



Biotechnical Faculty

Classification: Internal, Organizational, Report on study program

Based on a Rule-book of reporting methodology (number: 06-4357/10 dated 30.12.2010.), Self-evaluation methodology (number : 06-457/11 dated 7.2.2011.), and in accordance with: the Criteria for accreditation of study programs of I and II cycle of studies in B&H ("Official Gazette of Bosnia and Herzegovina", number: 47/17), the Decision on norms defining the minimal standards in domain of higher education in Bosnia and Herzegovina ("Official Gazette of B&H", number: 100/11) and the Decision on amendments of Decision on norms defining the minimal standards in domain of higher education in Bosnia and Herzegovina ("Official Gazette of B&H", number : 26/19), it has been prepared

SELF- EVALUATION REPORT ON STUDY PROGRAM SUSTAINABLE FOOD PRODUCTION SYSTEMS

For academic year 2020/2021

II cycle of studies

The Self-evaluation team:

1. Ms. Vildana Jogić prof. PhD, associate professor –leader of II cycle –the president of Team,
2. Mr. Emir Mujić prof. PhD, associate professor, representing the academic staff – the member,
3. Ms. Ešefa Halilagić, senior professional associate in charge of student's affairs of II and III cycle of studies – the representative of the student's service – the member,
4. Mr. Emrah Kazaz – the representative of students of study program of II cycle of studies: Sustainable food production systems -the member.

Submitted to:

- Team for assurance of quality of faculty

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SUMMARY

Regarding the need for accreditation of the study program of II cycle -“Sustainable food production systems” at the Biotechnical faculty of University of Bihać, and in accordance with the recommendations of the Team for assurance of quality at the Biotechnical faculty (in further text named as Team) and suggestions of B&H Agency for higher education development and assurance of quality (in the text below: the Agency), at XL regular session of the Biotechnical Faculty, the Decision on self-evaluation of the study program of II cycle of studies-Sustainable food production systems (Decision no. 03-1552/2022 dated 29.9.2022 – Attachment no. 1), has been passed on, and the Team for self-evaluation of the study program of II cycle of studies-Sustainable food production systems, was appointed, in the following composition:

1. Ms. Vildana Jogić PhD, associate professor –leader of II cycle, the president of Team,
2. Mr. Emir Mujić PhD, associate professor, representing the academic staff, the member,
3. Ms. Ešefa Halilagić, senior professional associate in charge of student’s affairs of II and III cycle of studies – the representative of the student’s service, the member, and
4. Mr. Emrah Kazaz – the representative of students of study program of II cycle of studies: Sustainable food production systems, the member.

In accordance with the guidelines/instructions and the form B-02, prepared by the Team, the activities necessary for self-evaluation of the study program of II cycle of studies- Sustainable food production systems, have been started. Through the engagement of the Team for self-evaluation and by consulting the members of the Team for assurance of quality at the Biotechnical Faculty, the form B-02 was filled in and the self-evaluation of the study program-Sustainable food production systems, was performed.

1. INTRODUCTION

1.1. Background and organization of University, Faculty and Study program

The University of Bihać is a public institution which organizes and performs the university studies, scientific and highly professional work, develops the scientific, technological and artistic creativity. The University of Bihać was founded on 28. 07. 1997. However, the roots of higher education are much deeper and older, looking from the time perspective. Namely, in the year 1970, the remote class/department of Higher Technical school from Karlovac, started to work here; afterwards, in the year 1975, the mechanical-engineering department of Higher Technical school in Bihać was established; the textile department started to work in 1979, and in the year 1979 the Higher economics school started to work; in the year 1993, the Pedagogical Academy was founded; in the year 1995, the Islamic-Pedagogical Academy was founded.

The Biotechnical Faculty is a public higher education institution of Una-Sana canton, which is dealing with the activities of higher education and scientific-research work and it was founded in the year 1998. Through the graduate and post graduate studies, the teaching process and the scientific-research work, are being organized. The graduate studies as a permanent activity of the Faculty, are being realized through different teaching forms for all the subjects established by curriculum. Since the foundation of the Faculty until the academic year 2005/06, the study at the Faculty was organized in two departments: Agricultural and Nutritional. Since academic year 2006/07, the Biotechnical Faculty has started with implementation of Bologna Declaration and at the existing departments, it formed the following courses: Organic agriculture, Cattle breeding, Fruit growing-Wine growing and Farming-vegetable gardening at the Agricultural department, and the courses Nutritional technology and Environmental protection, were introduced at the Nutritional department. In academic year 2010/2011, the new department –Forestry, was founded-course of Forestry.

Since the foundation of the Faculty, one of the functional departments was the Agricultural department-General course; this department had only one course until the academic year 2005/06. In accordance with Bologna Declaration and after the implementation of ECTS system, the Scientific-teaching council of Biotechnical Faculty, on its IV extraordinary session held on 30.04.2008, has adopted the curriculum for the General course and also the curricula for other courses, were adopted on its III extraordinary session held on 31.05.2010.

Namely, the Scientific-teaching council of Biotechnical Faculty, on its IV (fourth) regular session, held on 19.05.2010, has passed on the Decision on change of study module at the Biotechnical Faculty, by which Decision the study module 3+2+3 for the first year of I cycle of study in academic year 2010/2011, is being changed by Biotechnical Faculty into the study module 4+1+3, referring to all the courses.

Since the very beginning of the foundation of the Faculty, all the courses are being active, but the teaching process at the courses was performed in accordance with decisions of Scientific-teaching council and according to expressed interest of the potential candidates.

Attachment no. 1. Decision on self-evaluation of the study program of II cycle of studies-Sustainable food production systems (Decision no. 03-1552/2022 dated 29.9.2022.)

Launching an initiative for organization of the study program of the second study cycle named "Sustainable food production systems", was mostly based on participation of Biotechnical Faculty of University of Bihać in realization of Erasmus+ project "MSc in Sustainable Food Production Systems / STEPS".

By joining the realization of this project, the University and the Faculty, besides other things, have accepted the commitment that prior to the termination of the project, the study program of II cycle of study from domain Sustainable food production systems, should be developed, adopted and functionally activated.

The Scientific-teaching council of Biotechnical Faculty of University of Bihać, on its regular XXXIV session held on 23.01.2020, has passed on the Decision on introduction of new study program of II cycle of studies-Sustainable food production systems and it formed the Commission in charge of preparation of the study program at the second (II) cycle of studies named "Sustainable food production systems", within the project Erasmus+STEPS at the Biotechnical Faculty of University of Bihać.

Attachment no. 2. Decision of Scientific-teaching council on introduction of new study program- Sustainable food production systems and on appointment of Commission (no. 03-161/2022 dated 21.01.2020).

Attachment no. 3. Decision on adoption of Curriculum for I study cycle- Sustainable food production systems (no. 03-83472020. dated 20.05.2020).

1.2. Implementation of Bologna process at the University, Faculty and the Study program

Since academic year 2006/07, the ECTS –European system of transfer of points/credits, was established at the University of Bihać, as one of the basic instruments for creation of united European education area. Based on article 42 of Law on higher education ("Official Gazette of Una-Sana Canton", number: 08/09) and the article 154 paragraph 3 of Statute of University of Bihać, the Senate of University of Bihać, on its XI session, held on 14.06.2010, has enacted the Rules of studying at the second (II) cycle (no. 06-1698/2010 dated 14.06.2010), thus, introducing to the University of Bihać, the Bologna process at the II cycle of studies. The study program "Sustainable food production systems" was established in accordance with all the legal acts and by-laws of higher education in Bosnia and Herzegovina, in Federation of Bosnia and Herzegovina and in Una-sana Canton and in accordance with Bologna Declaration. The European system of transfer of points/credits (ECTS), has been applied. The proposed study program of the second (II) cycle of studies at the Biotechnical Faculty of University of Bihać, contains 60 ECTS (points), and it represents the integration of the accredited study programs of I cycle: AGRICULTURE AND NUTRITIONAL TECHNOLOGY. It is being realized through two teaching semesters. In the second semester, the preparation of the final Master's thesis, is foreseen. The subjects prescribed by curriculum are divided into compulsory and elective subjects. The entire study program is envisaged as a modular system with combination of two groups of subjects, related to sustainable food production systems. The teaching subjects which refer to the nutritional engineering, food quality and safety, are in the first group and in the second group are the subjects related to the food production systems' management. Considering the interdisciplinarity of the proposed study program, modular organization of teaching process plans and curricula with greater number of teachers who are involved in the teaching process performance, the efficient and strong coherence of teaching material, aiming at achievement of desired goals which are defined by the second study cycle program, is being secured. Optional/elective subjects of the study, were created respecting the project's guidelines and by obeying the sustainability concept, separately for each university which realizes the study program, according to the rules and capacities of the university, and in accordance with the results of stakeholders' analysis, which means according to the labor market requirements of the countries of these universities.

At the University of Bihać, i.e. at the Biotechnical Faculty, the second (II) semester contains 10 optional/elective subjects and the two basic clusters of the study program (nutritional engineering, food quality and safety and food production systems' management).

In this semester, the ratio between so called engineering and managing subjects from these aforementioned two groups, is 70:30 (seven engineering and 3 managing subjects). Out of the first group of subjects, the students have chosen and attended 2 (10 ECTS) subjects, while out of the second group of subjects, they have chosen 1 subject (5 ECTS), which makes in total at least 15 ECTS points in the second (II) semester. Thus, the students are not only oriented to the profiling of engineering disciplines, but also to the profiling of management skills, within the sector of sustainable food production systems. The selection process of elective subjects, was done by using the method of online survey, but for elective subjects with the biggest number of votes, the teaching process is being organized.

Attachment no. 4. Results of conducted survey

1.3. Research and scientific-research and/or artistic work at the Faculty and the Study program

Since its foundation, the Biotechnical Faculty is dedicated to fulfil its mission based on successful results of scientific-research work and application of these results in the practice. For this purpose, the laboratory is located in a separate facility with total surface of around 410 m². The following laboratories are in function: four larger laboratories destined for performance of experimental part of teaching process, four smaller laboratory premises having instrumental techniques, two laboratories destined for external services, one laboratory for scientific-research work, laboratories for food quality control and also the IT equipment destined for establishment of "ICT center for Food production systems management".

The scientific-research work of the teachers of this study program, is also presented through their involvement in different projects, thus enabling the resources for permanent performance of scientific-research work, provision of equipment and improvement of work conditions at the Faculty. The Biotechnical Faculty is well experienced, in terms of sending the applications to different tenders for project's participation at different institutions.

The permanent scientific-research work is ongoing at the Biotechnical Faculty, as well as, at the study program of the second II cycle of studies-Sustainable food production systems. This scientific-research work is being carried out both in co-operation with the students, during the preparation of their projects and Master's thesis, and also in co-operation with the teachers, during the preparation of their Master's thesis and numerous national and international projects. The Vice-Dean for scientific-research work is in charge of co-ordination of scientific-research work and researches (Decision on appointment of Vice-Dean for scientific-research work – Attachment no. 5 and 5a), and also the Team for scientific-research work and international co-operation, was appointed –Attachment no.6.

The staff and the students are in permanent communication with the Office for scientific-research work, through web page of [University and Faculty](#); thus the staff and the students are timely being informed about the tenders for application to the projects, and also they are informed about the possibilities of conducting the researches at the national and international institutions. The data on scientific-research work for 2020/2021, are presented in the Attachment no. 8. The data on realized projects or ongoing projects are published on a [web page of Faculty](#), while the data on publishing activity are also at [web page](#) of Faculty.

Attachment no. 5. Decision on appointment of Vice-Dean for Scientific-research work

Attachment no. 5a. Decision on extension of mandate of Vice-Dean in charge of Scientific-research work

Attachment no. 6. Team for Scientific-research work and international co-operation

Attachment no br. 7. Data on scientific-research work for the year 2020/2021.

The results of the researches carried out by the teachers and associates of the study program of the second (II) cycle –Sustainable food production systems, in a form of papers, are being published in different journals, in Reviews of papers of many seminars, congresses, symposia, both nationally and internationally published. Apart from these activities, these teachers and associates, take part in organizational and scientific boards of conferences at the other national faculties and abroad.

