



WP2

Development of curricula

Lead Organisations of WP2: **UNS - Serbia**

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Analysis of study requirements with Bologna standards

Institutional and legal framework of higher education - Law on Higher Education

Higher education in Bosnia and Herzegovina (B&H) is recognized as a priority area of particular public interest. Concern for the quality of education and its development is a priority in education policies, at all levels of government in B&H. Public universities in B&H began working on reform and implementation of quality assurance policies and practices even before B&H was included in the Bologna Process in 2003. During the academic year 2003/2004, all existing public universities in B&H were included in the institutional evaluation of the European University Association (EUA).

Main documents in the field of quality assurance in higher education in B&H are *Standards and Guidelines for Quality Assurance in Higher Education in BiH* and *Recommendations for the Implementation of Quality Assurance in Higher Education in B&H* (Decision of the Council of Ministers of B&H from December 27th 2007 on the adoption of documents required for further implementation of the Bologna Process in B&H - Official Gazette of B&H, No. 13/08). The third key document defining the quality assurance system in B&H is the *Framework Law on Higher Education in B&H*, adopted in 2007 (Official Gazette of B&H, No. 59/07 and No. 59/09). The State signed the Bologna Declaration in 2003 at the Ministerial Conference in Berlin, but only with the adoption of the *Framework Law on Higher Education in B&H*, the progress has been made towards establishing a common legislative framework for the whole country, but also a decisive milestone in support of higher education reforms in B&H according to reform processes in the *European Higher Education Area* (EHEA).

The Framework Law established the organization of higher education in B&H, the responsibility of the competent authorities, the bodies for law enforcement and international obligations, such as *Agency for Development of Higher Education and Quality Assurance*, *Centre for Information and Recognition of Documents in the Field of Higher Education*, and the *Rector's Conference of B&H*. In addition to the B&H Ministry of Civil Affairs and the Conference of Ministers of Education, B&H has an established institutional network with clearly defined competences, responsibilities and tasks, which provide favourable conditions for the implementation and development of higher education, based on accepted strategic goals, European standards, and Bologna principles. Pursuant to Article 48 of the Framework Law on Higher Education in B&H, the Agency for Development of Higher Education and Quality Assurance has drafted reference documents "*Criteria for Accreditation of Higher Education Institutions in B&H*" ("Official Gazette of B&H", No. 75/10).

B&H has a complex political and administrative structure that contributes to creating a specific environment for the higher education field. Education in B&H, including higher education, is under the complete and undivided jurisdiction of the Entities of Republic of Srpska, ten cantons in the Federation of B&H and the Brčko District of B&H. Each of the 12 administrative units has its own ministry of education /

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department of education, laws for the field of education, budgets for education, establishes educational policy and has all other rights and obligations arising from the mandate of the competent educational authority, responsible for the organization and functioning of education in its area of responsibility.

In addition to the Framework Law on Higher Education in B&H, the legislative framework in B&H is made up of the laws on higher education of the entities of the RS, the cantons in the FB&H and the Brčko District of B&H. The Faculty of Forestry of the University of Sarajevo is an integral part of the Integrated University of Sarajevo whose operations are conducted in accordance with the Law on Higher Education of the Sarajevo Canton (Official Gazette No. 33/17), and the Statutes and Regulations resulting from these regulations. Until the entry into force of this law, the Faculty of Forestry of the University of Sarajevo was an independent organizational unit of the University with a legal entity status. Since it came into force, the new Law (Official Gazette No. 33/17 under Article 143) stipulated that the University has the status of a legal entity, and that organizational units do not have the status of a legal entity. The exceptions are the faculties of theology to which the Sarajevo Canton has not acquired the founding rights.

