



Josip Juraj Strossmayer University of Osijek

Faculty of Agrobiotechnical
Sciences Osijek

Development Strategy

of the Faculty
of Agrobiotechnical
Sciences Osijek

2023/2024 - 2027/2028

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Osijek, July 2024

Development Strategy of the Faculty of Agrobiotechnical Sciences Osijek (abbreviation used in the text: the Faculty or FABSOS) was prepared by the Committee composed of the following members:

1. Prof. Dr. Krunoslav Zmaić
2. Prof. Dr. Andrijana Rebekić
3. Prof. Dr. Zvonko Antunović
4. Prof. Dr. Ivana Majić
5. Prof. Dr. Brigita Popović
6. Prof. Dr. Tomislav Vinković
7. Prof. Dr. Tihomir Florijančić
8. Prof. Dr. Sonja Petrović
9. Prof. Dr. Tihana Sudarć
10. Prof. Dr. Mirjana Brmež
11. Prof. Dr. Ivan Plaščak
12. Prof. Dr. Miroslav Lisjak
13. Prof. Dr. Karolina Vrandečić
14. Prof. Dr. Igor Kralik
15. Renata Meleš, LL.M
16. Vesna Tomaš, PhD, scientific associate
17. Igor Andrašević, MEng
18. Mirko Vukoja, BEng
19. Magdalena Jelečević, BEng

Aiming at achieving the best possible quality of this document, in addition to the above-mentioned Committee members, all staff of FABSOS departments and of CAAU, as well as all Faculty Council members were invited to contribute to drafting of this document by giving their suggestions and comments.

The Faculty Development Strategy 2023/2024 - 2027/2028 was adopted at the 9th session of the Faculty Council in the academic year 2023/2024, held on 1st July 2024.

Contents

FOREWORD	4
List of documents used as a reference for the Development Strategy of the Faculty of Agrobiotechnical Sciences Osijek	6
1. Introduction	8
1.1. History of the Faculty of Agrobiotechnical Sciences Osijek	8
1.2. Faculty of Agrobiotechnical Sciences Osijek today	9
1.2.1. Organisational structure	9
1.2.2. Teaching activity	12
1.2.3. Scientific activity	13
1.2.5. Professional activity	16
1.3. Overview of strategic elements with defined action areas	17
2. Mission and vision of the Faculty of Agrobiotechnical Sciences Osijek	18
2.1. Mission	18
2.2. Vision	18
3. SWOT analysis of the Faculty of Agrobiotechnical Sciences Osijek	19
4. Faculty's strategic aims for the period of 2023/2024 - 2027/2028	24
4.1. Encouraging development and improvement of human and material resources through digital transformation	24
4.2. Teaching activity and students	29
4.3. Scientific research activity	36
4.4. International relations	45
4.5. Cooperation with economy sector and transfer of knowledge and technology	50
5. Risks, priorities and methods of the Strategy implementation	53

FOREWORD

Faculty of Agrobiotechnical Sciences Osijek (FABSOS) is a leading scientific research institution in Eastern Croatia in the field of biotechnical sciences.

Its new strategic development aims envisage long-term development and reflect its readiness for numerous adjustments. At the same time, the Faculty takes over the responsibility to act as a policy maker and to cooperate with the economy sector for the purpose of educational system advancements. Faced with the challenges of new technologies and new generations as well as with limited material resources, the Faculty of Agrobiotechnical Sciences Osijek recognises education, science, and innovation and knowledge transfer as its development priorities, and highlights them as the only ones that can ensure long-term social stability in a globalised world of dynamic societal, economic and cultural changes and contribute to the Faculty prosperity in the long run. This is also supported by the fact that the Faculty realises significant success in the education of students and professional staff, as well as in the implementation of scientific and professional projects, and in cooperation with the economy sector. The Faculty of Agrobiotechnical Sciences Osijek has positioned itself at the national and international level as a leading higher education institution in the field of agronomy in this part of Europe. The key to determine the strategy of the Faculty of Agrobiotechnical Sciences has been focused on the overall aim to preserve unity and commitment to the agronomic profession. At the same time, we strive for openness in all scientific-research and professional areas and for openness towards the acquisition and provision of new knowledge, we want to build an open attitude towards society and open science accessible to everyone. This is confirmed by the significant scientific activity of the Faculty of Agrobiotechnical Sciences Osijek, which is focused on the development of biotechnical sciences, agriculture, and the interdisciplinary sciences. The research results are resulting from a significant number of scientific research projects and very good professional cooperation with public and private sector entities dealing with agriculture and food production. Such cooperation paves a high-quality way for knowledge transfer and for solving problems in agricultural production.