Attachment no. 8. List of experts' and scientific meetings, journals and published papers, as a result of scientific-research work (and/or artistic work) of academic staff involved in realization of study program for academic year 2020/21

Attachment no. 9. Program of conference - seventh INTERNATIONAL SCIENTIFIC – PROFESSIONAL CONFERENCE "5. JUNE – WORLD DAY OF PROTECTION OF ENVIRONMENT"

Attachment no. 10. Program of ROME Conference

1.4. Connections of the Faculty and Study program, to the environment, economy and social partners

The Biotechnical Faculty and the study program-Sustainable food production systems, have established the connection with the local community through the participation in a social life of Una-Sana Canton. The Co-operation Agreements have been signed with certain institutions of educational domain, where also the issues of professional practice performance, and visits to the scientific-research work institutions, were covered. As a result of co-operation, the Biotechnical Faculty has signed the agreements with the following entities:

- Faculty of Agriculture and Nutrition of University of Sarajevo,
- Specialized agricultural cooperative AgroDar,

During the preparation of the study curriculum of II cycle of studies-Sustainable food production systems, the development strategic documents of the state of Bosnia and Herzegovina, Federation of Bosnia and Herzegovina, Una-Sana Canton and the cities and municipalities of Una-Sana Canton, have been analyzed. Apart from these activities, as previously mentioned, the number of almost 80 different stakeholders were consulted, through online surveys, extensive interviews and panel debates:

From the private sector, in the country and abroad, the following entities have been consulted:

Meggle, d.o.o. Bihać, Bihać brewery d.d., Mavi d.o.o. Travnik, AC food d.o.o. Velika Kladuša, KolMix d.o.o. Velika Kladuša, Milk-San, d.o.o. Sanski Most, Meet industry d.o.o. „MS Alem“, d.o.o Meet Industry Karajić Velika Kladuša, Specialized beekeeping co-operative Apimed, Specialized agricultural co-operative AgroDar, d.o.o. EE-commerc Bihać, cattle Farm „Perna-F“, Institute „Food development Center- Emona RCP“ (Ljubljana, R. Slovenija), Factory of green fodder- Jata Emona (Ljubljana, R. Slovenia), Company Nestlé, Klas d.d. Sarajevo, d.o.o. Akova Impex Sarajevo, d.o.o Sinalco BiH Sarajevo, d.o.o. Sava semberija Bijeljina, d.d. Vitaminka Banja Luka, d.d. Milkos Sarajevo Dairy, Meet industry d.o.o. Argeta Sarajevo, d.o.o. Ledo Čitluk, d.o.o. Lactalis BH Gradačac, Zenica Milk industry d.d. „ZIM“, d.o.o. Poljorad Travnik, d.o.o. Milk industry 99 Gradačac, d.d. Sarajevo brewery, d.o.o. Bosnaplod Brčko, d.d. Winery čitluk Čitluk, d.o.o. Hercegovina product, Čitluk, d.o.o. Hepok Mostar, Coca-Cola HBC B-H Sarajevo.

From domain of public administration and decision making bodies, institutes and local communities, the following institutions/entities, have been consulted:

The Ministry of Foreign trade and economic relations of Bosnia and Herzegovina, Federal Ministry of agriculture, Water management and Forestry Sarajevo, Ministry of Economy of Sarajevo Canton (Office for enlargement services), Regional Development Agency for Herzegovina - REDAH, Co-operative Alliance of Federation of Bosnia and Herzegovina, Federal Agricultural Institute in Sarajevo, Federal Agro-Mediterranean Institute in Mostar, Development Agency Žepče - RAŽ, Federal Institute of Agro-pedology Sarajevo, Ministry of Education, Science, Culture and Sport of Una-Sana Canton, Ministry of Economy of Una-Sana Canton, Development Agency of Una-Sana Canton, Ministry of Health, Labor and Social policy of Una-Sana Canton, Ministry of Agriculture of Una-Sana Canton (competence over the entities dealing with food), Veterinary Institute of Una-Sana Canton, Agricultural Institute of Una-Sana Canton, Public Health Institute of Una-Sana Canton, Municipality of Bihać (Department for local economic development and Project Management), Municipality of Cazin (Service for agriculture and consultation), Economic Chamber of Una-Sana Canton, SERDA – Agency for development of economic region of Sarajevo, IFAD – International Fund for development of agriculture, The Institute for public health of Federation of Bosnia and Herzegovina, Organic inspection „OK“ Sarajevo

From academic community in Bosnia and Herzegovina and abroad, the following institutions have been consulted:

The Biotechnical faculty of University of Bihać, the Faculty of Agriculture and Nutrition of University of Sarajevo, the students of the first study cycle of Faculty of Biotechnology in Bihać and the students of the Faculty of Agriculture and Nutrition of University of Sarajevo (agricultural and nutritional courses), the

Faculty of Technology of University of Banja Luka, the Faculty of Agriculture of University of Banja Luka, the Faculty of Technology of University of Tuzla, the University of León (Institute of hygiene and Nutrition technologies, Spain), the University of Klagenfurt (Department for organization, human resources and service management), Centro Tecnológico da Carne (Center of Technology, Spain), the Faculty of Agriculture of University of Zagreb (Institute for plant production), Faculty of Agriculture of University of Novi Sad, University of Josip Jurja Strossmayer of Osijek, Secondary agricultural school "Sanus futurum" Sanski Most.

Attachment no. 11. Agreement on inter-institutional co-operation in domain of exchange of teachers and students of the study program of II cycle of studies of Erasmus + STEPS " Sustainable food production systems".

Attachment no. 12. Co-operation Agreement with the specialized agricultural co-operative named AgroDar

1.5. Funding of University, Faculty and the Study program

Funding sources of the University are defined by the Law on higher education of Una-sana Canton and by the Statute of University of Bihać. According to the Law on higher education of Una-sana Canton, the Higher education institutions of Una-Sana Canton, are funded from the following sources:

- a) funds of the founder,
- b) enrollment fee, tuition fee, paid by the student,
- c) payment for dealing with intellectual and other services,
- d) resources for publishing,
- e) resources secured through the performance of scientific-research and artistic-research works and through the preparation of technical and consulting projects,
- f) resources obtained through provision of teaching services in the other institutions of higher education,
- g) sales of enrollment documents (index and enrollment material) and sales of documents which are being used in the course of studies and graduation,
- h) donations, inheritance, grants and
- i) legacy, gifts, heritage and other legal sources.

According to the Statute of University of Bihać, the funds needed for the performance of its activity are provided by the University, in accordance with the Law, from the Budget of the Founder and through provision of its own funds. The budget's funding basis is: the total number of students enrolled to the University, the necessary number of teaching and non-teaching staff members according to the Higher education Standards, norms of Una-Sana Canton, capital investments and costs in accordance with the vision of development of University and other investments suggested by University and accepted by the Government of Una-Sana Canton upon relevant budget positions. All the funds obtained from the budget, tuition fees charged and the funds from the other sources, do belong to the higher education institution and these funds are disbursed according to the law, statute and the adopted financial plan. The total cost break down for the study program –Sustainable food production systems, for one academic year amounts to 572.904,00 BAM.

The calculation of the total costs was done based on calculation of annual revenues and current expenditures: According to the capacities of the study program, for the purpose of realization of the teaching process and practice performance, in accordance with the pedagogical standards and norms, the University of Bihać and Biotechnical Faculty, have the teachers and associates capable of realizing the teaching process at the second cycle of studies „Sustainable food production systems“ based on modular system with participation of higher number of teachers and associates in realization of syllabus program. In total, the number of 26 teachers and 1 associate (senior assistant), are engaged at the proposed study program, who belong to different professions, and they have a permanent work contract status at the Biotechnical Faculty i.e. at the University of Bihać (table 3).

- Teaching staff performing the teaching process: 6 full-time professors, 10 associate professors, 10 docents and 1 senior assistant (gross monthly income multiplied by 12 months)
- External associates (according to the number of held hours)
- Administration 1 person

Teaching staff: 512.400,00 BAM

External associates: 3.750,00 BAM

Administration: 21.024,00 BAM
 Additional staff: 31.230,00 BAM
 Heating: 3.500,00 BAM
 Electricity: 1.000,00 BAM

Attachment no. 13. Budget

Attachment no. 14. Public procurement Plan for the year 2020.

In case of enrollment of minimally planned number of students (12), the total revenue in amount of 28.800,00 BAM, is being achieved. The tuition fee for one student is 1.200,00 BAM in total for academic year or 600,00 BAM per semester, plus the amount of 1.200,00 BAM for defence of Master's thesis, which amounts to 2.400,00 BAM per student in total.

The expenditures were not registered, although the number of 6 teachers (external associates), were engaged for teaching compulsory subjects in the I semester, who will perform the teaching process at the II cycle, within the modular teaching process at the scope of 5 hours for each subject (this form of teaching process and engagement of external associates, was defined in the project STEPS and it is obligatory for the Biotechnical Faculty of University of Bihać, as well as, for the Faculty of Agriculture and Nutrition of University of Sarajevo, being a project's partner).

The total costs needed for realization of foreseen modular teaching process (lectures, travel and accommodation) for all 6 external associates is 0,00 BAM. For realization of remaining hours of each module, the teachers and associates who are employed on a permanent basis at the Biotechnical Faculty and at the other organizational units of University of Bihać, have been engaged. The part of the costs which are funded by the total enrollment revenues, do belong to the costs of work of Commission during the defence of Master's thesis. In case the external associates would be engaged for work in commissions, the remuneration for this work will be defined in a gross amount, as follows: for mentor it is 550,00 BAM, for member of Commission it is 300,00 BAM (since there are usually 2 members of Commission, this amount is multiplied by 2 and the cost amounts to 600,00 BAM) and clerk's fee is 50,00 BAM, which makes in total 1.200,00 BAM. However, if the mentor and the members of Commission are employed at the University of Bihać, they are not entitled to remuneration for work in Commission (according to the actual Standards and norms for dealing with the higher education activity at the area of Una-Sana Canton-Official Gazette of Una-Sana Canton number 12/12), in such a way, the total expenditures are being reduced. Taking into consideration the total revenues of studies (tuition fees) and costs of studies-expenditures (engagement of teachers and remuneration for work in Commission), which will be covered by payments of tuition fees of enrolled students of the second cycle of this study program, it is obvious that the introduction of study program "Sustainable food production systems", is justified from the economic point of view.

1.6. Statistical data

Total number of study programs being implemented at the faculty:	I cycle	II cycle	III cycle
	3	2	0
STUDENTS AND BACHELORS OF THE STUDY PROGRAM			
Academic year :	2020/2021		
Number of full-time students:	12		

Number of part-time students:	0				
Number of “online” students:	0				
Total number of students:	12				
Number of Bachelors:	0				
Number of Master’s degree holders:	0				
Number of PhD holders:	0				

ACADEMIC STAFF OF STUDY PROGRAM

Number of elections to scientific-teaching and artistic-teaching professions:

Year:	2016/17	2017/18	2018/19	2019/20	2020/21	
Full-time professor	-	-	-	1	2	
Associate professor	-	-	-	1	2	
Docent	-	2	4	2	2	
Senior assistant	-	-	-	-	-	
Lector	-	-	-	-	-	
Assistant	-	-	-	-	-	
Total number of elections:	-	2	4	4	6	
Number of academic staff members	Full-time professor	Part-time professor	Docent	Senior assistant	Lector	Assistant

Employees:	5	10	10	1	-	-
External associates :	1	-	-	-	-	-

RESOURCES AND INFRASTRUCTURE FOR STUDY PROGRAM REALIZATION

Total surface of useful space [m ²]	3.612 m ² of space and 3 ha of agricultural surface
Surface of classroom's space [m ²]	327,2 m ²
Surface of library space [m ²]	10 m ²
Surface of laboratory space [m ²]	410 m ²
Surface of area for student's standard (accommodation, food, recreation) [m ²]	65 m ²
Number of amphitheatres and/or large classrooms	1
Number of classrooms	6
Number of sitting places for teaching process for the students	230
Number of computer's cabinets	10
Number of computers in computer's cabinets	11
Total number of computers	36
Number of laboratories	11
Total number of library units	1944
Total number of books in libraries	730

Number of library staff members	-
Total number of administrative staff members	3
Total number of staff in student's service	1

2. IMPLEMENTATION OF SELF-EVALUATION

2.1. Team for self-evaluation

At the regular XL session of Biotechnical Faculty, the members of the Team for self-evaluation of the study program of II cycle of study- Sustainable food production systems (03-1552/2022 dated 29.9.2022. – **Attachment no.1**), have been appointed. Ms. Vildana Jogić professor, PhD, associate professor, leader of II cycle of study, was appointed as a president of Team; Mr. Emir Mujić professor, PhD, associate professor, teacher at the study program of II cycle Sustainable food production systems and at the same time, she is a representative of academic staff, was appointed as a deputy president; Ms. Ešefa Halilagić was appointed as a representative of administrative staff and the student's service; and Mr. Emrah Kazaz, the student of II semester of the study program of II cycle -Sustainable food production systems, was appointed as a representative of students.

