



DUALMON

Strengthening capacities for the
implementation of dual education
in Montenegro Higher Education

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Recommendations for the Development of the Accreditation Standards for Dual Higher Education (DHE)

Contacts: Prof. Dr. Mirko Savić, University of Novi Sad, savicmirko@ef.uns.ac.rs

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Abstract	This document represents the set of recommendations and principles for the development of the accreditation standards for dual higher education study programs in Montenegro. The accreditation standards for DHE programs will be developed on the basis of these principles and recommendations right after the new Law on Higher Education in Montenegro is recognized, where DHE will be officially implemented into HE system of the country.
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Dual model of studies at higher education institutions in Montenegro

Dual education in higher education is important for several reasons that directly affect the quality of education, the employability of graduated students, as well as the country's competitiveness on the global labor market.

The introduction and implementation of the dual model of education in higher education provides students with the opportunity to combine theoretical knowledge acquired in the classroom with practical experience in real working conditions. This enables them to develop specific skills that employers need, thus reducing the gap between education and the labor market. In addition, dual education contributes to greater cooperation between higher education institutions and the private sector. Through partnership with companies, higher education becomes more flexible and adapts more quickly to the needs of the labor market. On the other hand, employers have the opportunity to influence the shaping of educational processes according to specific needs, which reduces the costs of training new employees.

Through the DUALMON project (work package WP3), the Agency for Control and Quality Assurance of Higher Education had the obligation to develop a standard that would be used for the accreditation of studies according to the dual model, and after the adoption of amendments to the Law on Higher Education (the project foresees changes to the introduction and recognition of dual study model at higher education institutions). In this regard, the Agency implemented a number of activities through the project that laid the basis for the preparation and creation of guidelines for the development of standards for the dual study model:

- Representatives of the Agency participated in study visits to Slovenia (October 2021), Austria (May 2022) and Serbia (March 2023), where they had the opportunity to learn about such a study model and practical examples of the dual study model, challenges which the institutions face in the process of implementation and realization of the dual model, but also the opportunities offered to the students, as well as the reasons why the students chose this study model.
- In addition, the representatives of the Agency made two study visits to Agencies dealing with quality assurance in higher education in partner countries - Serbia (July 2024) and Slovenia (November 2024). Through study visits, knowledge and experience were gathered when it comes to the development and implementation of standards for accreditation of this type of study programs.

As already stated, one of the goals of the DUALMON project was a proposal for changes to the legal regulations so that the dual study model would be recognized through the Higher Education Act. Consequently, according to the proposed and accepted project documentation, after the adoption of amendments to the Law on Higher Education and the recognition of the dual study model, the Agency's task was to develop and adopt standards for the accreditation of this study model.

Bearing in mind that during the implementation of the project and until the end of 2024, the foreseen amendments to the Law on Higher Education have still not been adopted (a new draft of the Law on Higher Education that recognizes a dual education model has been prepared and the public debate was completed on November 18, 2024) the Agency did not have the opportunity to implement project activities related to the creation and adoption of standards. However, as the draft Law on Higher Education recognizes the dual study model, the Agency created a set of guidelines for the development of standards for the dual study model in higher education. This set of guidelines will represent the basis for the preparation and creation of standards for the accreditation of study programs according to the dual study model, after the adoption of the Law on Higher Education.

Additionally, the [Generic and specific models of the dual study model](#), as well as other research that was realized through the DUALMON project, served as a starting point for creating these guidelines. The generic model of dual higher education was developed within the work package WP2, and was the basis for the creation of specific models of dual education at institutions of higher education in Montenegro that are partners in the project, as well as the piloting of these models at institutions (organizational units of the University of Montenegro - Faculty of Economics, Faculty of Electrical Engineering, Faculty of Tourism and Hotel Management and Faculty of Maritime Affairs).

Dual study model in the countries of the European Higher Education Area

The research regarding the best practices and experiences in dual higher education ("[Pregled najboljih praksi i iskustava u DVO](#)") conducted through this project, provides an overview of the best practices of dual higher education in different countries of the region. This document served as the basis for the development of generic and specific study models at higher education institutions in Montenegro.

According to the mentioned research, there are different types of dual education models in higher education, namely: unitary¹, binary² and combined system.

Comparing the practice in several countries, the research showed that:

- In Austria, Universities and primary higher education institutions (UPN) are considered the main "carriers" of dual higher education. Dual education programs in Austria have a standardized format, including content, which ensures uniformity of educational standards. Dual programs in Austria mainly refer to technical studies and are aligned with

¹ Potpuno ili djelimično unitarni sistem je sistem u kojem se stručno visoko obrazovanje izvodi djelimično od strane specijalizovanih instituta ili u jedinstvenom sistemu u kojem se pravi razlika između „profesionalne“ i „akademske“ aktivnosti.

