of the subdivision for assessment of programmes and institutions providing professional training programmes in higher education, the subdivision for accreditation of programmes and institutions providing professional training programmes in higher education, and the subdivision for technical and vocational education and training, as well as other subdivisions necessary to achieve its tasks, established by the Governing Board.

Besides these subdivisions, according to the own regulation for organization and operation<sup>3</sup>, the Agency shall have Specialty Commissions, which will develop registers of experts-evaluators based on open competition.

The executive management of the National Agency for Quality Assurance in Education and Research shall be exercised by the President of the Governing Board, assisted by Vice-president and Secretary General.

The Governing Board shall be composed of 15 members: teaching and scientific research staff, including one representative of students and business community. The members of the Governing Board cannot hold the position of public office, rector or director of the educational institution.

The members of the Governing Board shall be selected on open competition basis with international juries, for a mandate of 4 years, with the right to be re-elected only once. The competition shall be organized by the Governing Board. Every four years, eight new members of the Governing Board shall be elected. The President, Vice-president and Secretary General of the Governing Board shall be elected for a mandate of 4 years out of its members.

### **3.1.2. Relationship of the accreditation body with the Ministry of Education, Culture and Research**

The National Agency for Quality Assurance in Education and Research at the request of the Ministry of Education, Culture and Research, on a contractual basis, performs the assessment of the quality of programmes and institutions providing professional training programmes in VET, higher education, and continuous training.

In exercising its duties, ANACEC has the right to inform the evaluated institution and the Ministry of Education, Culture and Research about the results of the external evaluation.

The Agency shall transmit to the Ministry of Education, Culture and Research and to the educational institution/institutions the decision on the external assessment, as well as placing the decision on the Agency's webpage after the completion of the appeals procedures.

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<sup>3</sup> [Regulamentul cu privire la organizarea și funcționarea Agenției Naționale de Asigurare a Calității în Învățământul Profesional, aprobat prin Hotărârea Guvernului nr. 191 din 22 aprilie 2015.](#)

Decision on the authorisation or non-authorisation for provisional operation, accreditation or non-accreditation of the study programme or an educational institution, as well as the withdrawal of the right of activity of an educational institution or of the right to provide a study programme shall be adopted by decision of the Ministry of Education, Culture and Research, based on the decision of the Governing Board of the Agency or the decision of another quality assessment agency, entered in the European Quality Assurance Register in Higher Education.

### **3.1.3. Relationship of the accreditation body with universities**

Accreditation is required and is granted, for each educational institution and for each study programme of cycle I, cycle II and cycle III. The initiation of a master's degree programme is possible when the bachelor's degree programmes in the same professional training field are accredited, the programme has obtained the authorisation for provisional operation or another master's degree programme in the same general field of study is accredited.

The accreditation of a study programme and an educational institution is awarded by Government decision, on the proposal of the Ministry of Education, Culture and Research and on the decision of the Governing Board of ANACEC. After obtaining accreditation, study programmes and educational institutions shall be subjected, at least every 5 years, to the external assessment of quality for re-accreditation.

According to the Education Code of the Republic of Moldova, the following will depend on the results of the external evaluation of the higher education institutions:

- the ranking of universities by category within the accreditation procedure;
- provisional authorization, regular accreditation and re-accreditation of higher education institutions, as well as ranking of study programmes;
- the ranking of higher education institutions shall be based on the methodology approved by ANACEC;
- depending on the category of the higher education institution and the ranking of the study programmes, the number of places financed by the state budget awarded to the higher education institution shall be determined; budgetary funds allocated to the higher education institution for research, development, innovation and artistic creation activities;
- other norms under the law.

## **3.1 Institutional level: Management**

### **3.2.1. Structure and tasks of the university governing and management bodies**

The Education Code of the Republic of Moldova determines the governing bodies of the universities, their structure and number. The law provides that the system of management bodies in the higher education institutions shall encompass *the Senate, the Strategic and*

*Institutional Development Council, Scientific Council, Faculty Council, Administration Council and Rector of the institution*<sup>4</sup>.

**The Senate** of the higher education institution represents the supreme management body composed of scientific-teaching and non-teaching staff, elected via secret vote of the teaching staff of the faculties, departments, and scientific centres, of students elected by the academic units and students' associations, and of representatives of the trade-unions, in line with the institutional regulation, developed according to a framework-regulation approved by the Ministry of Education, Culture and Research<sup>5</sup>. The members of the Senate shall be: rector, vice-rectors and deans. The Senate mandate shall last for 5 years, synchronized with the mandate of the rector. The mandate of the Senate members among students shall last for 1 year that may be renewed. The Senate is headed by the rector of the institution.

The Senate shall have the following competences and duties:

a) to ensure the observance of the principle of academic freedom and university autonomy;

b) to develop and approve the University Charter;

c) to approve the Institutional Development Strategic Plan;

d) to approve the institution's budget;

e) to develop and approve the methodologies and regulations for organization of the academic, research and artistic creation activities and programmes within the institution, as well as the methodologies and regulations for recruitment, employment and assessment of the teaching staff;

f) to approve the organizational chart and the functional structure of the educational institution. In case of the educational institutions in the area of military, security and public order, the organizational chart and the functional structure shall be proposed by the Senate, and shall be approved by the heads of the relevant authorities in the area of defence, security and public order, in which subordination the respective institutions are;

g) to develop and approve the regulation on the modality of electing the rector, according to a framework regulation approved by the Ministry of Education, Culture and Research;

h) to confirm, without the right to amend, the list of the Institutional Strategic Development Council members.

Another governing university body is the **Institutional Strategic Development Council (CDSI)** consisting of 9 members: 4 internal (rector, vice-rector and two elected members from the higher education institution's teaching staff, who do not hold managerial positions), and 5 external members nominated by the University, Ministry of Education and Ministry of Finance. CDSI members are appointed for a term of 5 years.

The duties of the CDSI are determined by the Education Code and consist of the following:

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<sup>4</sup> [Codul educației al Republicii Moldova, nr.152 din 17.07.2014, art. 102](#)

<sup>5</sup> [Regulamentul-cadru privind organizarea și funcționarea organelor de conducere ale instituțiilor de învățământ superior din Republica Moldova](#)

a) to coordinate the development of the Strategic and Institutional Development Plan encompassing the vision, mission, institution's development strategy and the main actions for a period of at least 5 years and to submit it to the Senate for approval;

b) to monitor and evaluate the efficiency of using the financial resources and to submit the educational institution's draft budget to the Senate for approval;

c) to approve the model-study contract and the amount of tuition fees;

d) to ensure the institutional management related to the intellectual property rights and technological transfer;

e) to take decisions, with the approval of the Senate, regarding:

- development and consolidation of the institution's patrimony – decision to be approved with at least 2/3 votes of the Council members;

- launch and closure of the study programmes – decision to be approved with at least 2/3 votes of the Council members;

- methodology for remuneration and motivation of personnel;

- entrepreneurship activities, public-private partnerships and cooperation with the businesses;

- involvement in consortiums and mergence with other higher education institutions;

f) to organize and carry out the election for rector's vacancy, in line with the Institutional Regulation for organization and carrying out the elections<sup>6</sup>.

The Institutional Strategic Development Council is an elective body, members of whom, with the exception of the Rector and the Vice-rector, are elected in compliance with the framework regulation drawn up by the Ministry of Education, Culture and Research.

**The Scientific Council** is the collective body consisting of 7-15 persons, who operate in accordance with the Regulation on the organisation of doctoral degree studies, Cycle III<sup>7</sup>.

May be a member of the Scientific Council persons within or outside the institution, in the country or abroad, scientific personalities or the relevant industrial and socio-economic sectors, as well as representatives of Doctoral students in the institution's doctoral schools.

The members of the Scientific Council, who are academics or researchers, must have the right to supervise the doctorates, in the country or abroad, and to meet the minimum and mandatory standards for granting the right to supervise the PhD, proposed by the national authority empowered to confirm the scientific titles and approved by order of the Minister of Education.

The Scientific Council is chaired by a president, assimilated/associated with the function of vice-rector.

The main duties of the Scientific Council are:

a) Elaboration of the research strategy of the higher education institution, or of the consortium or partnership;

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<sup>6</sup> [Regulamentul-cadru privind modul de alegere a rectorului instituției de învățământ superior din Republica Moldova](#)

<sup>7</sup> [Regulamentului privind organizarea studiilor superioare de doctorat, ciclul III, aprobat prin Hotărârea Guvernului nr. 1007 din 10 decembrie 2014.](#)

- b) Elaboration of the institutional regulation for the organisation and conduct of doctoral degree study programmes which they submit for approval by the Senate of the higher education institution or to the equivalent body of consortiums or partnerships;
- c) Approving decisions on the establishment and abolition of doctoral schools within the institution or partnership;
- d) Selection of doctoral supervisors for activity in a new doctoral school;
- e) Coordinating the partnership according to the partnership agreement, where applicable;
- f) Other specific tasks established by the institutional regulation for the organisation and conduct of doctoral degree study programmes.