2.2. Self-evaluation procedure

The self-evaluation procedure was performed in accordance with the recommendations of the Team for assurance of quality and through detailed insight into documentation of the Agency, which documents directly determine the course and the content of study programs' accreditation process:

- [Criteria for accreditation of the study program](#)
- Decision on norms ([Minimal standards](#))
- [Methodology of writing the reports by the side of expert's Commission](#)
- Regulations of University of Bihać are available at [web page of University](#).

The members of the Team for self-evaluation of the study program of II cycle of study, held their first meeting on Wednesday 30.9. 2022. Then, regarding the obligations related to preparation of self-evaluation reports, the tasks have been assigned and the new meeting was convened for Thursday 21.10.2022. At their second meeting, the members have presented the undertaken activities. Then, based on the scope of work done by the Team members, the President of Commission, has completed and amended the self-evaluation report and he assigned the following tasks related to completion of attachments. The third meeting was held on 25.11.2022, when the report together with the attachments, was completed and the president was made accountable for detailed review of the report, technical corrections and delivery to the Team; the same report was forwarded to the Team in electronic form on 13.12.2022.

After having an insight into the report, the Team for assurance of quality of Faculty of Biotechnology, has convened the meeting with the members of the team for self-evaluation of the study program on 27.12.2022, where the objections and comments were given. The course of further activities has been agreed at the meeting, in order to accept the objections; the report was corrected and sent to the president of Team.

After the Team has given the positive opinion on the report, the report was submitted to the Scientific-teaching council of Biotechnical Faculty, for their review and adoption at XLIII (forty third) regular session on 16.01.2023.

Decision on adoption of Report on conducted self-evaluation and internal evaluation of the study program of the II cycle of study -Sustainable food production systems at the Biotechnical Faculty of University of Bihać (number: 06-851/23 dated 2.3.2023), was passed on, at the regular session of Senate held on 2.3.2023

Attachment no. 67. Minutes of the Team's meetings.

Attachment no. 68. Decision on adoption of self- evaluation report of the study program of the II cycle of study- Sustainable food production systems at the Biotechnical Faculty of University of Bihać, no.03-83/2023 dated 16.1.2023.

Attachment no. 69. [Decision on adoption of report on conducted self-evaluation and internal evaluation of the study program of the II cycle of study- Sustainable food production systems at the Biotechnical Faculty of University of Bihać \(number: 06-851/23 dated 2.3.2023\).](#)

3. CRITERIA FOR ACCREDITATION OF STUDY PROGRAM OF FIRST AND SECOND CYCLE OF STUDIES IN BOSNIA AND HERZEGOVINA

- 3.1. *Policy of assurance of quality of study programs*
 3.2. *Higher education institution has established publicly available policy of internal assurance of quality of the study programs, as a part of its strategic management*

At XXX regular session of Senate of University of Bihać held on 28.11.2018, the Policy of assurance of quality of study programs, has been passed on, in accordance with the current Mission, Vision and Policy of quality of University, strategic documents, legal and other norms and requests within the system of Higher education in Bosnia and Herzegovina.

[Attachment no. 15. Policy of Quality assurance of the study programs number 06-6582/18 dated 28.11.2018.](#)

Assurance of quality of study programs at the Biotechnical Faculty, is presented through the activities performed by Team for assurance of quality at the Biotechnical Faculty. The Team is obliged to do the evaluation of self-evaluation surveys for students, for each semester; they make a report and submit it to the Scientific-teaching council of the Faculty. Within these reports, certain measures are recommended to the Dean and Scientific-teaching council, in case some of the teachers did not obtain the positive grade or in case the pass level at the study program is very low.

Attachment no. 16. Decision on appointment of Team for assurance of quality at the Biotechnical Faculty of University of Bihać (no.03-358/2021 dated 17.02.2021)

Attachment no. 17. Report of Team for assurance of quality on evaluation surveys for academic year 2020/2021 (03-1243/2022 dated 15.07.2022)

- 3.3. *Policy of assurance of quality of study programs is oriented to the promotion of: research work, learning and teaching, mobility and internationalization at the study programs, and also prevention of plagiarism of teacher's works and final thesis of the students at all the cycles of studies*

In the document of Senate - Policy of assurance of quality of study programs, which was passed on at XXX regular session of Senate of University of Bihać, held on 28.11.2018, among the other things, the promotion of research work, learning and teaching, mobility and internationalization at the study programs, was pointed out, as well as the prevention of plagiarism of teacher's works and final thesis of the students at all the cycles of studies.

[Attachment no. 15. Policy of Quality assurance of the study programs number 06-6582/18 dated 28.11.2018.](#)

The scientific-research work is being done at the study program, aiming at development of science and creativity, improvement of teaching process quality and quality of technical activity, professional training of scientific youth. The study program requires from all its teachers to deal with the scientific-research work, within their field of occupation. Thus, it has been enabled that the teachers do apply the elements of research and concrete practical issues, to the educational contents which they transfer to the students. The promotion of research work at the study program of the second II cycle of Sustainable food production systems, is presented through the active participation of academic staff and students at numerous conferences, scientific meetings, symposiums, and through publishment of the research results, in a form of thesis in different journals. Due to pandemic caused by virus Covid 19, the activities have been performed at lower scale, but the students were in position to perform the researches within their Master's thesis, which results would be published in a form of scientific work/paper. The structure and the content of curriculum of the study program, are in accordance with the modern didactic approaches, such as : modern teaching methods, innovations in teaching process, performance of practical exercises, all this aiming at learning and studying at the study program. The teaching process is interactive, of modular type of lecturing, interdisciplinary and multimedia. The essential feature of teaching process is the understanding of teaching process and appearances in modern agricultural production.

Regular teaching process, which encompasses lecturing and exercises, is followed up by professional practice, make out of seminar's thesis and presentations, which ultimately enables the continuous learning and studying to the students at the study program.

It is a fact that a certain number of teachers and researchers at the Faculty, who are involved in realization of the second II cycle of Sustainable food production systems, are at the same time the participants of Erasmus+ project ("MSc in Sustainable Food Production Systems / STEPS", 598963-EPP-1-2018-1-AL-EPPKA2-CBHE-JP), which is namely related to the development of curriculum and establishment of laboratory-infrastructure preconditions ("Laboratory for food quality control" and "ICT Center for food production systems management"). This Project, as well as many other Erasmus+ projects, is being realized through joint efforts of several universities out of the Western Balkan's countries (Bosnia and Herzegovina, Albania, Kosovo) and partner's universities out of the EU countries (Greece, Czech Republic, Romania). The students and the teachers of the study program are entitled to spend certain period of time at the other Higher education institution in Bosnia and Herzegovina or abroad, in the framework of international exchange programs for students and teachers. Mobility of teachers who perform teaching process at this study program in academic years 2020/21 and 2021/22, was realized through Erasmus+ ICM mobility program financed by EU, (International Credit Mobility Week "Internationalizing Higher Education Institutions beyond the European borders). Due to pandemic of Covid 19 and the travel restrictions, the mobility of teachers and students, was not realized in full, as it was the case in the previous years. The mobility of teachers who perform the teaching process at this study program in academic year 2020/21, was realized through Erasmus+ ICM mobility program financed by EU, (International Credit Mobility Week "Internationalizing Higher Education Institutions beyond the European borders). This program was used by the following teachers: Mr. Emir Mujić, PhD, Ms. Azra Skender PhD, Ms. Zemira Delalić PhD, Ms. Azra Bakrač PhD (<https://btf.unbi.ba/>, <https://www.facebook.com/biotehnicki.fakultet.5>). Within the activities of the work package of **WP3 Erasmus+ CBHE STEPS** project and continuous support and improvement of science, and teaching capacity of scientific staff in domain of "*Sustainable food value chain management; Introduction to supply chain; Sustainable management*" on 21st May of 2021, online training was organized for scientific staff, for students, engineers and managers from the partner's countries of STEPS project. This online training was performed by Mr. Giannis Tsoulfas docent PhD, the professor of University of Agriculture in Athens (AUA) ([Erasmus+ CBHE MSc STEPS UNBI BLOG](#)).

Attachment no. 18. Certificate of attendance

Attachment no. 19. List of expert's and scientific meetings, journals and published thesis, as a result of scientific-research work (and/or artistic work) of academic staff involved in implementation of study program for academic year 2020/21.

Attachment no. 20. Forms of teaching process performance – Report on implementation of teaching process at the course of Sustainable food production systems and analysis of pass level for academic year 2020/21.

3.4. The Policy supports development of quality culture where all internal participants contribute to the quality of study program, and the Policy defines the way of involvement of external participants into this process

The Policy of assurance of quality of study program, supports the development of quality culture through active involvement of internal participants in preparation, realization, analysis and (self) evaluation of study programs, i.e. through minimal involvement of external participants in preparation and evaluation phases of study program.

The Team for make out of study program, includes certain number of academic, additional and technical staff and students of study program, and during the make out of study program, the academic staff of study program was involved in preparation of study program, in such a way that they submitted syllabus for subjects, as well as, through the promotion of study program ([Erasmus+ CBHE MSc STEPS UNBI BLOG](#)). During the make out of study program, the following companies were contacted in a role of external participants: Meggle, d.o.o. Bihać, Bihać brewery d.d., Mavi d.o.o. Travnik, AC food d.o.o. Velika Kladaša, KolMix d.o.o. Velika Kladaša, Milk-San, d.o.o. Sanski Most, Meet industry d.o.o. „MS Alem“, d.o.o Meet Industry Karajić Velika Kladaša, Specialized beekeeping co-operative Apimed, Specialized agricultural co-operative AgroDar, d.o.o. EE-commerc Bihać, cattle Farm „Perna-F“, Institute „Food development Center- Emona RCP“ (Ljubljana, Republic of Slovenia), Factory of green fodder- Jata Emona

(Ljubljana, Republic of Slovenia), Company Nestlé, Klas d.d. Sarajevo, d.o.o. Akova Impex Sarajevo, d.o.o. Sinalco BiH Sarajevo, d.o.o. Sava semberija Bijeljina, d.d. Vitaminka Banja Luka, d.d. Milkos Sarajevo Dairy, Meet industry d.o.o. Argeta Sarajevo, d.o.o. Ledo Čitluk, d.o.o. Lactalis BH Gradačac, Zenica Milk industry d.d. „ZIM“, d.o.o. Poljorad Travnik, d.o.o. Milk industry 99 Gradačac, d.d. Sarajevo brewery, d.o.o. Bosnaplod Brčko, d.d. Winery čitluk Čitluk, d.o.o. Hercegovina product, Čitluk, d.o.o. Hepok Mostar, Coca-Cola HBC B-H Sarajevo.

Out of domain of public administration and decision making bodies, institutes and local communities, the following institutions have been consulted: Ministry of Foreign trade and economic relations of Bosnia and Herzegovina, Federal Ministry of agriculture, Water management and Forestry Sarajevo, Ministry of Economy of Sarajevo Canton (Office for enlargement services), Regional Development Agency for Herzegovina - REDAH, Co-operative Alliance of Federation of Bosnia and Herzegovina, Federal Agricultural Institute in Sarajevo, Federal Agro-Mediterranean Institute in Mostar, Development Agency Žepče - RAŽ, Federal Institute of Agro-pedology Sarajevo, Ministry of Education, Science, Culture and Sport of Una-Sana Canton, Ministry of Economy of Una-Sana Canton, Development Agency of Una-Sana Canton, Ministry of Health, Labor and Social policy of Una-Sana Canton, Ministry of Agriculture of Una-Sana Canton (competence over the entities dealing with food), Veterinary Institute of Una-Sana Canton, Agricultural Institute of Una-Sana Canton, Public Health Institute of Una-Sana Canton, Municipality of Bihać (Department for local economic development and Project Management), Municipality of Cazin (Service for agriculture and consultation), Economic Chamber of Una-Sana Canton, SERDA – Agency for development of economic region of Sarajevo, IFAD – International Fund for development of agriculture, The Institute for public health of Federation of Bosnia and Herzegovina, Organic inspection „OK“ Sarajevo.