Building an innovative society and economy that will be responsive to future challenges is a prerequisite for creating a knowledge society. Accepting these findings, the Faculty of Agrobiotechnical Sciences Osijek incorporates knowledge into strategic development projections and emphasises its exceptional value. Moreover, lifelong learning as an important segment of education enables everyone to learn, to acquire new skills and to become capable of solving different issues. Education, science and lifelong learning form a triangle of knowledge that offers a community a framework for effective functioning.

Following its vision and fulfilling its mission, the Faculty of Agrobiotechnical Sciences Osijek is ready to achieve all its goals by implementing its strategic tasks. With its strategic tasks and measures, the Faculty will raise the quality of the teaching process, scientific research and professional work, will facilitate the transfer of knowledge and technology to the economy, it will boost its business management, infrastructure development and quality assurance system. During the realisation of strategic tasks, there are certain obstacles expected, which will be elaborated in annual plans for realisation of strategic activities, and the measures will be defined to be undertaken towards strategic aims accomplishment. This document represents the strategic act of the Faculty of Agrobiotechnical Sciences Osijek of the Josip Juraj Strossmayer University in Osijek for the period from 2023/2024 to 2027/2028.

Dean of the Faculty of Agrobiotechnical Sciences Osijek
Prof. Dr. Krunoslav Zmaić

List of documents used as a reference for the Development Strategy of the Faculty of Agrobiotechnical Sciences Osijek

The following international and national documents were consulted as a reference in the process of drafting the Development Strategy of the Faculty of Agrobiotechnical Sciences Osijek for the period of academic years 2023/2024 - 2027/2028:

- ▶ Action plan for science (MSE, 2020)
- ▶ Europe 2020: statistics and indicators for Croatia, Paris Communiqué (EHEA, 2018)
- ▶ Horizon Europe (2021-2027)
- ▶ The European Charter for Researchers, Code of Conduct for the Recruitment of Researchers (EC, 2005)
- ▶ Improving knowledge transfer between research institutions and industry across Europe: embracing open innovation (EC, 2007)
- ▶ Criteria for external independent periodic assessment of the quality assurance system (audit) of higher education institutions (ASHE, 2017)
- ▶ Network of higher education institutions and study programmes in the Republic of Croatia (NCHE, 2011)
- ▶ New Colours of Knowledge - Strategy for education, science and technology (MZO, 2015)
- ▶ Development plan of scientific and research infrastructure in the Republic of Croatia (MSES, 2016)
- ▶ Procedure and criteria for evaluating scientific quality for the purpose of establishing scientific centres of excellence in the Republic of Croatia (2013)
- ▶ Ordinance on the content of licence and conditions for issuing licence for performing higher education activity, carrying out a study programme and re-accreditation of higher education institutions (OG 024/2010)
- ▶ Ordinance on the quality assurance system of the Faculty of Agriculture (2015)
- ▶ Ordinance on conditions for issuing licence for scientific activity, conditions for re-accreditation of scientific organisations and content of licence (OG 083/2010)
- ▶ Manual for quality assurance of the University of Osijek (2016)
- ▶ Standards for the evaluation of quality of universities and university constituents in the procedure of re-accreditation of higher education institutions (ASHE, 2023)
- ▶ Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) (2015)