² U binarnim sistemima, univerziteti pružaju akademsko visoko obrazovanje dok dualno visoko obrazovanje pružaju specijalizovani instituti.

the Bologna process. Graduates of these programs have the opportunity to continue their education at the master's or doctoral level.

- In Germany, there are different forms of dual education (Integrated training, Integrated practice, Career-oriented programs). A dual degree program in Germany combines academic studies with practical on-the-job training, making it very popular due to its practical nature. Practical experience is a mandatory part of this program, so students must sign a work contract with the company before starting their studies. Training is conducted at two locations: in the company and at a higher education institution.
- In Slovenia, dual higher education exists in programs at EQF levels 5 and 6. At EQF level 5, which includes short cycles of higher education, approximately 40% of teaching is based on practical learning in partner companies. These programs are mostly run by independent public or private colleges or school centers that offer both secondary and higher vocational programs. At EQF level 6, which refers to the first cycles of professional higher education, programs are implemented in independent higher education institutions, such as colleges or faculties that are not part of a university. Within these programs, the institutions themselves decide on the duration of the internship in ECTS credits, which usually accounts for between 10% and 20% of the entire curriculum.

The second research that was conducted within the DUALMON project related to the research on the potential prospects for dual education in Montenegro from the perspective of business entities ("[Report on Survey of companies needs for Dual Higher Education in Montenegro](#)"). 62 companies from Montenegro participated in the research (categorized according to the number of employees - 17 micro companies, 18 small companies, 13 medium companies and 14 large companies).

The results of the research showed that most companies agree that the dual model in higher education could help and support business processes in their companies (average 4.16 on a scale 1-5), but also that the dual study model could compensate for existing and future shortcomings of employees in their companies.

When it comes to the model of realization of the dual study model that would best suit the company, the companies that participated in this research are equally divided in their answers. For a third of the respondents (30.6%), the best model would be the joint week model (the student studies half of the week and works for the other half of the week). Another third (29%) indicated the model of weekly changes, according to which students would spend one week at a higher education institution and the next in a company, while the last third chose the model of changing semesters as the best model of dual education, in which students would study for one semester at a higher education institution education and in the second semester worked in a company (29%) or would do an internship at the end of the program, i.e. after two years at a higher education institution (19.4%).

Legal framework in Montenegro

According to the current [Law on Higher Education](#), basic, master's and doctoral study programs can be implemented at institutions of higher education in Montenegro, which can be academic and applied. In addition to these study programs, institutions can also implement interdisciplinary study programs in at least two fields. In addition, the Law prescribes that the study program must

contain practical teaching that is at least 25% in relation to the total workload of the student by subject, or year, depending on the learning outcomes for the individual study program.

The increase in the participation of practical classes in the educational process is also recognized by the [Higher Education Strategy of Montenegro 2024-2027](#). Through different models of practical teaching and the defined scope in relation to the defined pool of lessons according to the subjects, the Strategy also emphasizes that it is necessary to take care of the coordination of competencies with the results obtained through practical work.

Bearing in mind the above, and guided by various examples of organizing the dual model of studies, it is clear that at institutions of higher education in Montenegro, the dual model of studies can be implemented at all levels of academic and applied studies, depending on the specific model that the institutions would develop and applied.

According to the Law on Higher Education, the Agency ensures the quality of higher education in accordance with European standards and guidelines (ESG). Thus, according to the Law and by-laws related to the accreditation of study programs, in the accreditation process, the institution is obliged to submit an Application for accreditation of the study program on the form prescribed by the Agency. Along with the Application, the institution submits an Elaborate on the fulfillment of standards. In addition to the standards related to basic and master's studies, which institutions must meet in the process of accreditation of study programs, the Agency has also adopted additional standards for doctoral studies, studies in English language, distance learning studies, as well as studies for initial teacher education.

As stated, the draft [Law on Higher Education](#) provides that the Institution can implement a study program according to the dual model. The same article states the following: "The conditions for organizing dual education at institutions are prescribed by the Agency on the proposal of the Accreditation Board."

Therefore, for the purposes of realizing classes according to the dual study model, after the adoption of the new Law on Higher Education, the Agency will prescribe the conditions for organizing dual education at institutions of higher education in Montenegro.

Guidelines for creating standards for the dual study model in higher education

Comparing the practice in similar systems of higher education, as well as on the basis of the knowledge gathered through realized study visits and conducted research, a list of conditions that institutions need to fulfill in the process of accreditation of study programs that would be conducted according to the dual study model was created.