The following academic communities/institutions, have been consulted in Bosnia and Herzegovina and abroad: Biotechnical faculty of University in Bihać, the Faculty of Agriculture and Nutrition of University of Sarajevo, the students of the first study cycle of Biotechnical Faculty in Bihać and the students of the Faculty of Agriculture and Nutrition of University of Sarajevo (agricultural and nutritional courses), the Faculty of Technology of University of Banja Luka, the Faculty of Agriculture of University of Banja Luka, the Faculty of Technology of University of Tuzla, the University of León (Institute of hygiene and Nutrition technologies, Spain), the University of Klagenfurt (Department for organization, human resources and service management), Centro Tecnológico da Carne (Center of Technology, Spain), the Faculty of Agriculture of University of Zagreb (Institute for plant production), Faculty of Agriculture of University of Novi Sad, University of Josip Jurja Strossmayer of Osijek, Secondary agricultural school "Sanus futurum" Sanski Most, active students of Biotechnical Faculty, graduated students of Biotechnical Faculty - Agricultural course.

The culture of the study program quality, in terms of implementation, analysis and evaluation of the study program, is being achieved through the activities of the Team in charge of assurance of quality at the Biotechnical Faculty, i.e. it is achieved through the reports on evaluation surveys of the students for the academic year, as well as, through any other activity which presents to the public the work of the faculty in capacity of education-scientific institution.

Attachment no. 21. Policy of quality assurance ([Erasmus+ CBHE MSc STEPS UNBI BLOG](#)) and ([@stepsbtf.unbi](#))

Attachment no. 22. Study program – Information on participants in charge of study program preparation (no. 06-2391/2020.dated 29.09.2020.), (pages 10 and 11) ([Stakeholder-Database-Sample-for-Surveys-UNBIUNSA.pdf](#))

4. DESIGNING AND ADOPTION OF THE STUDY PROGRAMS

4.1. The Higher Education institution has implemented the procedures for designing and adoption of study programs which involve the students and all the interested parties/stakeholders

The Team in charge of the study programs preparation, is obliged to submit the relevant study program to the academic staff, students, graduated students, representatives of economy and to the local community. Prior to the adoption of the study program proposal at the session of the Scientific-Teaching Council of the

Faculty, the study program must have received the positive grade by the side of the Center for assurance of quality and it must have gone through the internal evaluation of the University; afterwards, it is forwarded to the Senate of the University. At the fifth (V) electronic session of the Scientific-Teaching Council of Biotechnical Faculty held on 20.5.2020. (protocol no.03-834/2020), the curriculum (plan and program) of the second (II) study cycle for the course Sustainable food production systems, was adopted and the educational process is being based on that plan and program, and it has been confirmed by the Decision of the Senate of the University of Bihać at the tenth (X) electronic session held on 27.05.2020 and on 28.05.2020. (protocol no. 06-2391/2020.dated 28.05.2020).

An aforementioned Decision was submitted to the Ministry of Education, Science and Sport of Una-Sana Canton, for their approval and inscription of the study program in the Register of Higher Education institutions, column B-record of the study programs (no. 10-34-5905-2/20. dated 01.06. 2020). The co-operation with the certain number of the external actors/stakeholders, as enumerated in the chapter 1.4, has been continued (the agreements were signed with the Biotechnical Faculty, attachments nos. 12, 62 and 63), and also in the form of student's study visits within the ongoing implementation of the educational process ([signed agreements](#)).

Attachment no. 3. Decision on adoption of the Educational plan and program (curriculum) for the second (II) study cycle- Sustainable food production systems (no. 03-834/2020. dated 20.05.2020).

Attachment no. 23. Evaluation of the proposal of the study program- department Sustainable food production systems, course-Sustainable food production systems of the Biotechnical Faculty of University of Bihać (no. 09-2248/20 dated 18.05.2020).

Attachment no. 24. Decision on establishment of the study program second (II) study cycle- department: Sustainable food production systems, course-Sustainable food production systems of the Biotechnical Faculty of University of Bihać (no.06-2391/2020 dated 28.05.2020).

Attachment no. 25. Approval issued by the Ministry of Education, Science and Sport, for the introduction of new study program at the second (II) study cycle of the Biotechnical Faculty of University of Bihać, department: Sustainable food production systems, course-Sustainable food production systems (no.10-34-5905-2/20 dated 01.06. 2020).

Attachment no. 26. [Rule-book on procedures for proposing, acceptance, implementation and follow up of the realization of the study programs of University of Bihać dated 29.9.2011. number 06-4294/11. article. 5.](#)

4.2.Goals of the study program and learning outcomes are clearly defined and they conform with the content of the study program and the level of the study cycle and they are in accordance with the strategy of the institution

The goal of the study program of the second (II) study cycle- Sustainable food production systems is an upgrade and expansion of knowledge and skills acquired at the first (I) cycle of accredited studies of agricultural and nutritional courses, and also enabling the students to develop abilities of critical way of thinking, improvement of the skills of team work and individual work, also development of students aspirations for the performance of scientific research, leading them to the higher level of professional and scientific knowledge in this domain, as well as enabling them further professional development. The study program is structured in such a way that on one hand, it offers the disciplines out of domain of nutritional and agricultural engineering, safety and quality of food, and on the other hand, it offers the disciplines which are grouped around the management of Sustainable food production systems, along with the modern methods of educational process realization and it insists on interactive involvement of the students. The goals are clearly defined and the outcome is a formation of the title-Master of profession, having a lot of transferable knowledge and skills, newly structured expert knowledge and having a high competence for planning, development, designing and management in the framework of complex, economically, socially and environmentally accountable food production systems.

4.3. Goals of the study program and learning outcomes are comparable to the same and/or similar programs at the Institutions of higher education in B&H and abroad

The preparations for the proposed study program, were done through the joint activities of the teaching staff of the Biotechnical Faculty in Bihac and the Faculty of Agriculture and Nutrition of University of Sarajevo. Within the scope of the project activities of Erasmus+ STEPS project, an insight into almost all study programs of agricultural and nutritional technologies, being implemented throughout the Universities in Bosnia and Herzegovina, in the Region and in the Universities in the world, has been made. The aim of this search was primarily to verify the extent of representation of the study programs/subjects that are directly or indirectly related to the studying of sustainability elements within the food production systems. The comparability of the study program focusing on goals and learning outcomes of the similar programs at the Higher education institutions in B&H and in the world, has been described in details in the study program Sustainable food production systems, chapter 1.8.1. *Comparability of the study program to the programs of similar accredited study programs in Bosnia and Herzegovina and in the world* ([Study program SUSTAINABLE FOOD PRODUCTION SYSTEMS-STEPS-Erasmus-bs-2](#)).

<https://www.ppf.unsa.ba/>

4.4. The learning outcomes are defined and stated at each level of the study program, they are linked to the qualification standards, Qualification framework in B&H and to the Qualification framework of the European domain of the higher education (FQ-EHEA)

The Team for preparation of the study program, have used the Qualification framework in B&H and the Qualification framework of the European domain of the higher education (FQ-EHEA) which fact was clearly stated in the study program within the list of applied regulations of University during the preparation of the study program, and the learning outcomes are stated for each level of the study program, since they are clearly defined in syllabus of the subjects for each subject, but they are also clearly defined at the end of the study program.

[Attachment no. 27. Manual for implementation of qualification framework in higher education](#)

[Attachment no. 28. Study program – List of applied regulations at the University \(page 8\), Learning outcomes of second \(II\) cycle of studies \(page 26\) and Syllabi of subjects \(pages from 38 - 60\), \(no. 06-2391/2020. dated 29.09.2020\)](#)

4.5. Curriculum minimally contains: review of compulsory and optional subjects, framework content of teaching material for each subject (divided according to the number of weeks/teaching units within one semester), overload of the students per subject, point value of each subject expressed in accordance with ECTS, methods of verification and valuation of continuous student's acquiring of knowledge, ECTS point value of final thesis at I and II cycle of studies, depending on status of institution, methods of quality assurance, list of mandatory and additional literature for each individual subject, obligatory and specific equipment needed for performance of program/subjects according to the requests of scientific/artistic domain.

Within curriculum and the cycle of studies of the study program, the review of compulsory and optional/elective subjects for each semester and each year of studies, was presented, while the syllabi of the subjects precisely state: ECTS point value of the subject, content of subject, methods and terms of examination, as well as the list of mandatory and recommended literature.

Attachment no. 29. Study program – Curriculum for II cycle of studies (page 24.) and syllabi of teaching subjects (page 38), (no. 06-2391/2020. dated 29.09.2020).

4.6. Higher education institution provides: interdisciplinarity/ multidisciplinary of curriculum, internationalization of curriculum, interaction with professional practice, realization of practical exercises and active involvement of students in scientific/artistic research within the study program

Interdisciplinarity and multidisciplinary of the study program, is presented through diversity of study subjects out of domain of agriculture and nutritional technology, as well as the social sciences, and also through the used reference points, while making the study program. The study program enables the internationalization through the exchange of students and teachers, using CEEPUS and ERASMUS programs, but unfortunately during the academic year, it did not happen, due to the pandemic caused by Covid 19. The teaching process is being performed in well-equipped and adequate rooms from spatial point of view, in the laboratories, supported by competent technical services. For certain subjects, the practical exercises are foreseen by the study program, which are being performed in the laboratories of the Faculty, in the experimental plots of land, experimental fields/yards and through the study visits to the farms, food industries, institutions and similar.

Attachment no. 30. Strategy of internationalization of University of Bihać 2018-2023 dated 29.10.2018

Attachment no. 31. Study program – Information on used reference points (page. 9), Forms of teaching process performance (page 16) and Support to the students (no. 06-2391/2020 dated 29.09.2020), (page 17) https://btf.unbi.ba/?page_id=3871

5. LEARNING, TEACHING AND VALUATION ORIENTED TO THE STUDENTS

5.1. Academic staff who performs the teaching process, have been previously prepared and motivated for that activity, and during the preparations for that activity, they took into consideration the results of questionnaires of evaluation of learning quality and teaching, by the side of students

The Team for quality assurance at the Biotechnical Faculty, submits the reports on a regular basis to the Scientific-teaching council's sessions, which reports, apart from other issues, contain the results of surveys performed by the students. Self-evaluation surveys/questionnaires which are filled up by the students using info service, contain 10 questions related to each teacher within the subject. Since the course -Sustainable food production systems have been designed on modular principle of performance and organization of teaching process, and due to the fact that info system of Biotechnical Faculty, does not recognize such a model, the Center for quality assurance at the University of Bihać, was not in position to organize and perform the evaluation survey using the usual procedure. From that reason, the evaluation survey was performed by using the special LMS STEPS platform created at Massive Open Online Courses – MOOC (Studio Home | STEPS - Studio steps-project.eu).

Within the survey, where the students evaluate the work of teachers and assistants, there are some questions to be asked. The students have set up the scale of satisfaction for each question, introducing the grades from 1 to 5, meaning: 1 – very poor, 2 - poor, 3 - good, 4 – very good and 5 - excellent, and there is a column-comments, where any suggestion/opinion could be made.

According to the recommendation of the Center for quality assurance and internal evaluation of University, due to the relevance of data, those teachers who were evaluated by 5 or more students, have been taken into consideration. Before presenting the results, it would be important to point out, that according to the regulations of the University, all the results over 3,0 are considered positive and as such, they are satisfactory. The results of survey are public and they are being presented at the sessions of the Scientific-teaching council of the Biotechnical Faculty, and then, the certain measures are proposed, in case some of the teachers were not positively evaluated.