Higher education in Republic of Srpska (RS) is regulated by the Law on Higher Education ("Official Gazette of Republic of Srpska" No. 73/10, 104/11, 84/12, 108/13, 44/15, 31/18, 26/19). The Law determines the level and type of the higher education in this entity, types of higher education institutions, the responsibility of the competent authorities (ministry, commissions, committee, deans, rectors, senates, etc.), procedures for quality assurance (licencing, accreditation), recognition of foreign higher education diplomas, election of academic staff, students' rights, organisation of learning processes at higher education institution, financing, and other important question in the area of higher education. RS is also committed to basic principles and standards of higher education that are prescribed in Framework Law on Higher Education in Bosnia and Herzegovina („Official Gazette of Bosnia and Herzegovina“ No. 57/07, 59/09). According to the Law, the highest authority in the area of higher education is Ministry for Scientific and Technological Research, Higher Education and Information Society. In the area of QA, the Law stipulates establishment of the Agency for Accreditation of Higher Education Institutions of Republic of Srpska (HEAARS). The Article 27 stipulates the accreditation procedure for existing HEIs and study programmes, with the view to evaluate the quality level reached in accordance with existing standards and criteria in the area of QA is conducted by HEAARS and in cooperation with Agency for Development of Higher Education and Quality Assurance (HEA). Also, HEAARS keeps a register of accredited HEIs and study programmes in the RS, collects and processes data on the higher education system in RS with the purpose of providing relevant information and statistical indicators to stakeholders, organises trainings and certification of staff in the area of QA. HEAARS became a full member of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) in 2015. In order to develop the higher education system and professional and advisory assistance to HEIs and relevant authorities, the Council for the Development of Higher Education and Quality Assurance of the RS was founded. The Council shall review

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reports of the Commission for licensing and elaborates for justification of establishing new HEIs in the RS. Also, it considers the self-evaluation reports of HEIs in the RS and provides recommendations for improvement of HEIs' quality system.

Analysis of the system of the undergraduate and graduate studies and system of ECTS credits comparing to the Bologna Declaration

There are two departments at the Faculty of Forestry in Sarajevo: "*Forestry*" and "*Horticulture*". The Department of Forestry educates staff for the needs of the forestry sector and other related fields. The Higher Education Reform in B&H, in accordance with the Bologna Process in the Forestry Department, has prepared and implemented study programs of the first and second cycle. Upon completion of the first cycle of education, the title of Bachelor of Forestry is acquired with the knowledge and skills necessary for monitoring and realization of projects in this field. After completing first cycle, students can deepen their knowledge and improve their skills at second cycle on this Department, through study program "*Sustainable Forest Management*". Upon completion of this study program, the title of Master of Science or Master of Forestry is acquired with the knowledge and skills necessary to accomplish more complex tasks in the field of planning, design and analysis of forestry business and related disciplines.

The department of Horticulture educates staff for the needs of horticulture, landscaping and refinement of urban space. The reform of higher education in B&H in accordance with the Bologna process in the department of Horticulture has prepared and is implementing study programs at first and second cycle. Upon completion of the first cycle of education, the title of Bachelor of Horticulture is acquired with the knowledge and skills necessary for monitoring and realization of projects in horticulture and improvement of urban space. After completing cycle I, students can deepen their knowledge and improve their skills through continuing their studies at second cycle, called *Landscape Architecture*. Upon completion of this study program, the title of Master of Science in Horticulture is acquired with the knowledge and skills necessary to accomplish more complex tasks in the field of planning, design and analysis of business in organizations dealing with horticulture and urban development.

Studying in both departments first cycles lasts three years (six semesters). The first and second study cycle (in both departments) is based on the European System for Transferring and Collecting Study Points (ECTS). Each course is evaluated with a certain number of points, which enables the student to achieve success with 30 points per semester, or 180 points for Bachelor, during the three-year study program, or 120 points for Master, during two-year study program. In both study programs of Master, the fourth semester is scheduled for the preparation of the Master's thesis. The third cycle of study lasts for three academic years (six semesters), and the volume of study program of these studies is evaluated with 180 ECTS study points.