- ▶ Digital Croatia Strategy for the period until 2032
- ▶ Education, Science and Technology Strategy (OG 124/2014)
- ▶ Development Strategy of the Faculty of Agrobiotechnical Sciences Osijek 2018/2019 -2022/2023
- ▶ Development Strategy of Josip Juraj Strossmayer University of Osijek (2021)
- ▶ Act on the Croatian Qualifications Framework (OG 22/2013, 41/2016, 64/2018, 47/2020, 20/2021)
- ▶ Act on Quality Assurance in Science and Higher Education (OG 151/2022)
- ▶ Act on recognition and evaluation of foreign educational qualifications (OG 069/2022)
- ▶ Act on Scientific Activity and Higher Education (OG 119/2022)

1. Introduction

1.1. History of the Faculty of Agrobiotechnical Sciences Osijek

Higher education in the area of biotechnical sciences in Eastern Croatia began in 1960, when teaching was organised within the Higher Agricultural College in Osijek, which was a constituent part of the University of Zagreb. In 1970, the Higher Agricultural College changed its name to become the Faculty of Agriculture and Food Technology, and in 1975, it transferred to the University of Osijek as its constituent unit. In 1976, the Faculty changed its name again, and registered as the Faculty of Agriculture. This was followed by integration of the Faculty into the Biotechnical Science and Teaching Centre, which comprised other institutions, namely the Faculty of Food Technology, the Agricultural Institute, the Sugar Beet Institute and the Fruit Nursery Garden. In 1977, the Faculty integrated with the Higher Agricultural College in Vinkovci and reorganised its study programmes. The first postgraduate study in Plant Protection and Agricultural Products was organised by the Faculty in 1972.

In the period of 1977-1991, the Faculty of Agriculture in Osijek was operating in its new building on the Tenja Road, and this period marked a new phase in the Faculty's development. The Faculty had at its disposal more than 4,000 sq. m. of new laboratory space, as well as classrooms and other premises, which significantly contributed to the improvement of study conditions and intensification of the scientific and professional work.

The following period from 1991-1995 will remain deeply embedded in the history of the Faculty's development as the most difficult one, since the Faculty building was completely destroyed and devastated. During the Homeland War, as well as in the post-war years until 1995, the Faculty was operating at several locations scattered around the city of Osijek, and since 1995, it found its seat in the building of the former General Barracks in the Osijek Old Town. The process of Faculty complete infrastructure reconstruction consisted of spatial organisation, equipping of lecture halls, laboratories, library, IT cabinets and other premises, both at the main Faculty building in the Osijek Old Town and in Vinkovci, where the Faculty was delivering its professional study programmes.

In October 2011, the Faculty moved its seat to a modern building located at the University campus in the Osijek Downtown, in the Vladimir Prelog Street, where it is operating until present.

As of 23 July 2018, the Faculty of Agriculture changed its name to the Faculty of Agrobiotechnical Sciences Osijek. The new name of the Faculty is based on achieved criteria in the field of biotechnical sciences, having a dominant prefix put on the scientific area of agriculture and related branches, and following the tendency of interdisciplinary ties with the scientific fields of biotechnology and forestry. The support to this fact was also found in significant scientific production outside the scientific area of agriculture, both in biotechnology and forestry, as well as in natural sciences, biomedicine and health, social and technical sciences. The change of Faculty's name represents a new driving force for its

faster development and for the regain of the agricultural profession value, as set in the Faculty mission and vision. There are profession and qualification standards prepared within the Croatian Qualifications Framework project in the academic year 2015/2016. New study programmes in agriculture and biotechnology, as well as in ecology and environmental protection have been organised.

Since the Faculty's establishment until today, significant achievements have been reached in equipping of laboratories with modern scientific equipment, without which it would not be possible to carry out scientific research and to achieve significant progress in practice. It is important to mention that in 2021, Central Agrobiotechnical Analytical Unit (CAAU) has been established as an independent organisational unit of the Faculty, as well as the Biotechnical Scientific Research Centre that is pursuing new scientific technologies, patents and innovations to be transferred to industry.