Attachment no. 17. The Report of Team for assurance of quality for evaluation surveys, for academic year 2020/2021 (03-1243/2022 dated 15.07.2022)

5.2. Academic staff motivates and involves the students to take over an active role in research work, scientific-research and teaching-educational process, using adequate orientation, consultations and support.

The students are actively involved in research work and scientific-research process, through make-out of Master's thesis, participation at conferences, seminars, projects. Due to the fact that at the second (II) cycle of studies, the students have not yet finished their Master's thesis, the document Master's thesis application, is being attached as the evidence of their scientific-research work (Attachment no. 32). During the studying process, the teachers are available to the students for consultations in certain period of time, where the students may ask for the assistance, in case they need it.

During the preparation of the Master's thesis, the students receive maximal support by the side of their mentor, in terms of conducting the research, composing the Master's thesis or for any other clarification the student might need during the make-out of the Master's thesis. The students contribute to the teaching-educational process, through their participation at the sessions of Scientific-teaching council of the Faculty and through making decisions process, regarding the fact that the vote of the student at the sessions of Scientific-teaching council, is fully equal to the vote of any other academic staff representative.

Attachment no. 32. Master's thesis application

Attachment no. 33. Minutes of the Scientific-teaching council's session of the Biotechnical Faculty - the representative of II cycle of studies (no: 03-154/20 dated 23.01.2020).

5.3. Students are being graded by using the procedures available for public; these procedures refer to fair, transparent and consistent grading process, and also other different forms of verification of knowledge and skills are being used, in accordance with specific circumstances and goals set up by the study program

The concerned teacher is obliged, among the other issues, to inform the students during his first class hour, about the structure of the total number of credits/points, and also about the methodology of forming the grades. For each separate form and valuation of knowledge, certain number of points is being assigned to the student, in accordance with ECTS rules. In the structure of the total number of points, at least 50 % must be foreseen for activities and knowledge verifications during the semester.

All the results of verification of work and knowledge of the students during the teaching process, must be registered by the concerned teacher into the student's ECTS card (info-system). After the termination of teaching process and after the final exam, the teacher defines the total number of acquired points and he/she forms the final score/grade for each student. All these enumerated elements are defined by the document Rules of studying at the second (II) cycle (06-1698/2010 dated 14.06.2010), which rules have been revised to the new Rules of studying at the second (II) cycle (02-4214/2021 dated 7.10.2021). These rules refer to the students who are enrolled at the second (II) cycle of studies of the Biotechnical Faculty of University of Bihać for academic year 2021/2022., i.e. they refer to the students of the second generation of Sustainable food production systems, who started studying in academic year 2022/2023.

[Attachment no. 34. Rules of studying at the second \(II\) cycle no. 06-1698/2010 dated 14.06.2010. \(article. 27-30\).](#)

Attachment no. 35. Study program – Grading System (no. 06-2391/2020. dated 29.09.2020), (page 17)

Attachment no. 36. ECTS student's card, https://btf.unbi.ba/?page_id=3871

5.4. Grading procedures regulate the following: organization of tests and exams, criteria and grading methods of the teachers and the board, transparency of grading and possibility of lodging the complaints to the grading process, by the side of student

Transparency of grading process is presented through the public verification of knowledge. The teacher is obliged to allow an insight into the student's written work and also to explain to the student what are the faults/shortcomings of his work, regardless the grade he has achieved. In case the student considers that he was deprived during the grading process at the final exam, he is entitled to take the exam again, in front of

the board. The request for repeating the exam must be submitted to the Dean within 24 hours, after having an insight into the work. In case the Dean considers this request as justified, he makes a decision and inform the concerned teacher and the student about it, then the board is being appointed.

[Attachment no. 34. Rules of studying at the second \(II\) cycle no. 06-1698/2010 dated 14.06.2010. \(article. 27-30\).](#)

[Attachment no. 37. Rule-book on passing of exams dated 30.12.2010. number 06-4344/10.](#)

Attachment no. 38. Study program - syllabi of the subjects (no. 06-2391/2020. dated 29.09.2020), (pages from 38-60), https://btf.unbi.ba/?page_id=3871

5.5. Higher education institution has established the procedure which defines the make-out process, the structure and valuation of the Master's thesis of the students of II cycle of studies, the rights and obligations of the students and mentors and the conditions for mentoring.

After being enrolled to the II semester of study, the student is entitled to choose the Master's thesis subject. The Master's thesis subject is chosen out of the technical subjects contained in study program and the mentor of Master's thesis is the teacher of domain where the chosen subject belongs to. If Master's thesis is composed of several segments, or it also includes the practical exercises, the student could choose two mentors, but one of these mentors should be the teacher of the subject to which domain Master's thesis belongs. Mentor leads the candidate in his theoretical and research work and provides the assistance to the student in entire process of make-out of Thesis, such as:

1. selection of subject,
2. Definition of subject title,
3. Theoretic elaboration of the issue,
4. Establishment of definitions, valuation of criteria and structure,
5. Selection of methodology for research work, gathering, processing and analysis of data and verification of research methods.
6. Final layout of the Master's thesis.

The student makes the Thesis independently. Mentor is obliged to monitor the work of student, to advise him and to direct him to the literature, and he/she must review the Thesis and give his comments, not later than 14 days after the Thesis was handed over to him/her. After he/she passed all exams foreseen by curriculum, the student is entitled to defend the subject of his Master's thesis.

Attachment no. 39. Rules of studying at the second (II) cycle (mentor, application and defence of Master's Thesis) no. 06-1698/2010 dated 14.06.2010. (articles from 25 - 38.).

Attachment no. 40. Study program – Path to knowledge (no. 06-2391/2020. dated 29.09.2020), (page 18), https://btf.unbi.ba/?page_id=3871

5.6. Representatives of students are involved in work of bodies of Higher education institution, which is competent for making decisions on study programs

The Association of students of Biotechnical Faculty, selects and appoints the representative of students, who is involved in work of Scientific-teaching council of Biotechnical Faculty. The representative of Association of students of Biotechnical Faculty, is automatically the member of the quality assurance Team at the Biotechnical Faculty. One of the members of the Team for self-evaluation of the study program - Sustainable food production systems, is the student of the same study program.

Attachment no. 33. Minutes of the session of Scientific-teaching council of Biotechnical Faculty – the representative of II cycle of studies (no: 03-154/20 dated 23.01.2020)

Attachment no. 1. Decision on appointment of Team for self-evaluation of study program- Sustainable food production systems

6. ENROLLMENT AND ADVANCEMENT OF STUDENTS, RECOGNITION AND CERTIFICATION

6.1. Enrolment of students to the study program of any cycle, is based on: law regulations, clear and transparent criteria, including verification of knowledge, aspiration and abilities of the candidates and their results during previous education, and in accordance with analyzed social needs and provided resources for performance of program. Public competition for enrollment is published at web page of the institution and in the media

The second II cycle study enrollment is done upon the public competition issued by Senate, and proposed by the Scientific-teaching council of organizational units, in accordance with the provisions of the Statute of University. The candidates who terminated first cycle of studies at accredited Higher education institutions, are entitled to enroll the second II cycle of studies, in accordance with the article 154 of Statute and according to special decision made by Senate for those candidates who do not fulfil the criteria of achieved minimal average grade (which encompasses additional knowledge verifications, additional exams and similar), and in accordance with the provisions of articles 62 and 63. Paragraph 1 of the Law on Higher education of Una-Sana Canton. The Competition notice is published at web page of Faculty and in media (<https://btf.unbi.ba/?p=2043>).

[Attachment no. 41 a\). Public competition for enrollment of students to I \(first\) year of second II cycle of studies at Biotechnical Faculty of University of Bihać in academic year 2020/2021](#)

Attachment no. 41 b). Decision on prolongation of term for enrollment applications of students at I (first) year of II and III cycle of study for academic year 2020/2021 at the faculties of University of Bihać

Attachment no. 42 a). Ranking list of candidates who applied

Attachment no. 42 b) Board for establishment of conditions for enrollment to the second (II) cycle of studies

Attachment no. 43. Study program – Conditions for enrollment and re-enrollment to the study program (no. 06-2391/2020. dated 29.09.2020.), (page 26), https://btf.unbi.ba/?page_id=3871

6.2. Procedures for recognition of higher education qualifications, period of study and previous learning, which means also the recognition of unformal and informal learning, have been established. The recognition procedures are in accordance with Lisbon convention on recognition

The Rule-book on nostrification procedure and on equivalency of foreign school's diplomas, regulates the recognition of foreign higher education qualifications and cycles of study, and recognition of foreign diplomas for elementary, secondary education levels and for study of I cycle. Also this Rule-book regulates the procedure of equalization of the previously acquired professional title with new academic title according to the Law on higher education. In case there is transferee to the study program, Commission for recognition of exams, reviews the subjects passed by the transferee at the former study and compares it with the curriculum of study program; then the Commission writes a report and submits it to Scientific-teaching council of the Faculty.

[Attachment no. 44. Rule-book on nostrification and equalization of foreign school's diplomas \(Official Gazette of Una-sana Canton no.15/2012\).](#)

Attachment no. 45. Decision on appointment of Board for recognition of exams at Biotechnical Faculty (no. 03-1858 dated 30.10.2020.)

Based on articles 49, 50. and 107 of the Law on higher education of Una-Sana Canton, the Rule-book on content of public documents issued by Higher education institutions in Una-Sana canton, was passed on; this rule-book prescribes the content of public documents issued by Higher education institutions in Una-Sana canton. Public documents issued by higher education institutions are: diploma, diploma supplement, certificates (transcript of grades record and other certificates) and confirmations.

The study of the second cycle lasts for one year, which means for two semesters and brings up 60 ECTS points. The academic year is divided into winter and summer semester, and the teaching process within one semester lasts for 15 weeks. Organization and duration of teaching process are defined by the Rules of

studying at the second cycle of study at University of Bihać and by Rule-book on studying at the second cycle of study at the Biotechnical Faculty.

The teaching activities are performed in accordance with academic calendar which is established by Senate of University for each academic year, and in accordance with the teaching overload schedule which is occasionally announced by the leader of second II cycle of study, and adopted by Scientific-teaching council of the Faculty. The academic title which is being acquired by termination of the second cycle of study, is a Master of Nutritional technology, course Sustainable food production systems.

Attachment no.46. Rule-book on content of public documents issued by Higher education institutions in Una-Sana Canton (Official Gazette of Una-Sana Canton no. 15/10).

Attachment no. 47. Student's card

Attachment no. 48. Certificate of passed exams

Attachment no. 49. Certificate on regulation of status issues

Attachment no. 50. Organization and duration of teaching process at II cycle of study at Biotechnical Faculty

Attachment no. 50 a - i. List of academic staff performing the study program and the teaching process schedule

7. HUMAN RESOURCES

7.1. *The number and competences of academic staff (teachers and associates) and of non-academic staff, needed for realization of good quality study program, is in accordance with an appropriate document of the competent educational authorities that is in charge of setting up the criteria for licensing*

The standards and norms for dealing with the activity of higher education at the area of Una-Sana Canton, define that the activity of higher education could be dealt with the Higher education institution i.e. the study program, in case the institutions have fully employed at least ½ of teachers and ½ of assistants for all compulsory and optional/elective subjects, and the remaining number of academic staff, could be engaged from the economic, scientific-research or similar sectors.

Within the study program, more than 95% of total number of teachers, are employed on a permanent basis at University of Bihać, while insignificant number of the teachers are associates, who are coming from other higher education institutions or some other institutions, namely, Faculty of Agriculture and Nutrition Sarajevo. Due to the pandemic caused by Covid 19, [the lectures of guest teachers were held on-line](#) by using platforms Zoom and Google meet, but after the stabilization of the situation, the faculty organized the study visits of guest teachers ([Mr. Sabahudin Bajramović prof. PhD, a full time professor of chair for macroeconomics, agriculture and food industry and Milenko Blesić prof. PhD, a full time professor of chair for technology of food products of herbal origin, from the Faculty of Agriculture and Nutrition Sarajevo](#)).