**The Rector**, assisted by the pro-rectors, with the support of the Administration Board ensures the operative management of the university and is the executor of the institution's budget.

The **Administration Board** consists of the rector, the pro-rectors, the deans, the heads of departments, the heads of chairs, the heads of services and other university subdivisions.

In order to ensure the quality of the study programmes and the teaching and learning process in higher education institutions, the **quality management** system is set up.

The Rector of the University is responsible for the elaboration of policy and objectives in the field of quality. Based on the Rector's decisions, the leadership skills can be delegated to a pro-rector, usually the pro-rector for didactic activity, who becomes responsible for quality assurance.

For the coordination of quality assurance at the level of the Senate the Quality Council is established, which has an advisory role in substantiating decisions on the policy and objectives of the institution relating to quality. This Council has the mission to establish, document, implement, maintain and improve the quality management system of the institution. The composition of the Council shall be determined by each institution on the basis of its own criteria.

The implementation of the quality policy and objectives is carried out at institutional level by the Department/Section responsible for quality management, at the faculty level by the quality councils/commissions/committees, and at the level of Departments/Chairs – the person responsible for quality assurance.

The main objectives of the Department/Section responsible for quality management at institutional level are:

- Monitors quality assurance structures at institutional level;
- Coordinates the process of elaboration and implementation of study programmes and curricular support;
- Carries out quality management, plans actions, develops self-assessment reports and quality assurance documents, trains staff regarding quality assurance, monitors internal assessments and coordinates external evaluations;
- Assesses the quality of the conditions/resources, process and results of the initial professional training;
- Provides the curricular conditions for integrating the MSU into the common European Higher Education Area.

### **3.1 Institutional level: Faculty**

**The Faculty Council** is the decision-making and deliberative body that assures the management, guidance and control of the educational and scientific research activity of the faculty and is elected for a term of 5 years. The operative management of the faculty is carried out by the Dean with the support of the Faculty Council.

Students are represented in the Faculty Council in proportion of 1/4 of the total number of members. The term of office of the Council members among the students is one year, with the possibility of renewal of the mandate. The ex-officio members of the Faculty Council are the dean, the deputy-dean and the heads of the faculty's departments / chairs.

The quality assurance committees are consultative structures of the Faculty Councils, formed in order to promote the policy of quality assurance of the professional training process at faculties. In the composition of the committees, representatives of the faculty, Quality Council, academic staff and faculty students are included. These committees operate permanently, in collaboration with the university Quality Council, and are designed to coordinate and monitor the elaboration of educational plans for study programmes (cycle I and cycle II) and ensure the proper conduct of activities and quality assurance evaluation in the faculty.

### **3.2 Institutional level: Department**

The executive management of the department is carried out by the head of the department, who is chosen for a period of five years, in accordance with the regulations in force.

The Head of the Department mainly participates in the elaboration of educational plans, approves the analytical programmes of the disciplines provided by the chair and presents them for examination to the Faculty Council, organizes, coordinates and monitors the deployment of the process of studies and scientific research and is responsible for ensuring the quality of the teaching-learning process performed by the members of the department.

### **3.3 The process of approving the study programme**

Bachelor's degree studies are organized by professional training areas (specialties/study programmes) in accordance with the Nomenclature of professional training areas and specialties on the training of specialists<sup>8</sup>, except areas governed by special rules in the European Union.

The initiation of new study programmes, for the cycle I, is carried out at the level of the chair/department and is based on complex analyses of the internal resources of the university and the context of their functioning.

The members of the team appointed by the management of the chair / department shall establish the disciplines in the educational plan and the list of scientific-didactic staff with

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<sup>8</sup> <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=312972>

competences in the field, to be discussed in the Faculty Council. Following the Council's approval of the programme, in accordance with the framework plan developed by the MECC<sup>9</sup>, the educational plan and the state of functions for the new study programme shall be drawn up.

After approval in the Faculty Council, the documents of the study programme shall be submitted for approval to the University Senate. The final decision on the initiation of study programmes is approved by the Council for Institutional Strategic Development, as required by the legal provisions.

Following the final approval, the faculty management designates the team to develop the *self-assessment report* of the new study programme for provisional authorisation. The self-assessment report shall be drawn up in accordance with the requirements laid down in the Guidelines for external evaluation of bachelor's degree programmes, higher education<sup>10</sup> developed by the National Agency for Quality Assurance in Education and Research (ANACEC).

On the basis of these documents and correlated to the material basis provided for this programme, the final version of the self-assessment report shall be drawn up. The self-assessment report shall be submitted to the pro-rector for the didactic activity, to be checked by a Commission designated by the University subdivision responsible for quality management. After remediation of any deficiencies, the self-assessment report, implicitly the educational plan, shall be submitted, at least 6 months before the commencement of the study programme, to the Ministry of Education, which, after coordinating the educational plan, forwards it to ANACEC for conducting the external evaluation with a view to provisional authorisation.

Within up to 45 working days from the date of registration of the application, the Governing Board of the Agency (ANACEC) shall announce the decision on the approval or rejection of the initiation of the external evaluation procedure of the study programme. After approving the decision on initiating the external evaluation procedure, the Governing Board of the Agency shall designate the external evaluation commission, consisting of selected expert evaluators from its own register of evaluators, and appoint the evaluation coordinator.

The external evaluation commission verifies the achievement of accreditation standards by examining the self-assessment dossier submitted and by visiting the institution (1-3 days), based on the provisions of the Methodology of external quality assessment for authorisation for provisional operation and accreditation of study programmes and vocational education and training, higher education and continuous training institutions<sup>11</sup>, as well as the assessment standards and minimum standards of assessment set out in the Guidelines for external quality assessment.

Within 30 working days from the date of approval of its composition the external evaluation commission shall draw up the *External evaluation report* containing the

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<sup>9</sup> [https://mecc.gov.md/sites/default/files/traducere-plan-cadru\\_revised.pdf](https://mecc.gov.md/sites/default/files/traducere-plan-cadru_revised.pdf)

<sup>10</sup> <http://www.anacip.md/index.php/ro/legislatie/anacip/ghiduri/send/22-ghiduri/412-ghid-de-evaluare-externa-a-programelor-de-studii-de-licenta-invatamanantul-superior>

<sup>11</sup> <http://anacip.md/index.php/ro/legislatie/anacip/metodologii/send/19-metodologii/377-metodologia-de-evaluare-externa-a-calitatii-in-vederea-autorizarii-de-functionare-provizorie-si-acreditarii-programelor-de-studii-si-a-institutiilor-de-invatamint-profesional-tehnic-superior-si-de-formare-continua>



recommendation on the external evaluation of the study programme: provisional authorisation or non-authorisation.

The External evaluation report shall be submitted for examination to the Governing Board of the Agency, which shall, within 10 working days, adopt the decision on provisional authorisation or non-authorisation. ANACEC transmits the decision on the external assessment to the Ministry of Education, Culture and Research and the educational institution, as well as placing the decision on the Agency's webpage.

The authorisation for the provisional operation of a study programme in higher education shall expire after the first promotion of students and the institution must request the accreditation of that study programme.

Where the provisionally authorised educational institution does not require accreditation within 5 years, it shall not have the right to organise the admission to the studies, nor shall it be possible to issue study documents for the promotion of graduates.

#### **4. Comparative analysis of the study programmes**

The comparative analysis of the study programmes was carried out on the basis of the comparison of relevant criteria related to the respective study programmes in the universities of the Republic of Moldova, University of Aalborg, University of Gloucestershire. The analysis of the pilot study programmes in the project is presented in the university reports of the Work Package 3, the analysis of the study programmes in the partner universities in the European Union was carried out in the Work Package 2.

The comparative analysis, according to the criteria selected, is summarized in Table 2.

The analysis of the information in the table allows us to find, that between the pilot study programmes from the universities of the Republic of Moldova and those from the partner universities in the EU -University of Aalborg, Denmark and the University of Gloucestershire, the United Kingdom – there are some similarities, but also certain differences. To see this, we highlighted the basic criteria that characterize the study programmes and overlapped them.