The transparent and systematic use of the European Credit Transfer and Accumulation System (ECTS) and its principles is a continuing tendency to achieve a student-centred education system at UNSA. Faculty of Forestry is using the ECTS system used from 2005. According to recent analyses, the EHEA report from 2018, UNSA is among the higher education institutions in B&H where the link between ECTS credits



and learning outcomes is between 50 to 99%. The full use of ECTS credits, links of ECTS and learning outcomes in B&H has not been fully implemented. The application of the system is limited by the differences in the current study programs and the lack of procedures for transferring ECTS credits. The Faculty of Forestry in Sarajevo awards ECTS credits to the study programs based on student workload and student/ teacher contact hours. Considering the outcomes of individual courses related to the acquisition of theoretical and practical knowledge, the acquisition of skills and competences is awarded to the total number of ECTS credits. Transfer and accumulation of credits between institutions inside and outside the country are currently handled through evaluating each individual course overlap. If there are at least 50% of overlaps, courses are accepted and ECTS are transferred.

The study is organized according to the indicative Calendar of activities of the University of Sarajevo, which is adopted for each academic year separately. With the last revision of the syllabuses (2017), the students of both cycles in both Departments, by completing the last exam, complete the education in the first cycle (according to the earlier syllabuses, the students also had final papers).

The higher education in RS is organized in three cycles. First cycle consists of undergraduate studies and leads to the academic title of completed undergraduate study (the degree of Bachelor) or an equivalent, acquired following at least three and no more than four years of regular studies after acquisition of the certificate on the completed secondary school, and it is valued with minimum 180 and maximum 240 ECTS credits. The second cycle or graduate studies leads to the academic title of master or an equivalent, acquired following the completed graduate study, it lasts for one or two years, and it is valued with 60 or 120 ECTS credits in such a way that together with the first cycle worth 300 ECTS credits. The third cycle or postgraduate studies leads to the academic title of doctor or an equivalent, it lasts for three years and is valued with 180 ECTS credits. One semester of studies carries 30 ECTS credits on each three cycles. The study programs at medical sciences are excepted from previous provisions and are delivered as an integrated studies valued with up to 360 ECTS credits. There are two types of ownership at HEIs and two types of organisation: public and private and universities and higher schools. The term "university" is limited to the HEIs involved in both, lecturing and research work, offering academic degrees in all of the three cycles, with goals including improvement of knowledge, thought and education system in RS, education, cultural, social and economic development of RS, promotion of the democratic civil society and accomplishment of the highest standards in lecturing and research work and to HEIs which implements at least five various study programs from at least three scientific areas. The university may have organizational units such as faculties, academies, higher schools or scientific institutes, which conduct the lecturing, scientific research and artistic work in one or more educational and scientific areas. The term "higher school" is limited to the HEIs accredited to issue diplomas and degrees of the first cycle, with goals including preparation and training of individuals for expert, economic and cultural development of RS and promotion of the democratic civil society, as well as accomplishment of high standards in lecturing and



study and to HEIs which implements at least one study programs from one scientific area.

Faculty of Forestry offers students graduate and postgraduate studies. Studies are organized as a three-cycled system based on 4+1+3 model of study. In the past, faculty was organized first cycle programs as a three year studies (3+2+3 model). The last generation of students enrolled three year studies at 2011 and they have a possibility to study a two-year master degree studies. All the rest can enroll one-year master programs. First cycle studies are organized on two study programs: „Forestry“ and „Wood Processing“. They lasts for four years (eight semesters) and are valuated with 240 ECTS credits. On graduation students are obtaining the qualifications of “Bachelor of Forestry Engineering – 240 ECTS” or “Bachelor of Wood Processing Engineering – 240 ECTS”. Subjects related to project goals are under Forestry study cycle. Second cycle (master) studies are offered as one or two year studies (two or four semesters) and are valuated with 60 ECTS credits or 120 ECTS). There are three modules of one-year master degree Forestry program: „Silviculture and Forest establishment”, “Silviculture, Forest protection and Planning forest management” and “Forest Use, Organization, Economics and Hunting”. On sucesfully completed studies and master thesis defended, students are obtaining the qualifications Master of Forestry 300 ECTS, depending on module they have choosen. For students that are graduated on three year „bachelor“ programs that are valuated with 180 ECTS credits, there are three study modules of a two-year master degree Forestry program: „Silviculture and Forest protection“, „Forest Use“ and „Forest Management“. Those programs lasts for two years (four semesters) and are valuated with 120 ECTS credits. On sucesfully completed studies and master thesis defended, students are obtaining the qualifications of Master of Forestry - 300 ECTS. Third cycle of postgraduate, doctoral studies leads to scientific degree of “Doctor of Forestry Sciences – 480 ECTS” and is offered at three year doctoral study program of Forestry. This program contains mandatory research activities, preparing and oral defending of doctoral thesis. Admission requirements are finished second cycle study of forestry or related field. At the Faculty of Forestry, UBL, in the 2018/2019, 200 students were enrolled, where 168 students enrolled in the first cycle of study (135 in the Forestry 4 + 1 study program, 25 students in the Forestry 3 + 2 study program and 8 students in the Wood Processing 4 + 1 study program,) and 32 students in the second study cycle.