Attachment no. 50 a - i. List of academic staff performing the study program and teaching process schedule

[Attachment no. 51. Standards and norms for dealing with the activity of Higher education at the area of Una-Sana-Canton \(Official Gazette of Una-Sana canton no.12/12\)](#)

Attachment no. 20. Forms of teaching process performance – Report on realization of teaching process at the course of Sustainable food production systems and analysis of pass level for academic year 2020/2021

7.2. *The higher education institution is in possession of well-defined policy of human resources management with clear and transparent criteria for employment of academic staff, assigned tasks, overload and responsibilities, criteria for professional development, advancement and professional upgrade of academic staff and established the mechanisms for monitoring of work of academic staff, along with the measures for improvement*

In connection with the Decision of quality assurance Board at University of Bihać (no. 09-3535/18 dated 11.06.2018.) and based on the articles 5 and 61 of the Statute of University of Bihać, the Policy of human resources management was enacted at XXX regular session of Senate of University of Bihać, held on 8.11.2018.

The percentage of 95% of qualified teaching staff (6 full time professors, 10 associate professors, 10 assistant professors/ docents and one assistant), do fulfil the needs of teaching process realization at the study program of II cycle of Sustainable food production systems. The process of advancement of teaching and associated staff, is going on through the fulfilment of conditions for advancement and professional development, according to the provisions of the Statute of University of Bihać. The procedures for appointment and advancement of the teaching staff, have been previously established, they are available in public through the Public competition announcements and these procedures are in accordance with the actual law regulations and confirmed by the Statute.

The criteria for advancement and professional development of academic staff, are clearly defined and they are presented through the appointments into professions, being adopted at the sessions of Scientific-teaching council, and they are being forwarded to the Senate of University.

[Attachment no. 52. Policy of human resources management at University of Bihać number 06-6583/18.](#)

Attachment no. 53. Appointments to the professional titles of the employees of the faculty, performing the study

[Attachment no. 54. Rule-book on employment plan of academic staff at University of Bihac 2018](#)

7.3. *Academic staff is dedicated to the research i.e. scientific-research and artistic work, especially through the international scientific-research projects, and through the joint activities of mentors and students on finding the grants and scholarships*

Engagement of academic staff in research work, scientific-research work, in scientific-research projects at the study program, is presented through the participation of academic staff to professional and scientific meetings, number of published thesis in scientific and professional journals, as well as, through realized projects. Joint activities of students and professors are oriented to applications towards national and international tenders for project's funding from domain of the study program. The students and professors are also involved into mobilities and trainings at the other scientific-research institutions outside B&H, which are financed from the national and European funds destined for exchange of teachers and students and their professional development. Due to pandemic caused by Covid 19, the activities were not realized in full capacity, as it was the case in pre pandemic or post pandemic period of time.

[Visit of prof. Azra Skender PhD, to the Faculty of Agriculture at Çukurova University in Adana \(Turkey\) within Erasmus+ ICM Staff Mobility program](#)

[Visit of prof. Emir Mujić PhD, at University of Çukurova \(Adana, Republic of Turkey\) within Erasmus+ ICM mobility.](#)

[Professor Zemira Delalić spent some time at the Faculty of Agriculture and Biosystem sciences of University of Maribor](#)

Attachment no. 8. List of expert's and scientific meetings, journals and published works, as a result of scientific-research work (and/or artistic work) of academic staff involved in realization of study program for academic year 2020/21

[Attachment no. 9. Program of conference - seventh INTERNATIONAL SCIENTIFIC – PROFESSIONAL CONFERENCE “5. JUNE – WORLD DAY OF PROTECTION OF ENVIRONMENT”](#)

[Attachment no. 10. Program of Rome conference](#)

7.4. *Administrative and additional staff have the possibility for development, through participation to the trainings, especially when it concerns IT systems and management systems*

The additional staff are enabled to improve through the participations to the trainings. According to the Law on safety at work (article 12), the additional staff is obliged to possess the Certificate for management and operation of power plants, which process is being organized by Faculty, and fire protection trainings are being organized, as well. Within the project ERASMUS+ - MSc in Sustainable Food Production Systems / STEPS, the training of additional staff in laboratory was done.

[Training of scientific and technical staff within Erasmus+ MSc STEPS project](#)

8. RESOURCES AND FUNDING

8.1. *Resources for study program performance which are in accordance with the Recommendations of the Agency for criteria of licensing of higher education institutions and study programs in B&H and in accordance with relevant document issued by the competent educational body in charge of setting up the licensing criteria, are sufficient and available to the students*

In the course of study program performance, the full-time teaching staff is being engaged at University of Bihać. The number of 26 teachers and one associate of different professions, are engaged in the teaching process. The need for engagement of the teachers outside the Biotechnical Faculty, is being fulfilled through the engagement of the teachers from University of Bihać or, occasionally, through the engagement of guest teachers, who are being selected through the competition procedure, separately for each semester. In average, 1 teacher and 1 associate, are engaged per semester. The study program is being performed at the premises of Biotechnical Faculty in "Grmeč" campus.

The teaching process (lectures, auditory exercises and seminar's exercises) is being performed in a specially equipped cabinet funded through aforementioned Erasmus+ project "MSc in Sustainable Food Production Systems / STEP", laboratory exercises are performed in Laboratories of Microbiology no. 1 and 2, and in laboratory of chemistry, for organization of "Laboratory for food quality control", which was also equipped through the aforementioned project.

Attachment no. 55a and b. Decision on coverage of teaching process at the Biotechnical Faculty of University of Bihać for academic year 2020/21 no. 03-1482/20 dated 22.09.2020.

Attachment no. 56. Study program – Resources needed for realization of the study program and the modality of their provision for the study program (no. 06-2391/2020. dated 29.09.2020.), (page 27), https://btf.unbi.ba/?page_id=3871

8.2. *Obligatory and specific equipment needed for performance of study program/subject, is available according to the scientific area/narrow scientific area. The higher education institution provides the obligatory and additional literature for each individual subject, which by its content supports the realization of subject*

Obligatory and specific equipment needed for performance of study program, is available; the procurement of equipment is enabled through STEPS project "Laboratory for food quality inspection" and "ICT center for food production systems management". The Faculty is in possession of significant number of laboratory equipment. Apart from the laboratory cabinet, the study program has available 11 well equipped laboratories needed for realization of the practical exercises, and it also possesses a semi-industrial device for processing; then it has experimental plots with two greenhouses needed for practical exercises. Basic and addition literature for each subject of the study subjects, is stated in syllabi of the study program. Basic and addition literature is provided to the students by the teachers of the subject (electronic version), but the same literature could be found in the library of the Faculty, both in a hard copy and in electronic version. List of the titles of the literature possessed by library, is also available to the students via info service of Biotechnical Faculty.

Attachment no. 57. Study program – Equipment (no. 06-2391/2020.dated 29.09.2020), (page 33), https://btf.unbi.ba/?page_id=3871

Attachment no. 58. [Decision on establishment of laboratory /IT cabinet for Sustainable food production systems management, within the project STEPS](#)

Attachment no. 59 a). Development of “Laboratory for food quality control“ within Erasmus+ project “STEPS / MSc In Sustainable Food Production Systems”.

Attachment no. 59 b). Development of „Laboratory for food production systems/ ICT-Center Management “ within Erasmus+ project „STEPS / MSc In Sustainable Food Production Systems”.

Attachment no. 59 c). Training of teaching staff

8.3. The Higher education institution makes available to the students and academic staff, sufficient number of computer premises having an access to internet and the library with adequate reading room, with browsers and scientific and other kind of databases

The surface of area for student's standard is 45 m²; there is a specially equipped room with 10 computers and fully supporting IT equipment, Wi-Fi connection, while each member of academic staff possesses in his/her office one computer with internet access. The library of Faculty possesses more than 1.994 library units which are relevant for studying of scientific and professional disciplines out of domain of biotechnological sciences, and it has an adequate reading room. The Cantonal and University library in Bihać, are also available to the students, as well as, the central library for all the students of University of Bihać.

Attachment no. 60. Study program - Space, equipment, furniture, library and other working conditions (no. 06-2391/2020. dated 29.09.2020), (page 21).

8.4. The higher education institution follows up the realization of plan of investments in physical resources and equipment needed for scientific-research work and teaching-educational activity

The investment in physical resources and equipment needed for scientific-research work and teaching-educational activity, is being done through the public procurement procedure over the year, but also it is done through the realization of projects, and thanks to such projects, significant part of equipment needed for scientific-research work, is being provided.

Attachment no. 61. Public Procurement Plan for 2020

Attachment no. 15. Budget for the year 2021, expenditure of funds according to the budget of the year 2020.

8.5. Through contractual relationship with the other Higher education institutions and research centers, the Higher education institution, enables the use of their resources

The Biotechnical Faculty possesses a great number of signed agreements on co-operation with the other higher education institutions in B&H and abroad, as well as, with the research centers. During the research process, the academic staff is in position to use the resources of these institutions, while the students have the opportunity to use these resources during the realization of their professional practical exercises or in the course of the research work.

Attachment no. 11. Agreement on inter-institutional co-operation in domain of exchange of teachers and students at the study program of II cycle of studies Erasmus + STEPS " Sustainable food production systems.

Attachment no. 12. Agreement on cooperation with specialized co-operative named AgroDar
Agreement on scientific-professional and business-technical co-operation between the Biotechnical Faculty of University of Bihać and SPZ “AGRODAR” d.o.o. from Cazin

Attachment no. 62. Agreement on scientific-professional and business-technical co-operation (NET GREEN AGENT)

Attachment no. 63. Agreement on business-technical co-operation ("AGRICULTURAL INSTITUTE OF UNA-SANA CANTON")

9. STUDY PROGRAMS' INFORMATION MANAGEMENT

9.1. The system of regular collection and processing of information on all the aspects of study programs (success rate of students, leaving the studies, satisfaction of students, employment possibilities of graduated students etc.), is established and it is being used for improvement of quality of study programs

The Biotechnical Faculty is using the Student's information service for collection of data on teaching process, such as: number of students, pass level of the students, satisfaction of students expressed through surveys via Info service etc. The Team for assurance of quality of Biotechnical Faculty, once in each semester, does the review of the results obtained through the survey, by using the Student's information service; thus, the students evaluate the work of teachers, assistants and technical staff and the relevant reports on evaluation surveys are submitted to the Scientific-teaching council.

Since the course -Sustainable food production systems, have been designed on modular principle of performance and organization of educational process, and due to the fact that info system of Biotechnical Faculty, does not recognize such a model, the Center for quality assurance at the University of Bihać, was not in position to organize and perform the evaluation survey using the usual procedure. From that reason, the evaluation survey was performed by using the special LMS STEPS platform created at Massive Open Online Courses – MOOC (Studio Home | STEPS - Studio steps-project.eu).

Attachment no. 17. Report of Team for quality assurance on evaluation surveys for academic year 2020/2021(03-1243/2022 dated 15.07.2022)

In the study program -Sustainable food production systems, point 1.5 “Analysis of needs and opportunities”, related to the strategic goals of University dated 28.06.2017 number: 06-4332/2017, the strategic goals of University have been enumerated, such as education of young professional who would be capable through their qualifications and competences to respond to the needs and opportunities for development of agricultural production, primarily at the area of Una-Sana Canton and at the broader area as well, according to the resources available at the Canton and according to the possibilities of employment of qualified persons in this field. The reasons for introduction of the proposed study are, on one hand the recognized needs for the professionals at the educational level of Master of science, who would become experts for the issues of sustainability in complex food production systems, and on the other hand, the existence of the full range of inputs, which are already provided (stakeholder's analysis, analysis of good practices, analysis of similar study programs), or they will be provided/secured by the end of the project's implementation (additional equipping of laboratories, establishment of modern LMS platform, preparation of teaching materials and making them available)

9.2. The higher education institution collects and analyzes on regular basis, the following data: number and age of academic staff, gender structure, ratio of the teachers and students, ratio of its own teachers and guest teachers, results of surveys over teachers by the students

Administrative-technical service of Biotechnical faculty manages and disposes of documents and all other relevant information on employees of the Faculty. Upon the management's request, this Service submits the relevant reports from time to time. The Student's information system represents the database. Through the evaluation surveys, the students evaluate the work of academic and technical staff, as well as, the studying conditions. The results of surveys are processed by the Team for quality assurance at the Biotechnical faculty, and the Team submits the report to the Scientific-teaching council. All the reports are stored in the archive of the Administrative-technical service of Biotechnical faculty.