1.2. Faculty of Agrobiotechnical Sciences Osijek today

1.2.1. Organisational structure

Nowadays, the Faculty of Agrobiotechnical Sciences Osijek is a modern higher education institution that provides quality education within all levels of university studies (undergraduate, graduate and doctoral studies, as well as postgraduate specialist studies). It carries out study programmes based on recent scientific knowledge and organizes scientific research and professional work in the scientific field of biotechnical sciences, scientific area of agriculture. It also strongly focuses on interdisciplinary research in the field of biotechnology and forestry, natural sciences, biomedicine and health, social and technical sciences.

In its new premises in Osijek, the Faculty spreads on 19,000 square meters of modern spaces that are adapted for scientific and teaching purposes. It has all necessary accompanying infrastructure at disposal, thus following all up-to-date European standards for spatial requirements in higher education institutions. In the Faculty's main building in Osijek, there are 27 laboratories, 16 practice halls, 15 lecture halls, 3 great halls (one ceremonial hall), 123 teachers' rooms, Dean's Office, meeting room, library, printing room, and premises used by joint services.

Faculty of Agrobiotechnical Sciences Osijek (FABSOS) disposes of four plots for experiment stations located in Tenja, Antunovac, Mandićevac and Bilje. The Agency for Agricultural Land and the Faculty of Agrobiotechnical Sciences Osijek signed the agreements for the use of agricultural land owned by the Republic of Croatia without public tender in the area of the City of Osijek - Tenja (plots No. 1308, 1309, 1310, 1312, 1313, 4004 and 4024), and of the Municipality of Antunovac (plot No. 3/8), with a total area of 96.75 ha. The agreements are valid at least until the end of 2039. FABSOS also owns 3.3 hectares of land located in Mandićevac with vineyards where several vine sorts are grown. The experiment station in Bilje has been established in 2022 for the purpose of conducting research into beekeeping and biopollination. The mentioned experiment stations are used for practical teaching and carrying out of scientific-research and professional work.

Having its legal status, the Faculty of Agrobiotechnical Sciences Osijek joins Josip Juraj Strossmayer University of Osijek as its constituent unit. The University of Osijek has founding rights over the Faculty, as defined by the provisions of the Act on Scientific Activity and Higher Education and by the University Statute. The Faculty is registered in the Court Register, in the Register of Higher Education Institutions and in the Register of Scientific Organisations of the Ministry of Science, Education and Youth.

Organisational structure of the Faculty is presented by the Figure 1. The dean represents the Faculty, acts as its head and has all the rights and obligations as determined by the Statute of the University and by the Article 34 of the Faculty Statute. The dean is responsible for assuring legality, implementation of the Statute provisions and decisions of the university authorities at the Faculty level. For his activities, the dean is responsible to the Faculty Council and to the rector. The dean is obliged to submit to the Faculty Council an annual report on the implementation of the Faculty development strategy, a report on business undertakings and implementation of one part of the programme contract, a well as other reports, as determined by the Faculty Statute. At the Faculty, there are 6 departments with 30 chairs and the Central Agrobiotechnical Analytical Unit within which there are 3 sub-units, Experimental Station for innovations and the Central Administration. Furthermore, there are two centres at the Faculty: Centre for Lifelong Learning and Biotechnical Scientific Research Centre. Faculty departments are basic organisational units that coordinate scientific, professional and teaching activities. Each Faculty department is a nucleus of educational, scientific-research and professional work in its particular science field or branch.

As of present, the Faculty employs 228 members of staff, of whom 39 staff are appointed into the scientific-teaching title of full professor with tenure, 26 of them are full professors, 21 are associate professors, 20 employees are assistant professors. Furthermore, the Faculty employs 9 senior assistants, 9 assistants, 2 lecturers, 2 senior lecturers, 11 professional advisors, 9 senior professional associates, 4 professional associates, 19 laboratory technicians, 53 administrative and maintenance support staff members, as well as 4 project associates.