We mention certain peculiarities presented by the study programme at the State University of Medicine and Pharmacy "Nicolae Testemitanu" (SUMPH): firstly, the comparative analysis of the SUMPH's pilot programme was carried out in relation to the study programmes of the Faculties of Medicine of the University of Aalborg and the University of Plymouth, United Kingdom (and not with the one in Gloucestershire). This was due to the fact that the University of Gloucestershire does not provide training for students in the field of medicine. Secondly, we refer more often not to the programme in general, but to a complex course - the course of Neuroscience.

The study programme „Software Engineering” at TUM is developed from the scratch, taking into account the PBL teaching methods. Prior to the project, this specialty did not exist in the Nomenclature of professional training areas and specialties in higher education<sup>12</sup>. It appeared in the new version of the nomenclature <sup>13</sup>, in the year of 2017.

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<sup>12</sup> Nomenclatorul domeniilor de formare profesională și al specialităților pentru pregătirea cadrelor în instituțiile de învățământ superior, ciclul I, din 07.07.2005, disponibil la <http://lex.justice.md/index.php?action=view&view=doc&id=312972>

<sup>13</sup> <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=370821>

**Table 2. Comparative analysis of the study programmes**

<b>Study programme / University</b>	<b>Criteria</b>	<b>University from the Republic of Moldova</b>	<b>AAU</b>	<b>UOG</b>
Business and Administration (AESM)	Duration of studies	3 years, 6 semesters	3 years, 6 semesters	3 years, 6 semesters
	Workload per semester/year	30/60 ECTS; 1 ECTS = 30 hours	30/60 ECTS; 1 ECTS = 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	Individually, less frequently in the group; in writing, orally and assisted by the computer. Knowledge and competences are assessed; 1-2 current evaluation sessions are organized; there are detailed descriptions in the institutional Regulation.	Individually and in the group; in writing with the compulsory participation of the external evaluator; the competences are assessed. There is an institutional regulation with a detailed description of the assessment process.	Individually and in the group; orally and in writing. Competences are assessed. There is an institutional regulation with a detailed description of the assessment process.
	Involvement in the elaboration of the study programmes	Only teachers are involved directly. Students, graduates, employers are consulted	Teachers, students, employers, graduates.	Teachers, students, employers, graduates
	Monitoring and periodic analysis of the programmes	In a regular manner, the review is carried out once every 5 years. Every year, feedback is obtained from students, graduates, employers, which allows an analysis to be carried out and, if	Every semester	Every year

		necessary, initiation of the updating procedure.		
	The level of application of the PBL model	In the variant I of the educational plan, applicable since 1 September 2017, the courses and module formation shall be grouped. Each year it is foreseen to develop a project based on problems identified by students.	The PBL method is perceived as a philosophy of the university, is fully applied to all years of study, projects are a component part of the study process.	The PBL method is used in line with other student-centered learning methods.
Public administration (USARB)	Duration of studies	3 years, 6 semesters	Integrated studies, 5 years (4 + 1), 10 semesters	3 years, 6 semesters
	Workload per semester/year	30/60 ECTS; 1 ECTS – 30 hours	30/60 ECTS; 1 ECTS – 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	- Current assessment (test, essay, case study, project, report, presentations, etc.) In the current assessment, information technologies (MOODLE learning platforms, etc.) are used. - Final assessment of the course units/module (oral/written exam, combined exam, computer assisted assessment (online on learning platforms) etc.	Assessment of students knowledge is carried out in the form of written and oral examinations, projects or other appropriate forms of assessment. Compulsory modules are partially assessed by written examination (50%). Students are given the opportunity to promote current examinations with a	Students' knowledge is assessed through written exams or course papers and other appropriate forms of assessment. Compulsory modules are partially assessed by written examination (50%). Students are given the opportunity to promote current examinations in order to prepare for summative evaluations.

			view to preparing for summative assessments.	
Involvement in the elaboration of the study programmes  Teaching	Teachers are involved, in particular, the head of department – at the drafting stage. Students, employers, graduates are involved in the discussion stages.	The initiative to create new study programmes usually comes from a teacher or a group of teachers. At the faculty there are people who have the necessary knowledge on the rigors and the set of documents to be drawn up for the opening of new programmes. The Dean signs the package of documents after this thorough research. After approval of the programme by the dean, it is evaluated by the Board of Studies.	The initial approval of new courses is made by the Academic Development Committee. Faculties usually generate new courses according to the University and Faculty Plan, which is presented by the Dean. The validation of the courses is made by the validation Panel which is approved by the Committee on Academic and Quality Standards.	
Monitoring and periodic analysis of the programmes	The modification of the educational plan is carried out by the responsible chair and approved by the Faculty Council. The Review/updating of the educational plans is validated by the USARB Senate and presented every 5 years for coordination, to	Monitoring is carried out on a permanent basis, at semester level.	Monitoring is carried out continuously, updating - annually, as necessary.	

		the Ministry of Education, Culture and Research.		
	The level of application of the PBL model		The curriculum includes PBL based on project activity as a central and binding element and contains an exhaustive description of the educational objectives including the competences and skills achieved	The programme uses a variety of approaches, such as: lectures, debates, seminars, role-playing, simulated processes, case studies and presentations, to ensure that the learning outcomes of the programme can be achieved and demonstrated.
Entrepreneurship and Business Administration (CSU)	Duration of studies	3 years, 6 semesters	3 years, 6 semesters	3 years, 6 semesters
	Workload per semester/year	30/60 ECTS; 1 ECTS = 30 hours	30/60 ECTS; 1 ECTS = 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	Individually, knowledge and competences are assessed; there are detailed descriptions in the institutional Regulation. There are 1-2 current evaluation sessions. The share of the exam grade constitutes 40%, current evaluations – 60%.	Individually and in group; the competences are evaluated. There are institutional Regulations with detailed description of the evaluation process.	Individually and in group; the competences are evaluated. There are institutional Regulations with detailed description of the evaluation process.

	Involvement in the elaboration of the study programmes	Usually, only teachers are directly involved in the elaboration of a study programme. However, students, employers, and graduates are consulted either through different questionnaires, or by organizing different roundtables, etc. So, several parties participate indirectly in the elaboration and improvement of the programme.	Teachers, students, employers, graduates are involved both directly (through participation in different Committees) and indirectly (through answers to questions, other feedback).	Several actors are involved in elaborating, developing and improving a study programme: teachers, students, employers, graduates
	Periodic monitoring and analysis of study programmes	In a regulatory manner, the review is carried out once every 5 years. Every year, feedback is collected from students, graduates, employers, which allows an analysis to be carried out and, if necessary, initiation of the updating procedure.	The review of the programmes is made every semester, for this purpose 8 annual assemblies are organized.	It is analysed annually, including through feedback from students, employers
	Level of application of the PBL model		The PBL method is perceived as a philosophy of the university, is fully applied to all years of study, projects are a component part of the study process.	The PBL method is used together with other student-centred study methods.

Law (MSU)	-Duration of studies	8 semesters, 4 years	Integrated studies – 10 semesters, 5 years	6 semesters, 3 years
	-Workload per semester/year	30/60 ECTS; 1 ECTS – 30 hours	30/60 ECTS; 1 ECTS – 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	- Assessment of the students	Current assessments; Final assessment Written and oral combined assessment	There are several ways of assessing students. Thus, some teachers use the 2 hour exam (2 hours written exam). The Test includes 5 more theoretical, but analysis or comparison questions. There is also the 24-hour exam (24-hour written project), which involves solving a practical problem and requires a knowledge of national and international legislation.	Written examinations and writing of course theses or other forms of assessment, as appropriate, in writing. Compulsory modules (excluding LW4004 (legal skills) are partially evaluated by written examination (50%). Students are given the opportunity to pass preliminary examinations in preparation for summative evaluations. Some modules use different methods of examination (written or oral evaluation) as specified in the module descriptor.
	Involvement in the elaboration of the study programmes	The study programme is elaborated by academic staff, including with didactic and administrative functions. The faculty office, the faculty council, as well as the MSU Senate consist predominantly of didactic staff. The implementation shortcomings,	Study programmes in higher education institutions in Denmark are usually designed on the initiative of research groups with performance results, based on human potential and material obtained from research.	The initial approval of new courses is made by the Academic Development Committee. Faculties usually generate new courses according to the University and Faculty Plan, which is presented by the Dean. The validation of the courses is

		and proposals to improve the study programme, are reported by the academic staff following the continuous application process. Consequently, the organisation and coordination of the study programme is the result of its effective application by the didactic and academic staff.	Each programme is in the responsibility of a programme team (in the AAU - the study board), subordinated to a department (school), in a faculty.	made by the validation Panel which is approved by the Committee on Academic and Quality Standards.
	Periodic monitoring and analysis of study programmes	Monitored annually, if necessary the programmes shall be updated after each promotion	Each study programme is continuously monitored primarily by the Board of Studies in charge of this programme. This is achieved by  (a) the evaluation of each semester and of the teaching process carried out within the semester,  (b) full evaluation of the study programme.	
	Level of application of the PBL model	Mostly traditional teaching-learning methods, which assumed a more passive involvement of students and, as a rule, referred to	Problem-based learning (PBL) is implemented at all faculties within the AAU. All study programmes offered at the University are developed	Active learning is ensured through the following tools: simulation, problem-based Learning (PBL), case studies, research/investigation projects. Working in the