Attachment no. 17. Report of Team for quality assurance on evaluation surveys for academic year 2020/2021(03-1243/2022 dated 15.07.2022)

10. INFORMING THE PUBLIC ABOUT THE STUDY PROGRAMS

10.1. The higher education institution informs the public objectively and timely, by means of updated information on all the aspects of approved (licensed) and/or accredited study programs, which are being offered and the focus is given to the defined goals of the study programs and learning outcomes. The data on academic careers of the employed and engaged staff, are announced in public. Minimally 50% of the total number of information is in English language

The Biotechnical faculty of University of Bihać has a web page (<https://btf.unbi.ba/>) that is regularly updated, it is well arranged, transparent and simple for use. All the relevant information on studying, data on academic staff and scientific-research work, are available at this web page. Currently, the web page of Biotechnical Faculty is monolingual, but the information on study program [Sustainable food production systems is also available in English language, as well as all the additional information related to this study program.](#)

11. CONTINUOUS FOLLOW UP, PERIODIC EVALUATION AND REVISION OF STUDY PROGRAMS

11.1. Procedures for periodic evaluation, improvement and restructuring of the existing study programs, have been established. The Procedures include the opinion of students and other internal and external stakeholders

Every year, the Procedures for restructuring of existing study programs, are being analyzed by Scientific-teaching council of the Faculty, which body suggests the needed changes of the study program. The Scientific-teaching council, in agreement with the Team for assurance of quality and the Center, adopts any suggested change of the study program. Amendments of the study program at lower scale, are implemented after being adopted by Scientific-teaching council, and afterwards, the information on adopted amendments, is submitted to Senate and Center. In accordance with the adopted quality assurance system of University (filling in the form B-02), the realization of the study program is followed up. The analysis obligatory contains the results of surveying students, as well as, the recommendations for changes/improvements of the study program's realization. There were no suggestions for revision of the study program, but since the teaching process with the second generation of students is ongoing, the necessary information is currently collected from the students and academic staff, and the suggestions for eventual changes and innovations of syllabi is expected, in accordance with the latest technological achievements out of the domain of the study.

Attachment no. 2. Decision of Scientific-teaching council on introduction of new study program - Sustainable food production systems and appointment of Commission (no. 03-161/2022 dated 21.01.2020).

[Attachment no. 26. Rule-book on procedures for proposing, acceptance, implementation and follow up of the realization of the study programs of University of Bihać 29.9.2011. number: 06-4294/11. article 5.](#)

11.2. The higher education institution periodically evaluates the curriculum, the teaching process, extent of learning outcomes realization and their relevance for the labor market, through surveying the students, academic and administrative staff, and the feedback information is being used for innovations and improvement of the process

Periodic evaluation of curriculum is presented through the analysis being performed for each subject, in accordance with adopted quality assurance system at the University i.e. by filling in the form B-01. The evaluation of the study program is also being achieved through the self-evaluation surveys filled in by the students, and the results/reports of these surveys are being presented by Team for quality assurance at the Biotechnical faculty, to the Scientific-teaching council.

On its XXXIX regular session held on 20.07.2022, the Scientific-teaching council of Biotechnical faculty, has adopted the report of the Team for assurance of quality on evaluation surveys for the academic year

2020/2021. Within this report, the results for teachers who have been evaluated by the students with the highest and the lowest grades, were presented, and also the total grade/score for the teachers and assistants, was presented.

The Team for assurance of quality at the Biotechnical Faculty, within their reports, proposes certain measures to the Scientific-teaching council and to Dean of the Faculty, in case the teachers at the study program did not obtain positive i.e. passing grade. The described situation was not found in the course of surveys results' analyses for academic year 2020/2021.

Attachment no. 64. Decision on adoption of report of Team for assurance of quality on evaluation surveys for academic year 2020/2021 (no. 03-1308/2022 dated 20.07.2022)

11.3. The higher education institution follows up and evaluates the implementation of: action plan of internationalization, benefits from signed contracts on international co-operation, percentage of foreign students and professors; number and improvement of its students during their professional advancement and development abroad; employment of graduated students etc.

The realization of the action plan of internationalization, is presented through active involvement of students and staff into the work of Office for International Co-operation – in international activities, in promotion of international co-operation, thus creating the preconditions for applications for projects to the international funds. Through established co-operation with many institutions within Erasmus+ program, through CEEPUS III network, UNET network, the mobility of students and teachers of the Faculty and the study program, has been increased.

[Office for Scientific-research work and international co-operation of University of Bihać](#)

<https://www.facebook.com/internationalrelationsUNBI/>

[Attachment no. 30. Strategy of internationalization of University of Bihać 2018-2023 dated 29.10.2018. - LINK](#)

Attachment no. 7. Data on scientific-research work for the year 2020/2021.

11.4. Quality, modernity and availability of resources are evaluated through surveying of academic staff and students

After the end of one semester, the students are obliged to fill in the self-evaluation forms for each subject and for the teacher of that subject, by using info service of Faculty, and they have to provide the answers to all the questions of the survey. The surveys are anonymous and after being processed, the survey's results are available to all the teachers through the info service of the Faculty. The Center for assurance of quality of University of Bihać, was not in position to organize and conduct the evaluation survey by using the usual procedure, due to the modular type of teaching process performance, i.e. due to the engagement of greater number of teachers for one subject, based on scientific units, as described by syllabus of the subject. From that reason, the evaluation survey for that course was performed at the special LMS STEPS platform which was created on Massive Open Online Courses – MOOC (Studio Home | STEPS - Studio steps-project.eu).

Attachment no. 64. Decision on adoption of report of Team for assurance of quality on evaluation surveys for academic year 2020/2021 (no. 03-1308/2022 dated 20.07.2022)

12. MOBILITY OF ACADEMIC STAFF AND STUDENTS

12.1. The mobility of academic staff and students at the study program, is being promoted and improved through joint applications and participation to the projects, together with other national or international higher education institutions

Facebook page of Office for International Co-operation of University of Bihać, where the information on available scholarships for mobility of students and teachers, is being updated on a daily basis; this page is at the same time the way of communication with the students and teachers, in terms of mobility.

<https://www.facebook.com/internationalrelationsUNBI/>

At the section of web page of University of Bihać for international activities, mobility and projects, and at the web page of Biotechnical Faculty, the announcements on mobility programs, open calls and projects, are presented on a regular basis.

<http://unbi.ba/index.php/medusaradnja>

<https://btf.unbi.ba/>

Membership in international associations of higher education institutions – University of Bihać is a member of European association of universities- EUA.

The trainings for writing of projects and projects' applications, were organized for several times for all the interested staff (the applications were funded by University), such as:

<http://unbi.ba/index.php/8-objava-vijesti/203-kako-napisati-dobar-projekat-za-finansiranje-istrazivacko-inovacijskih-programa-eu-horizon-2020>

The Office for Scientific-research work and international co-operation, has organized several times an informative days presenting the possibilities and application modalities to the projects in co-operation with: EU Info center, Delegation of European Union in B&H, National Erasmus+ office in B&H, etc.

<http://unbi.ba/index.php/8-objava-vijesti/316-univerzitet-u-bihacu-i-direkcija-za-evropske-integracije-u-bih-organizirali-promotivni-dogadaj-bih-u-procesu-pridruzivanja-eu>

The greater number of scientific-research projects has been realized. The realization of 3 projects is underway. The first and the second project encompass the faculties in Europe and Region, while the third project encompasses the faculties in B&H:

- [MSc in Sustainable Food Production Systems / STEPS \(Erasmus+, Key Action - 2 Cooperation for innovation and the exchange of good practices-Capacity Building in the field of higher education\)](#)
- [Erasmus+ project “Educational Capacity Strengthening for Risk Management of Non-native Aquatic Species in the Western Balkans \(Albania, Bosnia and Herzegovina and Montenegro\)” – RiskMan](#)
- [EFSA project ”Support to National Dietary Surveys in Compliance with the EU MENU methodology \(sixth support\) - The adults’ survey, including subjects from 10 to 74 years old”](#)

12.2. Mechanisms for establishing the bilateral and multilateral exchange of students with foreign higher education institutions, through different programs and networks of student’s exchange, recognizing the periods of time, grades and ECTS points achieved during the period of exchange, are in place

The Rules of mobility at the University of Bihać were adopted in the year 2014 and the Rule-book on procedures for support to the international activities of University of Bihać, was adopted in the year 2011, by Senate of University of Bihać. These documents which have been adopted in the years 2014 and 2011, regulate the modality of application, recognition period, grade system and ECTS points acquired during the mobility.

[Attachment no. 65. Rules of mobility at University of Bihać \(no.06-7988/2014 dated 01.12.2014\)](#)

[Attachment no. 66. Rule-book on procedures for support to the international activities of University of Bihać \(06- 4295/11 dated 29.09.2011\)](#)

The University of Bihać has in total 94 active agreements on co-operation with the partner’s universities, NGO-s and institutes in Bosnia and Herzegovina and abroad, and some of these agreements of the study program are attached here (Attachments nos. 11 to 13). The students of the study program are regularly informed on possibilities of exchange within Erasmus+ ICM program, CEEPUS and Mevlana program, by means of information channels of the Office, and since there is a low interest of the students of this study program for the exchange, the Office for Scientific-research work and international co-operation, through the Strategy of internationalization of UNBI 2018-2022, has defined the concrete promotion and increase of incoming and outgoing mobilities, as one of the strategic goals, with clearly determined operational objectives and indicators of promotion and mobility increase plans.

12.3. Higher education institution, from human resources and financial aspects, strengthens the capacities of the services for international co-operation and two-way mobility of academic staff and the students. This service follows up and evaluates the mobility, and it submits to the Senate the annual report on mobility of academic staff and students, along with the proposal for improvement measures.

The Strategy of internationalization of University of Bihać for period 2018-2022, has been done within Erasmus+ KA2 project STINT – Strengthening of internationalization at the higher education institutions in Bosnia and Herzegovina and it contains clearly described strategic goals, the Action plan with priorities, activity holders/bearers and the budget, and it also contains the List and description of strategic programs (in connection with the strategic goals) and indicators for following up of the results at the level of the program.

The Office for Scientific-research work and international co-operation of University of Bihać, currently employs the three employees: Expert Advisor for inter-university co-operation in the country and abroad, Expert Advisor for scientific-research work and Senior Expert Advisor for projects' activities. Head of the Office is a Vice-Rector for Scientific-research work and for inter-university co-operation, who is appointed for four years mandate. Apart from the employees of the Office, the Teams for projects and international co-operation, have been appointed at the faculties, who are in charge of communication with the Office.

Attachment no 6. Decision on appointment of Team for Scientific-research work and international co-operation

Attachment no 5 and 5a. Decision on appointment of Vice Dean for Scientific-research work and extension of mandate

The mobility of the teachers performing the teaching process at this study program in academic year 2020/21, was presented through Erasmus+ ICM program of mobility, funded by EU, (International Credit Mobility Week "Internationalizing Higher Education Institutions beyond the European borders"). Within this program, the following teachers paid visits: Mr. Emir Mujić prof. PhD, Ms. Azra Skender prof. PhD, Ms. Zemira Delalić prof. PhD, Ms. Azra Bakrač prof. PhD (<https://btf.unbi.ba/>, <https://www.facebook.com/biotehnicki.fakultet.5>).

Facebook page of Office for International Co-operation of University of Bihać, where the information on available scholarships for mobility of students and teachers, is being updated on a daily basis, and this page is at the same time, the way of communication with the students and teachers, in terms of mobility.