Professional collegium is an advisory and expert body of the Dean, which consists of vice-deans, heads of departments, head of the Central Agrobiotechnical Analytical Unit, heads of centres, Faculty secretary, one head of an office in the Central Administration, and head of the Experiment station for innovation and technology.

The Faculty Council is composed of the following members: the Dean and 5 (five) vice-deans, representatives of teachers appointed to scientific-teaching positions, 1 (one) representative of teachers appointed to teaching positions, 3 (three) representatives of associates appointed to associate positions, 1 (one) representative of other employees, and representatives of students, who make up 10% of all Faculty Council members, of whom a maximum of 20% are postgraduate students. Members of the Faculty Council without the right to vote are the Faculty academic secretary and a representative of a major union of science and higher education workers active at the Faculty, who is an employee of the Faculty.

The Faculty Council usually assembles once a month and all sessions are chaired by the Dean.

Within the Faculty Council, there are permanent boards and committees established as follows:

- ▶ Board for science
- ▶ Board for bachelor and master theses
- ▶ Board for publishing activities
- ▶ Committee for teaching
- ▶ Committee for the doctoral degree award
- ▶ Committee for postgraduate specialist studies
- ▶ Committee for quality assurance
- ▶ Committee for general issues
- ▶ Committee for development and organisation of experiment stations
- ▶ Committee for business, development and investments
- ▶ Ethics committee.

Apart of the permanent boards, committees other bodies, at the Faculty there are also non-permanent committees (Committee for awarding of teachers and associates, Committee for recognition of student mobility programmes, Committee for Faculty promotion, Committee for cooperation with the economy sector and innovations; Scientific Forum Committee, Bioethics Committee for Animal Research, Advisory board for international issues, Programme council of the Centre for Lifelong Learning, Disciplinary committee).

The Faculty management structure ensures that students and employees participate in the decision-making processes. Students are also members of the most Faculty boards and committees.



Figure 1. FABSOS organisational structure

1.2.2. Teaching activity

Since the academic year 2005/2006, the Faculty of Agrobiotechnical Sciences Osijek carries out teaching activities in accordance with the Bologna Declaration. Study programmes are structured according to the rule „3 + 2 + 3“, meaning that undergraduate studies last for 3 years, graduate studies last for 2 years and doctoral study last for 3 years. Teaching is also carried out within undergraduate professional studies that last for three years, as well as within postgraduate specialist studies.

As of present, the Faculty delivers teaching within the Undergraduate university study programme in Agriculture with five modules (Agroeconomics, Plant Production, Zootechniques, Horticulture, Mechanisation); and within the graduate university study programmes Agroeconomics; Plant Production (modules: Plant Production, Plant Nutrition and Soil Science, Plant Selection and Seed Production, Plant Protection), Organic Agriculture; Mechanisation; Vegetable and Flower Growing; Fruit Production and Viticulture (modules: Viticulture and Winemaking, Fruit Growing) and Zootechniques (modules: Nutrition of Domestic Animals, Hunting and Beekeeping, Special Zootechniques). In addition to the graduate university study programmes, since the academic year 2020/2021, teaching has been delivered also in English at the graduate study programme in Digital Agriculture. Postgraduate university doctoral study programme in Agricultural Sciences is composed of eight modules (Agroeconomics; Agrochemistry; Animal Nutrition and Feed Technology; Hunting and Cynology; Plant Selection and Seed Production; Livestock Breeding; Technical Systems in Agriculture; and Plant Protection).

Teaching is also delivered within the undergraduate professional study programme Viticulture – Winemaking – Fruit Growing.

Considering the trends in agriculture, emergence of new technologies and labour market needs expected in the following years, the Faculty aims to develop and deliver new university undergraduate and graduate studies. With the aim of internationalisation and increasing the mobility of teachers and students, the Faculty also wants to develop joint studies with national and international partners and an online study programme. In addition to the above, the Faculty will develop new and continue to carry out the existing lifelong learning programmes, and if necessary, it will harmonize them with the Croatian qualifications framework.