		the transfer of knowledge from the teacher to the student.	on the basis of this methodology. The inter-university structure responsible for the implementation, promotion and development of the PBL within the AAU is the PBL Academy.	group is one of the most common methods used to achieve individual student work.
"Neuroscience" course at the specialty "Public Health" (SUMPH)*	-Duration of studies	Integrated studies, 12 semesters/6 years		10 Semesters/5 years
	-Workload per semester/year	30/60 ECTS; 1 ECTS – 30 hours	30/60; 1 ECTS – 27 hours	ECTS60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
	Assessment of students	Individual, oral, computer-assisted examination, analysis of clinical cases	Individual and group examination, analysis of problems, clinical situations, etc.	Individual or group examination, as appropriate; orally and in writing, analysis of case studies, etc.
	Involvement in the elaboration of study programmes	They are developed by teachers with the direct involvement of employers and graduates	Teachers, students, graduates, employers are participating	All stakeholders are involved: teachers, students, employers, graduates
	Periodic monitoring and analysis of study programmes	The curricular content is periodically reviewed, with an emphasis on the pragmatic nature of medical education in line with	Permanent monitoring, annual update, as needed	Permanent monitoring and analysis, yearly update, as needed

		market needs. In reviewing and adapting the curriculum of the Faculty of Medicine, for all study programmes, several decision makers are involved: the dean and the deputy deans, the faculty council, the curriculum commission, the student representatives (also part of the faculty council of the curriculum Commission), representatives of the Association of Students and Residents, representatives of the Employees Union "Nicolae Testemițanu"		
	Level of application of the PBL model	Various student-centred methods are used, including PBL	The study system is based on PBL predominantly	The study system is based on various teaching methods centred on the student, including PBL
Software Engineering (TUM)	-Duration of studies	8 Semesters, 4 years 60 ECTS; 1 ECTS = 60 hours	6 semesters, 3 years	6 semesters, 3 years, with the four-year study option. This means that students can do an internship in the industry after the second year of study. After this, they return to the university to complete the last year of study.

-Workload per year	30/60 ECTS; 1 ECTS – 30 hours	30/60 ECTS; 1 ECTS – 27 hours	60/120 CAT; 1CAT = 1/2ECTS; 1 CAT = 10 hours
- Assessment of students	Individually, orally, in writing, computer-assisted. Current assessment, final assessment	Individually, in group, orally, in writing, combined. Basic – project assessment	Individually, in group, orally, in writing, combined.
-Involvement in the elaboration of study programmes	The teachers are directly involved. Indirectly – students, employers, graduates, being consulted through various questionnaires	A working group is formed involving teachers, students, employers, graduates. All directly participate in the elaboration of the study programme.	All categories of stakeholders are involved: teachers, students, graduates, employers.
Periodic monitoring and analysis of study programmes	Monitored periodically, every 5 years modified, updated annually if necessary.	Monitored permanently, once in the semester, updated plans shall be drawn up	Reviewed and updated annually
Level of application of the PBL model	Different student-centred methods are used, the Programme is based on the model of studies in the University of Aalborg, has 4 courses each semester of 5 credits each and a project taken out of the courses of 10 credits.	The entire study process is based on the use of PBL learning	In line with PBL learning, other student-centred methods are used.

\* For SUMPh, a comparison is made with the University of Medicine and Dentistry in Plymouth, UK. The University of Gloucestershire does not have the faculty of medicine

## **5. Development and implementation of pilot study programmes based on PBL**

### **5.1 Pilot study programmes based on PBL**

As a result of the project, every University in Moldova, a member of the project, developed study plans for the particular specialty, taking into account the normative acts of the Republic of Moldova, regulating the Higher education sector, but also based on the experience of the partner universities in the European Union. Each University presented its pilot programmes and started implementation, forming experimental groups, starting with 1 September 2017.

The level of PBL use is different in different universities. This depends on the specifics of the study programme and the degree of teacher training. Even though at the beginning of the implementation of the pilot plans not all courses were foreseen to be kept using the problem-based method, with the experience of the years, they will be expanded.

In Table 3 we present, in a systematized way, the pilot study programmes from each university with the degree of implementation of the PBL method. The existing situation is presented at the time before the implementation of the PBL and the change of situation, starting with 1 September 2017, when the pilot groups were formed. The educational plans were changed, modules were formed from several disciplines, the project was introduced as a method of studying and evaluating knowledge. The Regulation on the Organisation of Higher Education Studies under the National System of Study Credits<sup>14</sup>, article 82, provides for the elaboration of a project (annual thesis) during the entire 3-year study period (study programmes with 180 ECTS), in year II, and 2 projects (year II and year III) in the 4-year study programmes (with 240 ECTS). In the pilot programmes, projects were introduced as a method of study and are foreseen every semester in several disciplines.

A more special situation is with the Software Engineering programme within the TUM. Unlike others, this specialty did not exist in the Nomenclature of professional training areas and specialties in higher education, being included in the new Nomenclature approved on 28 June 2017. If this programme had previously existed, it certainly did not differ in comparison with other educational plans analysed from other universities, given that the basic normative framework is the same.

Another peculiarity presents the University of Medicine and Pharmacy „Nicolae Testemitanu”. Within this university, the studies are integrated, having 300 ECTS.

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[https://mecc.gov.md/sites/default/files/ordinul\\_nr.\\_1046\\_din\\_29.10.2015\\_regulamentul\\_de\\_organizare\\_a\\_studiilor\\_in\\_invatamintul\\_superior\\_in\\_baza\\_sistemului\\_national\\_de\\_credite\\_de\\_studiu\\_0.pdf](https://mecc.gov.md/sites/default/files/ordinul_nr._1046_din_29.10.2015_regulamentul_de_organizare_a_studiilor_in_invatamintul_superior_in_baza_sistemului_national_de_credite_de_studiu_0.pdf)

**Table 3. Pilot study programmes based on PBL**

Study programmes, Cycle I, bachelor's degree	Level of development	Level of implementation	ECTS	% of total ECTS (PBL coverage level)
Business and Administration (AESM)	In the existing study programme, both traditional and student-centered teaching methods are used. In the course of 6 semesters, a year project shall be drawn up in semester IV, equivalent to 3 ECTS.	1. The art of communication and professional ethics, sem I., including project	5	
		2. The organization's economy and management, including the project, sem.II	10	
		3. Initiation and development of the business, sem. III, including the project	8	
		4. Operations management, sem. IV / semestrial project	16	
		5. Company management, sem.V, including project	14	
		6. Bachelor's degree internship and development of the bachelor's degree thesis	22	
<b>Total ECTS disciplines based on PBL</b>			75	41,7
Entrepreneurship and Business Administration (CSU)	Teaching is based on both traditional and student-centered methods. The economic project is developed in semester V and is quantified by 3 ECTS	<ol style="list-style-type: none"> <li>1. <i>Principles of study by „PBL – Problem Based Learning” method, sem. I</i></li> <li>2. Economic theory I (microeconomics), sem. I</li> <li>3. Bazele managementului, sem. I</li> <li>4. Economic theory II (macroeconomics), sem. II</li> <li>5. The Basics of Entrepreneurship, sem. II</li> <li>6. Economic statistics, sem.II</li> </ol>	<p>2</p> <p>6</p> <p>6</p> <p>6</p>	

		<p>7. Basics of accounting, sem.II</p> <p>8. Production management,sem.III</p> <p>9. Management methods and techniques, sem.III</p> <p>10. Company finances,sem.III</p> <p>11. <i>Business law,sem.III</i></p> <p>12. Managementul of antreprenurial projects, sem.IV</p> <p>13. Marketing, sem IV</p> <p>14. Human resources management,sem.IV</p> <p>15. Internship , sem IV</p> <p>16. Economic-financial analysis,sem.V</p> <p>17. Risk management, sem.V</p> <p>18. supply managementul,sem.V</p> <p>19. Quality managementul,sem.V</p> <p>20. <i>Development antreprenurial project,sem.V , Project</i></p> <p>21. Innovational management, sem.VI</p> <p>22. Comparative management, sem.VI</p> <p>23. Production internship, sem.VI</p>	<p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>6</p> <p>3</p> <p>6</p> <p>6</p> <p>3</p> <p>3</p> <p>3</p> <p>3</p> <p>6</p>	
<b>Total ECTS disciplines based on PBL</b>			113	62,8