13. CONCLUSIONS AND PROPOSALS OF ACTIVITIES FOR IMPROVEMENT OF THE SITUATION - SWOT ANALYSIS

STRENGTHS (S)	WEAKNESSES (E)
<ul style="list-style-type: none"> ▪ Clear vision and mission of Faculty. ▪ Own academic staff of good quality, who are internationally recognized and motivated. Active involvement in existing scientific and professional projects at international and national level, high motivation for continuation of activities and internationally recognized scientific papers/work. ▪ Well-equipped laboratories having specific equipment, enabling regular unfolding of the teaching process. ▪ Good quality communication between the teachers and the students, involvement of students in scientific projects, educations and trainings. ▪ Good international co-operation with higher education institutions and partners, in development of the study programs. ▪ Partnership with the local community, signed agreements with institutions, and institutes, where the students acquire additional practical knowledge and skills. ▪ Possibility of continuing the studies abroad. 	<ul style="list-style-type: none"> ▪ Insufficient (marketing) promotion of the study program, inexistence of modern methods for promotion of the study program, relying on “traditional” methods of announcement and attraction of students, lower number of enrolled students than foreseen by planned enrolment quotas. ▪ Constraints that are present in organization and performance of practical exercises of the teaching process, as foreseen by the study program in academic year 2020/2021, due to the pandemic caused by virus Covid 19. ▪ Lack of student’s activities and participation in the projects: expert’s panels and meetings, journals, exhibitions and professional lectures. ▪ Insufficient interest of the students in mobility of students. ▪ Insufficient number of needed professional literature for the field of Sustainable food production systems and impossibility of having the access to the relevant databases.
OPPORTUNITIES (O)	THREATS (T)
<ul style="list-style-type: none"> ▪ Education and professional training of 50 experts within next 5 years, who would be capable of ensuring the sustainable food production so called “from the field to the table”, and also enabling the export of readymade/final products. ▪ Geographic position of Una-Sana Canton and proximity of EU border, led by the policy "from the field to the table", gives the opportunity to the Faculty to become the leading institution for application of EU policy in this area. ▪ Continuing communication and cooperation with alumni for making strong bonds with the community (Alumni club) 	<ul style="list-style-type: none"> ▪ Reduced number of secondary/high schools’ students, lower number of University students. ▪ Unsatisfactory level of prior knowledge and work habits of the students being enrolled to the II cycle of studies. Impossibility of employment of new staff members at the Faculty and lack of young associates. The prominent experts are leaving and going to other institutions/companies, due to search for better work conditions; mostly, they leave to the EU countries. ▪ Frequent changes of educational policy, hindering the long term planning and undertaking of strategic actions. Insufficient, irregular, unplanned funding of scientific-research work. ▪ Appearance of other Universities in the area or appearance of profitable and private faculties.

LIST OF ATTACHMENTS

- Attachment no. 1.** Decision on self-evaluation of the study program of II cycle of studies-Sustainable food production systems (Decision no. 03-1552/2022 dated 29.9.2022.)).
- Attachment no. 2.** Decision of Scientific-teaching council on introduction of new study program-Sustainable food production systems and on appointment of Commission (no. 03-161/2022 dated 21.01.2020).
- Attachment no. 3.** Decision on adoption of Curriculum for I study cycle- Sustainable food production systems (no. 03-83472020. dated 20.05.2020).
- Attachment no. 4.** Results of conducted survey (<https://info.btf.unbi.ba/Infoservis/ankete.jsf>)
- Attachment no. 5.** Decision on appointment of Vice-Dean for Scientific-research work
- Attachment no. 5a.** Decision on extension of mandate of Vice-Dean in charge of Scientific-research work
- Attachment no. 6.** Team for Scientific-research work and international co-operation
- Attachment no. 7.** Data on scientific-research work for the year 2020/2021.
- Attachment no. 8.** List of experts' and scientific meetings, journals and published papers, as a result of scientific-research work (and/or artistic work) of academic staff involved in realization of study program for academic year 2020/21
- Attachment no. 9.** Program of conference - seventh INTERNATIONAL SCIENTIFIC – PROFESSIONAL CONFERENCE "5. JUNE – WORLD DAY OF PROTECTION OF ENVIRONMENT"
- Attachment no. 10.** Program of ROME Conference
- Attachment no. 11.** Agreement on inter-institutional co-operation in domain of exchange of teachers and students of the study program of II cycle of studies of Erasmus + STEPS " Sustainable food production systems".
- Attachment no. 12.** Co-operation Agreement with the specialized agricultural co-operative named AgroDar
- Attachment no. 13.** Budget for the year 2020
- Attachment no. 14.** Public procurement Plan for the year 2020.
- Attachment no. 15.** Policy of Quality assurance of the study programs number 06-6582/18 dated 28.11.2018.
- Attachment no. 16.** Decision on appointment of Team for assurance of quality at the Biotechnical Faculty of University of Bihać (no.03-358/2021 dated 17.02.2021)
- Attachment no. 17.** Report of Team for assurance of quality on evaluation surveys for academic year 2020/2021 (03-1243/2022 dated 15.07.2022)
- Attachment no. 18.** Certificate of attendance
- Attachment no. 19.** List of expert's and scientific meetings, journals and published thesis, as a result of scientific-research work (and/or artistic work) of academic staff involved in implementation of study program for academic year 2020/21.
- Attachment no. 20.** Forms of teaching process performance – Report on implementation of teaching process at the course of Sustainable food production systems and analysis of pass level for academic year 2020/21.
- Attachment no. 21.** Policy of quality assurance: Erasmus+ CBHE MSc STEPS UNBI BLOG@stepsbtf.unbi
- Attachment no. 22.** Study program – Information on participants in charge of study program preparation (no. 06-2391/2020.dated 29.09.2020.), (pages 10 and 11)
- Attachment no. 23.** Evaluation of the proposal of the study program- department Sustainable food production systems, course-Sustainable food production systems of the Biotechnical Faculty of University of Bihać (no. 09-2248/20 dated 18.05.2020).
- Attachment no. 24.** Decision on establishment of the study program second (II) study cycle- department: Sustainable food production systems, course-Sustainable food production systems of the Biotechnical Faculty of University of Bihać (no.06-2391/2020 dated 28.05.2020).
- Attachment no. 25.** Approval issued by the Ministry of Education, Science and Sport, for the introduction of new study program at the second (II) study cycle of the Biotechnical Faculty of University of Bihać, department: Sustainable food production systems, course-Sustainable food production systems (no.10-34-5905-2/20 dated 01.06. 2020).

- Attachment no. 26.** Rule-book on procedures for proposing, acceptance, implementation and follow up of the realization of the study programs of University of Bihać dated 29.9.2011. number 06-4294/11. article. 5.
- Attachment no. 27.** Manual for implementation of qualification framework in higher education
- Attachment no. 28.** Study program – List of applied regulations at the University (page 8), Learning outcomes of second (II) cycle of studies (page 26) and Syllabi of subjects (pages from 38 - 60), (no. 06-2391/2020. dated 29.09.2020)
- Attachment no. 29.** Study program – Curriculum for II cycle of studies (page 24.) and syllabi of teaching subjects (page 38), (no. 06-2391/2020. dated 29.09.2020).
- Attachment no. 30.** Strategy of internationalization of University of Bihać 2018-2023 dated 29.10.2018. - LINK
- Attachment no. 31.** Study program – Information on used reference points (page 9), Forms of teaching process performance (page 16) and Support to the students (no. 06-2391/2020 dated 29.09.2020), (page 17)
- Attachment no. 32.** Master's thesis application
- Attachment no. 33.** Minutes of the session of Scientific-teaching council of Biotechnical Faculty – the representative of II cycle of studies (no: 03-154/20 dated 23.01.2020)
- Attachment no. 34.** Rules of studying at the second (II) cycle no. 06-1698/2010 dated 14.06.2010. (articles from 27-30).
- Attachment no. 35.** Study program – Grading System (no. 06-2391/2020. dated 29.09.2020), (page 17)
- Attachment no. 36.** ECTS student's card, https://btf.unbi.ba/?page_id=3871
- Attachment no. 37.** Rule-book on passing of exams dated 30.12.2010. number 06-4344/10.
- Attachment no. 38.** Study program - syllabi of the subjects (no. 06-2391/2020. dated 29.09.2020), (pages from 38-60),
- Attachment no. 39.** Rules of studying at the second (II) cycle (mentor, application and defence of Master's Thesis) no. 06-1698/2010 dated 14.06.2010. (articles from 25 - 38.).
- Attachment no. 40.** Study program – Path to knowledge (no. 06-2391/2020. dated 29.09.2020), (page 18),
- Attachment no. 41 a).** Public competition for enrollment of students to I (first) year of second II cycle of studies at Biotechnical Faculty of University of Bihać in academic year 2020/2021
- Attachment no. 41 b).** Decision on prolongation of term for enrollment applications of students at I (first) year of II and III cycle of study for academic year 2020/2021 at the faculties of University of Bihać
- Attachment no. 42 a).** Ranking list of candidates who applied
- Attachment no. 42 b).** Board for establishment of conditions for enrollment to the second (II) cycle of studies
- Attachment no. 43.** Study program – Conditions for enrollment and re-enrollment to the study program (no. 06-2391/2020. dated 29.09.2020.), (page 26),
- Attachment no. 44.** Rule-book on nostrification and equalization of foreign school's diplomas (Official Gazette of Una-sana Canton no.15/2012).
- Attachment no. 45.** Decision on appointment of Board for recognition of exams at Biotechnical Faculty (no. 03-1858 dated 30.10.2020.)
- Attachment no. 46.** Rule-book on content of public documents issued by Higher education institutions in Una-Sana Canton (Official Gazette of Una-Sana Canton no. 15/10) <https://vladausk.ba/v4/preuzimanje/2>
- Attachment no. 47.** Student's card
- Attachment no. 48.** Certificate of passed exams
- Attachment no. 49.** Certificate on regulation of status issues
- Attachment no. 50.** Organization and duration of teaching process at II cycle of study at Biotechnical Faculty
- Attachment no. 50 a).** - i. List of academic staff performing the study program and the teaching process schedule
- Attachment no. 51.** Standards and norms for dealing with the activity of Higher education at the area of Una-Sana-Canton (Official Gazette of Una-Sana canton no.12/12)
- Attachment no. 52.** Policy of human resources management at University of Bihać number 06-6583/18.
- Attachment no. 53.** Appointments to the professional titles of the employees of the faculty, performing the study
- Attachment no. 54.** Rule-book on employment plan of academic staff at University of Bihać_2018

- Attachment no. 55a and b.** Decision on coverage of teaching process at the Biotechnical Faculty of University of Bihać for academic year 2020/21 no. 03-1482/20 dated 22.09.2020.
- Attachment no. 56.** Study program – Resources needed for realization of the study program and the modality of their provision for the study program (no. 06-2391/2020. dated 29.09.2020.), (page 27),
- Attachment no. 57.** Study program – Equipment (no. 06-2391/2020.dated 29.09.2020), (page 33),
- Attachment no. 58.** Decision on establishment of laboratory /IT cabinet for Sustainable food production systems management, within the project STEPS
- Attachment no. 59 a).** Development of “Laboratory for food quality control“ within Erasmus+ project “STEPS / MSc In Sustainable Food Production Systems” https://btf.unbi.ba/?page_id=4414.
- Attachment no. 59 b).** Development of „Laboratory for food production systems/ ICT-Center Management “ within Erasmus+ project „STEPS / MSc In Sustainable Food Production Systems” https://btf.unbi.ba/?page_id=4417
- Attachment no. 59 c).** Training of teaching staff https://btf.unbi.ba/?page_id=4466
- Attachment no. 60.** Study program - Space, equipment, furniture, library and other working conditions (no. 06-2391/2020. dated 29.09.2020), (page 21).
- Attachment no. 61.** Public procurement plan for the year 2020
- Attachment no. 62.** Agreement on scientific-professional and business-technical co-operation (NET GREEN AGENT)
- Attachment no. 63.** Agreement on business-technical co-operation ("AGRICULTURAL INSTITUTE OF UNA-SANA CANTON")
- Attachment no. 64.** Decision on adoption of report of Team for assurance of quality on evaluation surveys for academic year 2020/2021 (no. 03-1308/2022 dated 20.07.2022)
- Attachment no. 65.** Rules of mobility at University of Bihać (no.06-7988/2014 dated 01.12.2014)
- Attachment no. 66.** Rule-book on procedures for support to the international activities of University of Bihać (06- 4295/11 dated 29.09.2011)
- Attachment no. 67.** Minutes of the Team’s meetings.
- Attachment no. 68.** Decision on adoption of self- evaluation report of the study program of the II cycle of study- Sustainable food production systems at the Biotechnical Faculty of University of Bihać, no.03-83/2023 dated 16.1.2023.
- Attachment no. 69.** Decision on adoption of report on conducted self-evaluation and internal evaluation of the study program of the II cycle of study- Sustainable food production systems at the Biotechnical Faculty of University of Bihać (number: 06-851/23 dated 2.3.2023)