Analysis of redibility and comparability of degrees and Diploma Supplements

The type and level of higher education qualification are defined in the *Framework Law on Higher Education in B&H* and a document entitled *Basics of the Qualification Framework in B&H* (Official Gazette No. 31/11), which is the basis for the development of the Qualification Framework in Bosnia and Herzegovina. The link between pre-Bologna qualifications is uniform in this document (Table 1). The document was aligned with the European Qualifications Framework and was to be adopted by the entity and cantonal governments.



The Department of Forestry, in accordance with the Bologna process, was graded in three cycles. According to the Law on Higher Education in the Canton of Sarajevo and the Study Rules for the first, second cycle of studies, integrated, professional and specialist study at the University of Sarajevo (No. 01-1094 / 18), after the completion of the study program, a certain qualification is acquired.

Table 1. The link between pre-Bologna and current qualifications

Relation to ISCED levels and EQF		Basis of the Qualifications Framework			Previous system in B&H based on degrees of professional qualification		
ISCED level	EQF	Qualification	Education	Level	Pre-bologna levels of HE	Education	Qualification
5B	6	Bachelor or Baccalaureat	First cycle of higher education	6	VI.	Viša škola	Viša stručna sprema - VŠS
5A	7	Master	Second cycle of higher education	7	VII./1	Fakultet osnovne studije	Visoka stručna sprema - VSS
					VII./1	Specijalizacija	Magistar specijalist
5	8	PhD	Third cycle of higher education	8	VII./2	Magisterij	Magistar nauka
6					VIII.	Doktorat	Doktor nauka

A complete account of the student's success and the acquired knowledge and skills is given through the Diploma Supplement, which lists the courses the student attended and the results (grades) he / she achieved.

The type and the level of degrees in RS and Bosnia and Herzegovina are stated in the Law on Higher Education, Law on Academic Titles Obtained after Completing Higher Education ("Official Gazette of RS" No. 33/14, 63/14) and, as a framework, by Decision on the Adoption of the Qualifications Framework in Bosnia and Herzegovina ("Official Gazette of Bosnia and Herzegovina" No. 31/11). According the laws in RS, after the completion of the academic study program at 1st Cycle, the graduates of the Faculty of Forestry UBL are awarded by the degree of "Bachelor" with 240 ECTS. On successfully ended 2nd Cycle of academic study program, graduates obtain the degree of "Master" with 300 ECTS, and after 3rd Cycle of postgraduate studies, candidates obtained the scientific degree of "Doctor of Science" with 480 ECTS.

Analysis of the mobility of students, teachers and researchers

The mobility of students, academic staff (teachers and researchers) at UNSA is governed by the Rules on Mobility of the University of Sarajevo (01-1101-100-1 / 18 of December

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19, 2018). It is achieved through national and international support programs for expert and scientific training.

At Faculty of Forestry, national mobility programs are supported by the Federal Ministry of Science and Education, the Ministry of Civil Affairs and the Ministry of Education, Science and Youth in Sarajevo Canton. While international projects are under COST actions, ERASMUS + and WUS. Within the Erasmus+ KA107, mobility is achieved with 1) the University of Tuscia (Italy), 2) the University of Poznan (Poland), 3) the Hochschule für Wirtschaft und Umwelt Nürtingen-Gleislingen (Germany); 4) Hochschule Weihenstephan-Triesdorf (Germany), 5) Buckinghamshir University (United Kingdom) and (University Iuav of Venice, Department of Architecture and Arts).