Bearing in mind the specifics of the dual study model compared to the classic study model, the additional standard for the dual study model should include the following:

1. Curriculum and study program - with a clearly defined structure of theoretical and practical classes, student enrolment conditions, i.e. the method of choosing a study model, as well

as the method of realizing the dual study model. As this study model foresees a greater representation of practical classes, institutions should document the organization of practical classes, its holders and the tasks of all participants. The plan and program of learning through work, which should contain a description and scope of learning through work, the scope of active teaching, specifications of the competencies of students of the dual education model, the maximum number of students who can be referred to the employer, the method of assigning students to employers, the conditions for transferring from the dual study model to other study models, etc. In addition, it is necessary to clearly specify the number of ECTS credits that are earned through learning by doing. The participation of employers in the educational process must be clearly defined, in order to achieve the learning outcomes of the study program and based on the acquisition of professional competences and learning through work. The proposed dual education program should also contain a clearly developed methodology of active learning, which is based on the experience gained through practical work in the company, which, again, is in accordance with the defined learning outcomes and a strong correlation with the theoretically acquired knowledge.

2. Teaching staff and mentors at employers - Bearing in mind that the participants in the dual study model, in addition to the institution and students, are also employers, the institution should submit a list of employers with whom the institution of higher education has signed a cooperation agreement, and for which the institution has determined that they meet the conditions for performing learning through work. For each employer, the institution should provide detailed information in order to ensure compliance of activities, competence of mentors, obligations of employers, minimum necessary equipment for the implementation of learning through work, as well as other measures for the implementation of the dual model of education. A higher education institution should have clearly defined and specified criteria on the basis of which it chooses employers who will participate in the dual study model. It is also recommended that the institution of higher education foresee periodic trainings that should be mandatory for mentors in companies. Additionally, in the dual study model, academic mentors and practice mentors should represent an inseparable link when it comes to learning outcomes. In this regard, for the successful implementation of the dual study model, clear and precise continuous communication between the academic mentor and the practical mentor is required. This communication should be achieved through defining and harmonizing the results of theoretical learning and learning through work, precisely set goals that will be achieved both at the institution and in the company, monitoring and evaluating the student's work, etc.
3. *Regulation of the relationship between the institution, student and employer* - The institution of higher education must clearly and precisely define, explain and attach appropriate evidence that regulates the legal relationship between all participants in the dual study model (institution, employer and student). This means that it is necessary to define in advance the basis of the legal relationship between the student and the employer, that is, between the institution of higher education and the employer.
4. *Support and monitoring of students' career development* - An important aspect of this type of study program should be support for students' career development through monitoring the satisfaction and motivation of students and employers during the duration of the program, empowering and supporting students in planning and setting career development goals, ensuring cooperation with secondary schools in order to establish the continuity of providing career guidance and counselling services, as well as providing assistance to students in choosing an employer, according to the individual needs of students, taking into account their best interests.

5. Continuous monitoring and improvement of the dual study model - Although this aspect is partially contained within the internal quality assurance system at higher education institutions, it is also an important element within the dual study model. As the dual study model is supported by employers and requires their professional and comprehensive involvement in order to harmonize and achieve competencies aligned with the defined learning outcomes, it is important to monitor the satisfaction of all three participants in this process - mentors at institutions, students and mentors in companies. Continuous evaluation of the degree of satisfaction and success of the dual study model can provide clear guidelines in the direction of improving mutual relations, teaching plans, etc.

Recommendations for the development of a dual study program in Montenegro

The document "[External evaluation report](#)" created as part of the DUALMON project provides useful guidelines regarding the results of the pilot implementation of the dual study program model, as well as recommendations for the improvement and implementation of this model in full capacity once the legal basis for its implementation is created.

The dual study model does not only represent the addition of practical learning in the company at a certain point in the implementation of curricula. In order for the dual study model to be able to realize its full capacity and the key purpose of realization - learning through work and acquiring, i.e. realization of the results of knowledge acquired through theoretical classes, it is necessary to adapt or create new study programs in order to enable the full purpose of the dual education system.

Based on examples from practice, as well as the results of pilot testing and external evaluation, it can be concluded that the future dual study model should be developed as a special form of study program and not a supplement and adjustment of the existing study program by introducing a larger volume of practical work. This is because, in order to achieve full complementarity of learning in the academic and professional environment, it is very often necessary to adjust the learning outcomes in order to achieve the appropriate competencies of the students. Unlike the traditional study model in which the focus is on the higher education institution and its capacities, in the dual education model the focus includes the company as a learning environment and not as an option that will enrich the learning process developed at the institution.

In order for the dual study model to be successful, it is very important to establish a strong and responsible partnership between the institution and the employer, in order to provide future students with a comprehensive joint training program. It must not only be a simple exchange of theory and practice, but implies a two-way relationship in the construction of the education system. That is why it is important that higher education institutions, in addition to the program, pay significant attention to the choice of mentors in the company, as well as to the relationship between the mentors at the institution and in the company, which is important for the sake of the student and his achievement of adequate and quality results.

In addition, in order for the implementation and realization of the dual study model in higher education to be successful, the existence of clear legal regulations and, in accordance with that, by-laws that would regulate this study model is also necessary.

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