Public Administration (USARB)	The year thesis is part of a fundamental or specialty unit of the semester III-IV and is quantified separately with ECTS.	<ol style="list-style-type: none"> <li>1. Constitutional law and political institutions, sem. I</li> <li>2. Public administration theory, sem. I</li> <li>3. The History of public administration, sem. I</li> <li>4. Politology, sem. I</li> <li>5. Interdisciplinary Project, sem. I</li> <li>6. Administrative Law I, including project, sem. II</li> <li>7. Administrative Law II, sem. III</li> <li>8. Financial and fiscal Law, sem. III</li> <li>9. Contravention law, sem. III</li> <li>10. interdisciplinary Project, sem. III</li> <li>11. Specialty internship I + Project</li> <li>12. Specialty internship II + Project</li> <li>13. Research internship + Bachelor's degree thesis</li> </ol>	<p>6 6 4 4 10 6 4 4 4 8 14 14</p>	
<b>Total ECTS disciplines based on PBL</b>			84	35,0
Law (MSU)	Teaching is based on traditional methods and on student-centered methods. A year project shall be drawn up in semester VI, which is part of a discipline, and shall be evaluated within the respective course.	<ol style="list-style-type: none"> <li>1. Constitutional law, sem. I + Project</li> <li>2. Administrative law, sem. II + Project</li> <li>3. Diplomatic uses and techniques/Juvenile delinquency/Medical law/Comparative legal systems, sem. III + Project</li> <li>4. Criminal law. Special part (I), sem. IV + Project</li> <li>5. EU institutional law, sem. IV + Project</li> <li>6. Criminal law. Special part (II), sem. V + Project</li> <li>7. Civil procedural law. General part, sem. V + Project</li> <li>8. Elaboration of civil procedure documents, sem. VI + project</li> <li>9. Legal protection of human rights, sem. VI + Project</li> <li>10. Comparative constitutional law, sem. VII + Project</li> <li>11. The law of the European Convention on Human Rights, sem. VII + Project</li> <li>12. Research internship + Bachelor's degree thesis</li> </ol>	<p>6 6 5 4 5 5 6 4 4 4 4 4</p>	

			9	
<b>Total ECTS disciplines based on PBL</b>			62	25,8
Software Engineering (TUM)	It is a new specialty, appearing in the NOMENCLATURE of professional training areas and specialties in higher education, approved by the Government of the Republic of Moldova no. 482 of 28 June 2017.	1. Conceptual design of an IT application, sem.I + project	10	
		2. Equivalent models, sem. II + project	10	
		3. Basics of application development, sem. III + project	10	
		4. Elaboration of domain specific languages, sem IV + project	10	
		5. Developing secure applications, sem V	10	
		6. IoT projects, sem.VI	10	
		7. Design of information systems, sem. VII	10	
<b>Total ECTS disciplines based on PBL</b>			70	29,2
Public health (SUMPH), multidisciplinary course "Neuroscience"		Multidisciplinary course of "Neuroscience"	4	



## 5.2 Roadmaps

In order to implement the pilot programmes with the application of the PBL method, each University in Moldova, partner in the project, developed its own *roadmap*, which represents a consolidated list of objectives, measures, actions and arrangements necessary to be carried out at the institution, faculty and/or department level, as well as the terms of their implementation.

By conducting a comparative analysis of these documents, we present a synthesis of the structure of the roadmaps of the partner universities in RM.

**Table 4. Synthesis of universities' roadmaps structure**

Objectives	Actions
<b>1. Elaboration of the educational plans for the pilot programmes</b>	1.1. Establishment of working groups for the elaboration/modification of the plan for the pilot programme
	1.2. Assessment of the economic and social sector expectations regarding programme outcomes
	1.3. Analysis of similar European / international programmes using the PBL method, including through study visits to partner universities in the EU
	1.4. Evaluation of the necessary and existing resources
	1.5. Determining the structure of the plan, taking into account the introduction of the project as a learning activity
	1.6. Adjustment of the educational plan according to the framework plan developed by the MECC
	1.7. Approval of the modified plan at the meeting of the faculty council and the Senate
	1.8. In the case of the elaboration of the new educational plan (Software engineering, TUM), obtaining the authorization for provisional operation from ANACIP
<b>2. Preparing teachers to apply the PBL method in pilot programmes</b>	2.1. PBL training provided by EU partners for teachers from RM universities, members of working groups within the project (Trainings for trainers)
	2.2. Mobility of a group of academics, involved in the pilot programmes, at partner universities in the EU
	2.3. Trainings / seminars (at institutional level) for teachers on problem-based learning, student assessment etc. provided by members of the working group
<b>3. Elaboration of educational documents</b>	3.1. Adjustment of academic curricula to PBL requirements (for years II and III of studies)
	3.2. Elaboration of educational documents: guidelines, case studies, assessment, etc.
<b>4. Organization of the Admission 2017 and launching of the pilot programmes</b>	4.1. Campaign to promote the programme: <ul style="list-style-type: none"> <li>- production of advertising leaflets;</li> <li>- visits to high schools,</li> <li>- institutional websites;</li> <li>- advertising websites (www.studentie.md, etc.)</li> </ul>
	4.2. Organization of admission to pilot programmes. Formation of academic groups.
	4.3. Study programme deployment

	4.4. Monitoring and improvement of the pilot programme: undertaking corrective and preventive actions
5. <i>Preparing the physical environment for organizing studies in pilot programmes</i>	5.1. Procurement (from the project budget and from the university's own budgets) and installing the necessary equipment to ensure the study process, including for group work.
	5.2. Repair and / or arrangement of study rooms / for group work, etc.
6. <i>Extending the project to other study programmes within the institution</i>	6.1. Dissemination of good practices of the implementation of the PBL method
	6.2. PBL trainings / seminars for academic staff from various training areas / study programmes

The universities' roadmaps were structured by *objectives* to be achieved through a series of actions identified by the institutions.

**Objective 1.** *Developing / modifying educational plans for pilot programmes.* The experience studied in the partner universities of the European Union, but also the legislative and normative acts regulating the activity in higher education in the Republic of Moldova were taken into account for their development. At the same time, some proposals have been made to amend some of the provisions of the Normative Acts in force, in order to be able to carry out the activity within the pilot programmes under the regulatory conditions.

**Objective 2.** *Training of teachers for the application of the PBL method within the pilot programmes.* In this respect, the teachers who will implement the PBL-based programmes participated in the trainings organized within the project. Also, some teachers will benefit from academic mobility at partner universities in the European Union, where they will be able to familiarize themselves with the model of applying the PBL method in the training area concerned. Within each higher education institution of the RM, partner in the project, a series of trainings for teachers on problem-based learning, evaluation of student activity, etc. will be organized.

**Objective 3.** *Elaboration of educational documents:* curricula on disciplines (analytical programmes), guidelines, case studies, problem sets, assessment, etc. Adaptation of theoretical and practical courses to the new requirements.

**Objective 4.** *Organisation of Admission to the pilot programmes (2017).* In this respect, information leaflets will be prepared about the pilot programmes, which will be disseminated in the advertising campaign in the country's high schools. The information will also be made public on the websites of universities.

**Objective 5.** *Preparing the physical environment for organizing studies.* Each university will use all the facilities at their disposal: study rooms, literature, access to databases, free LAN and WI-FI for students and teachers, etc. Also, from the sources of the project, with the co-financing from the universities, the necessary equipment for the implementation of the pilot programmes will be procured. Also, the sets of manuals and publications dedicated to the PBL method, purchased under this project, have been sent to university libraries.

**Objective 6.** *Extending the project to other specialties within the partner universities.* Activities related to the dissemination of good practices for the implementation of the PBL method, including those acquired during the implementation of the pilot programmes. In this respect, the websites and the university newspapers will be used, where the information about the project will be published, the members of the project teams will participate with speeches at different didactic-scientific conferences, workshops, will elaborate articles to be published

in scientific journals across the country. Seminars / trainings will be organized for teachers from all faculties of the university interested in applying the PBL method.

All activities mentioned in Table 4 will require certain resources. The necessary financial resources will be partially covered by the project budget (mobility of teachers and students, procurement of equipment, etc.), but also from the institutions' own budgets (organizing trainings with teachers, making repairs, procuring equipment, etc.).

In the process of drafting the educational plans for the pilot programmes, most higher education institutions faced some restrictions within the normative framework which limited the level of implementation of the PBL method in these programmes. In order to facilitate the implementation of the PBL and other student-centered methods in the study programmes, the higher education institutions have formulated a series of proposals to amend the normative framework, reflected in the table below.