As of time being, the Faculty enrolls 928 students, of whom 390 are enrolled in the university undergraduate studies, 373 in the university graduate studies, 42 in professional studies, 114 in doctoral studies and 9 students in postgraduate specialist studies. The Faculty admits about 300 students annually, and about 260 students graduate from their studies annually. Teaching is delivered by 106 teachers holding scientific-teaching positions, by 4 teachers holding teaching positions, and by 18 associates holding associate job positions (9 senior assistants and 9 assistants). Considering the number of students and teachers, a favourable ratio has been established to facilitate application of active teaching methods and creation of a stimulating learning environment. The realisation of teaching is

at a high level, as about 97% of teaching hours on average at all study levels are conducted in accordance with the curricula. Lectures are held in 2 great lecture halls, in 8 classrooms and 16 laboratory rooms. Professional practice, which is obligatory part of all university undergraduate and graduate studies, is carried out in the CAAU, at the Faculty experiment stations, in teaching bases and in companies with which the Faculty has signed agreements on cooperation. The library's working hours are corresponding to the students' needs and the library fund is renewed as needed.

Improving the quality of teaching and the teaching process is one of the Faculty's priorities. There are documents regulating the improvement of the quality of the teaching, and the stakeholders responsible for monitoring and improving the quality of the teaching process are actively implementing all prescribed measures and activities. Innovative teaching methods and methods of active learning and teaching are important drivers of raising the level of teaching quality. There are workshops offered to teachers on this topic. Teacher self-evaluation and student surveys are conducted to collect data useful in creation of guidelines for improving the quality of the teaching process. Student mentoring systems have been implemented, i.e. "mentor study year coordinator" and "student tutor". Both systems serve to improve communication between students and teachers and among students, all with the aim of ensuring high quality of studying.

Faculty employees are dedicated to create a stimulating environment for students and colleagues that will positively influence the learning environment and help to promote the Faculty into one of the leading educational institutions in the field of biotechnical sciences in the region.

1.2.3. Scientific activity

Scientific activity at the Faculty of Agrobiotechnical Sciences Osijek has a long tradition, which intertwines a large number of higher education employees engaged in various activities directed to popularisation of science.

In the last 5 years (2019-2023), Faculty employees published 681 scientific and 53 professional papers, of which 505 papers were published in journals indexed in the Web of Science - WoS. Furthermore, the Faculty employees published 310 scientific and 50 professional papers in the proceedings of conferences. Analysis of indexed publications in the WoS database showed that in the observed period the Faculty employees published 98 papers in Q1 quartile and 98 papers in Q2 quartile, by reaching a total of 3829 citations, with the h-index of the Faculty reaching 27. In the observed period, the Scopus database indexed another 28 papers, with 123 citations of the h-index of 5. In addition to the above-mentioned papers, during the same period, the CAB Abstract database indexed another 92 scientific and professional papers published in journals and 136 papers published in symposium proceedings.

Employees of the Faculty were also active in devising and implementing various scientific and professional projects. In the last five years, our staff has realised or are

in the process of realising 17 scientific projects supported by the Croatian Science Foundation, 6 scientific projects funded by the home University, 3 scientific projects funded by Horizon 2020, 2 scientific projects funded by Obzor Europe, 7 bilateral projects, 24 projects financed from the European Regional Development Fund, 5 projects financed by the European Cooperation in Science and Technology, 2 projects financed within the LIFE program, one European Space Agency project and 3 INTERREG IPA projects. Many of the stated competitive projects won in recent years are the result of the development and restructuring of laboratories, the procurement of sophisticated research equipment and employment of assistants who have met all required conditions and profiled themselves into new scientific strength of the Faculty. Faculty staff are also involved in scientific centres of excellence, i.e. in the University interdisciplinary centre of excellence in the field of biotechnical and biomedical sciences „Scientific Centre of Excellence for Personalised Health Care“, and in the „Scientific Centre of Excellence for Biodiversity and Molecular Breeding of Plants“, which is coordinated by the Faculty of Agriculture of the University of Zagreb.