In average 30% of the academic staff of the Faculty of Forestry participated in outgoing mobility during one academic year (the analysed period is 2016-2017 and 2017-2018), and the mobility lasted for 5 and 10 days and one semester. Outgoing student mobility, from Faculty of Forestry, was 8 students per school year (2016-2017 and 2017-2018 analysed), and mobility lasted one or two semesters each. In incoming mobility, more than 7 foreign academic staff from five foreign institutions participated in one academic year at the department of Forestry (the analysed period is 2016-2017 and 2017-2018). Mobilities lasted 5 days each. More than 10 foreign lecturers participated incoming mobility at the department of Horticulture in relation to MSc program *Landscape Architecture*. In the incoming mobility, more than 50 students participated from four foreign institutions in the school year 2016-2017 and more than 20 in the 2017-2018 school year, for the period of 10 days and one semester.

The programs at Faculty of Forestry are largely aligned with the programs of countries in the region, including Serbia, Croatia, Montenegro and Macedonia. There is a mismatch between the study programs compare to the European Union countries, with which cooperation agreements have been signed and projects implemented within the ERASMUS + program. The main reason for the limited outgoing student mobility is program mismatch. The main reason for the limited incoming mobility is the lack of English language classes.

The Faculty of Forestry is a member of the following international associations: IUFRO, EFI, IFSA, EVOLTREE, ECLAS. In the period 2006 - 2013, the Faculty, in cooperation with the Faculty of Forestry in Belgrade, implemented the Master Program in Forest Policy and Economics (FOPER), where the teaching was conducted in English. Students receive all information related to international cooperation on the Faculty's website, which is published periodically in accordance with the tenders submitted to the Faculty, as well as signed agreements and other forms of cooperation.

Internationalization of higher education and mobility as its main pillar is set as one of the strategic objectives in the Strategy of Development of Education in RS for a period 2015-2020. The mobility of students, academic staff (teachers and researchers) at UBL is governed by the Regulations on International Exchange of the University of Banja Luka (02 / 04-3.3699-3 / 17) of 21.12.2017. and in accordance with the UBL

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Internationalization Strategy. The Faculty of Forestry of UBL complies with this Rulebook and the Strategy. In the past, the mobility of staff and students has been realized through a number of different programs, supported by domestic and international institutions. The Ministry of Science and Technology Development, Higher Education and Information Technology supports the exchange of staff and researchers through domestic supporting programs, as well as the arrival of foreign researchers and staff. Current exchange programs take place under COST actions, ERASMUS +, CEEPUS etc. UBL, together with the Faculty of Forestry (and other organizational units) appointed coordinators for international cooperation and academic coordinators for international student exchange. In addition, a module called International Cooperation for Integrated Information Systems has been established. In 2019, the Faculty of Forestry became the coordinator of the CEEPUS network called "Managing forests for climate change". During 2018, UBL student and academic staff exchange activities were implemented within the CEEPUS program through 11 different active networks and four so-called Umbrella networks, which resulted in a total of 37 student and teacher exchanges, while in 2017, 85 student and staff exchanges in both directions were realized in the Erasmus + program, a component of credit exchange. The 29% of academic staff of the Faculty of Forestry in Banja Luka annually participate in outgoing mobility through various programs (CEEPUS, ERASMUS etc.). Significant number of teachers and researchers from the Faculty of Forestry, University of Belgrade, and Biotechnical Faculty in Ljubljana, have been involved in incoming mobility. In addition, an average of 5-7 teachers and researchers from Europe and Asia participated annually in teaching and/or research projects for the period 2010-2019. Also, for the same period, 10-30 students annually participated in the exchange programmes. The programs at the Faculty of Forestry of UBL are fully aligned with the programs of the countries in the region, including Serbia, Croatia, Montenegro and Macedonia. The main reason for the limited outgoing student mobility is the inconsistency of the program, as well as the lack of a procedure for recognizing the completed classes and exams during the mobility. The main reason for the limited incoming mobility is the lack of English language classes. In the period 2006-2013, the Faculty, in cooperation with the Faculty of Forestry in Belgrade, implemented the Master Program in Forest Policy and Economics (FOPER), where the teaching was conducted in English.