**Table 5. Regulatory provisions necessary to be amended**

<b>Article</b>	<b>Provision</b>	<b>Proposals</b>
<b>Framework-plan for higher education, art. 9</b>	It is recommended to allocate 4-6 study credits for a module.	To exclude this provision
<b>Framework-plan for higher education, art. 9</b>	At <b>cycles I and II</b> , the course unit/discipline can be accomplished through the <b>auditorium didactic activity</b> (direct contact): classes/lectures, seminars, laboratory work, practical work, design work, teaching, clinical internships and other forms approved by the Senate; as well as <b>non-auditorium didactic activity</b> : didactic-artistic or sporting activities; <i>year, bachelor, master projects/theses</i> ; individual activity, social and community activities, other activities provided for by the institutional regulations.	To add to the auditorium didactic activity the supervision of the team activity of the students
<b>Framework-plan for higher education, art. 28, E)</b>	A Physical Education course for students of the years I/II, that are not quantified with credits, but whose evaluation with "admitted" is a precondition for admission to the completion exam of bachelor's degree studies	To exclude the Physical Education course
<b>Regulation on the organisation of studies on the basis of SNCS, art. 20</b>	For programmes of 180 credits, a year thesis is done in the year II of the studies. For study programmes of 240 credits, one year thesis is done in the years II and III of studies.	To exclude the limitation to a single project

Universities also mentioned the need to prepare didactic materials, case studies that would allow for better understanding of the essence of using PBL, the role of the teacher, the role of the student, what does teamwork involve?, how is sharing of responsibilities done?, how is the assessment done?, etc.

**Table 6. Synthesis of universities' roadmaps structure**

	Implementation actions	Implementation deadline					
		AESM	USARB	CSU	MSU	SUMPh	TUM
<i>Elaboration of the educational plans for the pilot study programmes</i>							
1.1.	Establishment of the working group on the elaboration/modification of the study programme	December 2016	December 2016	December 2016	December 2016	December 2016	December 2016
1.2.	Assessing the expectations of the economic and social sector on programme outcomes	January – March 2016	February-April 2017	January-March 2017	February-April 2017	January – April 2017	January-March 2017
1.3.	Analysis of similar national, European and international programmes, including study visits to EU partners	January – June 2016	January – June 2016	January-March 2017	January-March 2017	January-March 2017	January-March 2017
1.4.	Evaluation of the necessary and existing resources	September 2016	October-November 2016	September – October 2016	September – October 2016	September – October 2016	September – October 2016
1.5.	Determination of the structure of the plans, taking into account the introduction of the <i>project</i> as a study activity.	September – October 2016	September 2016-January 2017	March – April 2017	April 2017	March – April 2017	January – March 2017
1.6.	Adjusting the educational plan in accordance with the framework-plan	April 2017	April 2017	May-June 2017	March-April 2017	April-May 2017	December 2016
1.7.	Approval of the amended plan at the meeting of the Faculty Council and the Senate	April-May 2017	April-May 2017	April – May 2017	May-June 2017	May-June 2017	December 2016
1.8.	Monitoring and improvement of the Pilot Programme: undertaking corrective and preventive actions	During the study year 2017-2018	During the study year	During the study year 2017-2018	During the study year	During the study year	During the study year

<b><i>Training teachers to apply the PBL method in pilot programmes</i></b>							
<b>2.1.</b>	Training on PBL, offered by EU partners for teachers from universities in RM (Trainings for trainers)	February 2017	February 2017	February 2017	February 2017	February 2017	February 2017
<b>2.2.</b>	Mobilities of the academic staff, involved in the pilot programmes, at EU partner universities	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017	Over the years 2016-2017
<b>2.3.</b>	Trainings/seminars (at institutional level) for teachers on problem-based learning, evaluation of student activity, etc.	In January of each year, starting with 2017			May 2017 January 2018		
<b><i>3. Elaboration of educational documents</i></b>							
<b>3.1.</b>	Adjustment of academic curriculum to PBL requirements (for year I of studies)	April-June 2017	April-June 2017	June – August 2017	June – August 2017	June – August 2017	March – June 2017
<b>3.2.</b>	Elaboration of educational documents: guidelines, case studies, evaluation etc.	September 2017-June 2018	During the academic year	September 2017-June 2018	December 2017	September 2017-June 2018	September 2017-June 2018
<b>3.3.</b>	Adjustment of academic curriculum (for year II and III of studies)	September 2017-June 2018	April-September 2017	June – August 2017	June-September 2017	June-October 2017	March-August 2017
<b><i>Organizing Admission 2017 and launching pilot-programmes</i></b>							
<b>3.4.</b>	Programme promotion campaign: - developing advertising flyers; - visits to high schools,	February – May 2017	March – June 2017	March – June 2017	March – June 2017	March – June 2017	March – June 2017

	- institutional websites; - advertising websites (www.studentie.md etc.)						
<b>3.5.</b>	Organizing admission. Formation of academic groups, which will learn according to Pilot- programmes	July-August 2017	July-August 2017	June – August 2017	July-August 2017	July-August 2017	July-August 2017
<b>3.6.</b>	Deployment of the study programme	September 2017 – June 2020	September 2017 – June 2020	September 2017 – June 2020	September 2017 – June 2021	February 2018	September 2017 – June 2021
<b>4. Preparing the physical environment for organizing studies in pilot programmes</b>							
<b>4.1.</b>	Purchase and installation of the necessary equipment	July-August 2017	June-August 2017	March-June 2017	August 2017	July-August 2017	July-August 2017
<b>4.2.</b>	Repair and arrangement of study halls/for group work, etc.	July-August 2017	May-July 2017	March-June 2017	May-July 2017	May-July 2017	May-July 2017
<b>5. Expanding the project to other study programmes within the institution</b>							
<b>5.1.</b>	Dissemination of good practices regarding the implementation of the PBL method	During the entire period	During the entire period	During the entire period	During the entire period	During the entire period	During the entire period
<b>5.2.</b>	Trainings/seminars with reference to PBL for academic staff from various training areas/study programmes	September 2019	Starting with 2018	June- August 2017	Starting with 2018	Starting with 2018	Starting with 2018

This synthesis can be complemented by some specific steps that TUM is about to make with the Software Engineering specialty. This is due, as mentioned above, to the fact that the specialty is a new one, not existent in the Nomenclature of 2005.

Thus, we mention the following specific activities necessary to be additionally done only at the specialty Software Engineering

- This specialty is a new one, which is not in the *Nomenclature of professional training areas and specialties of 2005*, and, for this reason, it must be introduced and approved in the new *Nomenclature of professional training areas and specialties of 2017*.
- Internal evaluation (self-evaluation) of the study programme for the authorisation of provisional operation
- External evaluation of the study programme for the authorisation of provisional operation by the National Agency for Quality Assurance in Professional Education (ANACIP) based on the analysis of the self-evaluation report of the programme.

## 6. Concluding remarks

The Competences of the 21st century require the implementation of a training that allows students to apply the content of the courses, to participate actively in their learning, to make meaningful use of technology and to collaborate.

PBL is a student-centred, research-based training model in which the student engages with an authentic, poorly structured problem that requires a more thorough research<sup>15</sup>. Students identify the gaps in their knowledge, conduct research and apply what they have learned to develop solutions and present their findings<sup>16</sup>. Through collaboration and research, students can cultivate problem solving<sup>17</sup>, metacognitive skills, commitment to learning, and intrinsic motivation.

Problem-based learning (PBL) is not only a method or a mere teaching theory, but a new philosophy, a rethinking of the whole teaching-learning process, of the relationship between teacher and student. The PBL model in its classical form has been applied over several decades at the University of Aalborg, but also at other European universities, demonstrating its efficiency, largely due to the high degree of employability of graduates. Today, the PBL model is internationally recognized, with a particular interest for universities, researchers and students in many countries.

Following the completion of this report, we have concluded that teaching approaches with widespread use of active teaching methods, especially PBL, are useful for implementation in all specialties analyzed, at least for the following reasons:

1. Closer working with potential employers would have a positive impact not only on the process of designing the study programme or the curriculum of disciplines, but also increasing the employability chances of graduates.
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 necessary changes to the application of the PBL would make the contents of the disciplines more interactive and raise the responsibility of the students to the training in the specialty, will contribute to students' training of critical analysis and information synthesis skills, abstract thinking, assessment of competing arguments and decision-making in solving problems. All these skills are essential for the areas concerned in the report.
4. Strengthening teamwork and, as a result, students will become more open-minded to each other and support each other during their studies.
5. Students will be more actively involved in curricular design.

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<sup>15</sup> Jonassen, D. H., & Hung, W. (2008). All problems are not equal: Implications for problem-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 2(2), 4.

<sup>16</sup> Barrows, H.S. (1996). Problem-based learning in medicine and beyond: A brief overview. In L. Wilkerson, & W. H. Gijsselaers (Eds.), *New directions for teaching and learning*, No.68 (pp. 3-11). San Francisco: Jossey-Bass.

<sup>17</sup> Norman, G. R., & Schmidt, H. G. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic Medicine*, 67(9), 557-565.



6. Academic staff will become more visible outside the university community due to active involvement in determining the external organisations they will collaborate with.
7. The study programme (specialty) will have a relevant impact in society due to the collaboration and direct involvement of external organisations.

## References

1. <http://www.pblmd.aau.dk/pblmd-ro/pachete-de-lucru/pl3/>
2. Education Code of the Republic of Moldova, No. 152 of 17.07.2014, available at <http://lex.justice.md/md/355156/>
3. Regulation on the organisation and functioning of the National Agency for Quality Assurance in Professional Education, approved by Government Decision Nr. 191 of 22 April 2015.
4. Framework Regulation on the organisation and functioning of the governing bodies of the higher education institutions of the Republic of Moldova, available at [https://mecc.gov.md/sites/default/files/ordinul\\_nr.10\\_din\\_14.01.15\\_regulamentul\\_cadru\\_privind\\_organizarea\\_si\\_functionarea\\_organelor\\_de\\_conducere\\_ale\\_institutiilor\\_de\\_invat\\_superior\\_din\\_republica\\_moldova\\_0.pdf](https://mecc.gov.md/sites/default/files/ordinul_nr.10_din_14.01.15_regulamentul_cadru_privind_organizarea_si_functionarea_organelor_de_conducere_ale_institutiilor_de_invat_superior_din_republica_moldova_0.pdf)
5. Framework Regulation on how to choose the rector of the Higher education institution of the Republic of Moldova, available at [https://mecc.gov.md/sites/default/files/ordinul\\_nr.\\_09\\_din\\_14.10.15\\_regulamentul\\_cadru\\_privind\\_modul\\_de\\_alegere\\_a\\_rectorului\\_institutiei\\_de\\_invatamint\\_superior\\_din\\_republica\\_moldova.pdf](https://mecc.gov.md/sites/default/files/ordinul_nr._09_din_14.10.15_regulamentul_cadru_privind_modul_de_alegere_a_rectorului_institutiei_de_invatamint_superior_din_republica_moldova.pdf)
6. The Regulation on the organisation of doctoral degree studies, Cycle III, approved by Government Decision No. 1007 of 10 December 2014.
7. [https://mecc.gov.md/sites/default/files/traducere-plan-cadru\\_revised.pdf](https://mecc.gov.md/sites/default/files/traducere-plan-cadru_revised.pdf)
8. <http://www.anacip.md/index.php/ro/legislatie/anacip/ghiduri/send/22-ghiduri/412-ghid-de-evaluare-externa-a-programelor-de-studii-de-licenta-invatamantul-superior>
9. <http://anacip.md/index.php/ro/legislatie/anacip/metodologii/send/19-metodologii/377-metodologia-de-evaluare-externa-a-calitatii-in-vederea-autorizarii-de-functionare-provizorie-si-acreditarii-programelor-de-studii-si-a-institutiilor-de-invatamint-profesional-tehnic-superior-si-de-formare-continua>
10. Nomenclature of professional training areas and specialties for the training of staff in higher education institutions, cycle I, of 07.07.2005, available at <http://lex.justice.md/index.php?action=view&view=doc&id=312972>
11. <http://lex.justice.md/index.php?action=view&view=doc&lang=1&id=370821>
12. [https://mecc.gov.md/sites/default/files/ordinul\\_nr.\\_1046\\_din\\_29.10.2015\\_regulamentul\\_de\\_organizare\\_a\\_studiilor\\_in\\_invatamintul\\_superior\\_in\\_baza\\_sistemului\\_national\\_de\\_credite\\_de\\_studiu\\_0.pdf](https://mecc.gov.md/sites/default/files/ordinul_nr._1046_din_29.10.2015_regulamentul_de_organizare_a_studiilor_in_invatamintul_superior_in_baza_sistemului_national_de_credite_de_studiu_0.pdf)
13. Jonassen, D. H., & Hung, W. (2008). All problems are not equal: Implications for problem-based learning. *Interdisciplinary Journal of Problem-Based Learning*, 2(2),4.
14. Barrows, H.S. (1996). Problem-based learning in medicine and beyond: A brief overview. In L. Wilkerson, & W. H. Gijsselaers (Eds.), *New directions for teaching and learning*, No.68 (pp. 3-11). San Francisco: Jossey-Bass.
15. Norman, G. R., & Schmidt, H. G. (1992). The psychological basis of problem-based learning: A review of the evidence. *Academic Medicine*, 67(9), 557-565.

**Annex 1. AESM WP3: Bachelor's degree studies in Business and Administration: The student-centred active learning pilot programme**

**Annex 2. USARB WP3: Bachelor's degree studies in Public Administration: The student-centred active learning pilot programme**

**Annex 3. CSU WP3: Bachelor's degree studies in Entrepreneurship and Business Administration: The student-centred active learning pilot programme**

**Annex 4. SUMPh WP3: Bachelor's degree studies in Public Health: The student-centred active learning pilot programme**

**Annex 5. MSU WP3: Bachelor's degree studies in Law: The student-centred active learning pilot programme**

**Annex 6. TUM WP3: Bachelor's degree studies in Software Engineering: The student-centred active learning pilot programme**



## Annex 7. Template methodology

Each Task Force Team will store all collected data files in the project intranet <https://pblmd-moodle.samf.aau.dk/>. Task Force leaders are to make sure all data files and documents are stored in the project intranet.

### 1. Institutional fit-for-purpose

This part is concerned with exploring the relationship between internal university structures and study programmes, incl., how study programme development and support are integrated throughout the entire university. The cohesion of study programme development and support will be examined at university management, faculty/department, as well as the study board levels. Issues related to the integration of disadvantaged group of students as well as to available physical environment will be explored.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of how student-centred teaching and learning at EU partner universities is imbedded into and related to overall institutional structure and later to explore the same relationship, fit-for-purpose at own universities.

NOTE: the questions below are separated into 6 levels; there might be an overlap between the levels. It is important when asking a question to consider its relationship with other levels and impact it might have on other areas within and across the levels.

#### *System level:*

- Does the University have power/authority to accredit/validate its own degrees? If so go to section below.
- If not what is the external process?
- What is the legal status of the accrediting body? How is it composed? Does it publish a guide and criteria for accreditation? Is this publicly available? Ask for a copy and include an analysis of key elements in your report.
- Does accreditation happen periodically? Is there a fast track for new degrees/areas of study? How long does the normal process take? Is accreditation institutional or subject based?
- How is it regarded by stakeholders?
- Is there a national system of Quality Assurance? Is it independent of accreditation? What is the legal status of the QA body? How is it composed? Does it publish a code of practice? If so obtain a copy or access and include an analysis of key elements in your report.
- How does the national QA body influence curriculum development and internal quality assurance? How is it regarded by stakeholders?
  - Are there national subject benchmarks or equivalent which programmes have to address?<sup>18</sup>

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<sup>18</sup> In the UK, and probably elsewhere, there are certain guidelines and constraints exercised from outside the HEI. These might be professional bodies (e.g. in the case of Law in England, where any qualifying Law degree has to be validated by the Law Society); government agencies (e.g. the subject benchmark statements provided by HEFCE); or other validating agencies (e.g. EDAMBA etc.). This can be significant because these agencies sometimes dictate the curriculum and the assessment style (e.g. insisting on exams).

- Are there any relevant guidelines or benchmark statements provided by government agencies which constrain or otherwise affect the delivery of programmes? Explain whether these benchmarks refer to the content, delivery or assessment of the programme.
- Which professional bodies have some input into the validation or oversight of the programmes and how are these processes carried out?
- Which external validating agencies are involved in the design of the programmes and how is this achieved?
- What are the arrangements for dual awards or professional recognition?

*University management level:*

- What is the governance, management and organizational structure of the university?
- Is there a University institutional strategy which incorporates a curriculum strategy with a focus on student centred learning or is there a separate curriculum (learning and teaching) strategy? Is there an institutional commitment to innovative learning and teaching, greater use of ITC, a focus on employability, internationalisation of the curriculum? Language acquisition, inter-cultural skills? Obtain or access the documents and include an analysis in your report?
- What is the key university structure/committee responsible for student-centred teaching and learning? What are its terms of reference? What is its membership? How often does it meet? Are there provisions for fast tracking urgent curriculum development? What delegated powers does it have and to which body is it accountable? Does it produce regulations/good practice guides for curriculum proposals? What is the relationship of this body to Faculties/ Schools/ Departments / Colleges in the University?
- Is there a separate committee and/or office for internal quality assurance and enhancement? What are its responsibilities and how is it resourced (number and level of staff full/part-time, academic or administrative)?
- At what level in the University curriculum proposals can be initiated and possibly a definition of the various bodies to be sure that there is a consistent understanding of terms? If necessary, for each university create a Glossary of terms and respective provide definitions.
- What other bodies have an influence on curriculum development and approval e.g. Is there a requirement for a business case for all new programmes? Would the business case have to demonstrate how the proposal fits the University strategic plan? Which committee or senior manager needs to approve the business plan? Would service departments such as e.g. Finance, Estates, Library, Careers, Legal, Ethical expect/require to be consulted?]
- What learning and teaching and assessment approaches are used at the university? What differences are there between and/or within different subject areas/faculties?
- Is there an institutional graduate school? Does it have responsibility for both second and third cycles? What are its terms of reference? How does it relate to other bodies responsible for curriculum approval? [ You might want to develop this with more on Doctoral Schools/Programmes]
- What public/published information is available on all aspects of the University curriculum policy and content? Is this available on the web site with open access? The content should be reviewed as part of the benchmarking.
- Do descriptions of programmes and modules contain clear statements of intended learning outcomes? Learning methods, assessment and assessment criteria? Do

programme descriptions indicate potential employment routes post-graduation? Who monitors/is responsible for ensuring this?

- Are academic staff required to have a formal ‘teaching’ qualification? If so what bodies offer/validate the qualification? What formal requirements are there for continuing staff development and training? How is this monitored and assessed? Which body in the University has responsibility for this? Is the University Human resource department engaged in academic staff training and development? What standards are followed in pedagogical training of academics? Are there national common guidelines, pedagogical standards/methodologies to be followed? What training courses are organized for staff teaching skills development?
- How are students represented at the university level? What role do students play in the governance, management, organisation of the University? Note: it is important to understand how the students are appointed/ nominated to the relevant bodies and how they report back to their constituency.
- What KPIs are typically used at university level in relation to resourcing teaching and learning (such as, SSRs (staff student ratio); spend per student on library resources; time allowances for teaching and assessment; average class size etc)?
- What is the role of the students’ union in the student-centred teaching and learning?
- How is student-centred teaching and learning supported by the university’s mission statement?
- How, if at all, is student-centred teaching and learning promoted throughout the university?
- What is the role of continuous professional development (CPD) in supporting studentcentred teaching and learning?
- What financial or administrative support is provided at university level to support student-centred teaching and learning approaches? These might include funding for pedagogic research, curricular development projects etc. and might be provided through central funds or through specific research units with budgetary autonomy.
- What is the overall leadership structure at university level for academic programmes including teaching, learning and assessment?

*Faculty/department level:*

- What are the communication structures and relationships between the higher management level at the university and the level of faculty and/or department related to student-centred teaching and learning?
- What is the role of faculty and/or department in the new study programme development?
- How do faculty share and access examples of good practice within departments?

*Study board level:*

- What is the structure and relationship of a Board of Studies (or other level) with the department, faculty and research centres within department?
- Is there a procedure for inter-disciplinary or multi-disciplinary programmes? Does this require the establishment of unique committees/boards and how do these relate to the overall structure? Are there problems in establishing such degrees? What are the problems?
- In depth review of assessment practice: the use of innovative methods of assessment e.g. peer assessment, the role of formative and summative assessment, types of assessment, blind and double marking, monitoring of assessment to ensure that it is

effective in relation to the achievement of learning outcomes, mark distribution analysis both within a subject and between other subjects (i.e. across the University) to ensure equity and comparability, use of external examiners, marking systems with a clear definition of criteria (Note: the integration of assessment into the process of student centred learning and its relationship with learning outcomes is critical).

- What is the process for (a) the approval of a new degree programme – is there any difference between first cycle, second cycle and third cycle? (b) the approval of a new module in an existing degree? What level of change, enhancement in a degree programme or a module requires full institutional approval? How long does the process take for each of these? Note: Understanding the approval cycle is important.
- What role do students play in curriculum planning and development? Is there a difference in their role between the cycles? Note: it is important to understand how the students are appointed/nominated to relevant bodies and how they report back to their constituency.
- What procedures (if different from above) exist for developing new study programmes?
- How is e-learning implemented and to what extent is it embedded within the programmes?
- How are staff members involved in managing and coordinating a particular study programme (programme coordinators, semester coordinators, supervisors)? How is this formalized?
- What is the process for annual monitoring and periodic review of programmes?
- Are there any performance indicators?
- What is the process for student feedback? How is this managed and what impact does it have? Does it result in feedback on outcomes to the students?

#### *Integrating disadvantaged groups of students:*

- Does the University have an office/staff dedicated for students with a disability? What are the responsibilities and resources of the office?
- What special arrangements are made for students with a disability (incl., according to UN Convention on the Rights of Persons with Disabilities)?
- What are the capacities of the university to work with students from disadvantaged backgrounds with regard to teaching approaches?
- What special approaches exist that are targeted at socially disadvantaged students?
- What approaches are followed for inclusion of students from non-academic backgrounds, if any?
- What academic support is available to students with learning disabilities?

#### *Physical environment:*

- Is the physical environment suitable/adapted for students with a physical disability? Is there a programme of adaptation for students with a physical disability?
  - What student facilities exist that support student-centred teaching and learning: study group rooms, common rooms for students, extended university library opening hours, free Wi-Fi on campus, IT assistance for students.

## **2. Study programme fit-for-purpose**

This part is concerned with exploring a current study programme structure at each EU partner University with the focus on operational, functional details, normative and technical details. The level of analysis is a particular study programme.

Each Task Force Team will employ this part of the methodology to develop a benchmark understanding of structures, procedures and process related to the development and management of study programmes in EU partner universities as well as explore the same at their own university in respective pilot study programme.

*Study programme level:*

- To what extent does it reflect the institutional strategy? [See also above]
- To what extent does it reflect subject benchmark statements of the equivalent?
- Is it competence based?
- Does it focus on 'employability'?
- Is it subject to professional or regulatory accreditation (particularly important for Medicine but probably the case for other subjects)
- Does it emphasize innovation, research led learning, entrepreneurship, internationalization?
- To what extent does it use IT and/or blended learning?
- What is the structure of the chosen programme? (workload, semesters, modules, student evaluations, staff evaluations, learning progression). It would be useful to determine whether this process applies to second cycle as well?
- How is the programme developed, enhanced and managed? What role do students play in the process? What role do employers play? Are other stakeholders consulted/engaged?
- Are former graduates/alumni consulted/engaged?
- What are the functions of the project coordinator, semester coordinator, teaching staff at the programme?
- What supporting documents exist in relation to the study programme? (course description, study regulations, guidelines, learning outcomes, evaluation guides). Are these publicly available?
- What are the existing programme regulations and who is responsible for ensuring that they are followed?
- How are the programme structure and content monitored, reviewed, enhanced and implemented?
- How is staff workload calculated and monitored? How is the norm for allocation of hours (academic staff related) for various types of activities (teaching, supervision, evaluation) calculated (ECTS, formula, or historical)?
- How is student workload calculated and monitored and how does this help to shape curriculum planning and development?
- What are the expected learning outcomes? How are the learning outcomes reflected in the assessments? How are the learning outcomes communicated to the students and how are they assessed?
- How is the student evaluation/assessment conducted? What forms of evaluation are practiced? (Written exams/open questions, multiple choice tests, oral exams, project presentations. Are there innovative forms of assessment e.g. peer assessment, IT based?)
- What are the progression requirements?
- What measures are taken to avoid and sanction 'cheating' and plagiarism? How are these recorded and evaluated?
- What are provisions for student appeals?
- What is the existing system of grading? What are the arrangements for credit transfer and accreditation of prior learning?
- What is the role of the external examiner?
- How is student-mobility embedded in the programme structure and how it is facilitated?

- How is the staff evaluation/feedback conducted by the students? How are the outcomes of feedback managed?
- What are the academic requirements for students to enter the programme?
- How do students contribute to the curriculum development?
- How are the programmes supported by administrators and what responsibilities do administrators have in directly supporting students? (e.g., answering enquiries; administration of assessments; managing academics' diaries etc.).
- Is the employment of graduates monitored? If so how and over what period?
- Which software, e-learning (e.g. Moodle, MOOC's, Knowledge Apps, moderated forums), how it is used, what checks there are for plagiarism.