From 2019 to 2023, Faculty's scientific and research activities are organised within 17 research teams, who have realised 26 scientific projects. The implementation of those projects created a foundation for application and implementation of numerous other projects and for cooperation at national, regional and international level. As of October 2023, 19 newly established research teams of the Faculty have started their activities. They are established for a period of 4 years, and they have applied for and are realising 29 scientific projects.

The doctoral study in Agricultural Sciences consists of 8 modules and educates 114 doctoral students. At 5 postgraduate specialist studies there are 9 students. In the last 5 years, 34 doctoral theses and 5 specialist theses were defended.

The Faculty organises or co-organises numerous national and international scientific symposia, of which the main gathering happens at the Symposium of Agronomists. Other symposia and conferences that need to be highlighted are Krmiva, Agriculture for Protection of Nature and Environment, Animal Science Days, Current Issues in Agricultural Mechanisation, Challenges in Agriculture Caused by Climate Change, International Symposium on Digital Technologies in Agriculture. In cooperation with the Agricultural Institute Osijek, the Faculty publishes the journal Agriculture, in contains scientific and professional papers referring to all areas of agricultural science and profession. Papers published in the journal Agriculture are cited in the following databases: WoS (Web of Science), CAB Abstract, SCOPUS, DOAJ, HRČAK, and in the National and University Library in Zagreb.

In the last 5 years, FABSOS employees have received numerous awards, of which the most prominent ones are the State Awards for Science in 2019 and 2021, awards for lifetime achievement, annual awards for popularisation and promotion of science, and annual awards for achievements in the field of Biotechnical sciences. The Faculty also received a recognition by the Association of Agrarian Journalists of Croatia for the Communicator of the Year 2023. The Faculty traditionally organises many events for popularisation of science, some of which are

the Open Door Days and the Festival of Science, organised for already twelve years in a row, as well as the Doctorate Day, Workshops for doctoral theses supervisors, Young Researchers' Day and Career Day.

1.2.4. International cooperation

In light of global changes and expansion, internationalisation has become crucial for our Faculty. Factors, such as increased competitiveness, increased labour force mobility, global ranking of the University, application of new methods and technologies in teaching and learning, promotion of European values (Europeanisation), implementation of European initiatives and activities in the field of higher education and science, quality assurance system, programmes for international mobility and projects, and international funding sources significantly influence the shaping of the Faculty's strategic aims in terms of internationalisation.

The Faculty shall be focused on strengthening of its key educational and research partnerships to ensure mutual benefit, reciprocity and transparent communication, and to encourage formation of multilateral strategic networks for efficient cooperation among institutions. By aligning international cooperation with our strategic and academic priorities, we shall develop new institutional partnerships with universities, business entities, research centres, non-academic and non-profit organisations, as well as with international financial institutions.

We will continue to cooperate with international partners, especially within the COLOURS European University Alliance, with associations and accreditation bodies, and we will also apply for international certificates and accreditations. We shall pay special attention to engaging our graduate students in promotion of our activities in international surroundings. We will communicate with partners in order to understand their interest and intensively promote our international activities, and we will support internal and external events that promote our international cooperation in order to ensure recognition of the Faculty and maintenance of its reputation.

Our goal is to attract as many international students as possible and to provide support during their stay at the Faculty. Through various study programmes and support services, we want to make international students feel welcome and integrated into our academic community. In addition, we want to provide them with resources and opportunities that will help them achieve their academic goals and boost their careers, so that they can be successful in a global environment.

We will develop a comprehensive plan for promotion of our studies among international undergraduate, graduate and postgraduate students, which will be aligned with the priorities and goals of the Faculty and of the University of Osijek.

The experience of studying in an international environment represents a transformative phase in every students' academic life. By increasing opportunities for studying and internship abroad, the Faculty will enable its students to develop a unique professional identity and to be well prepared for a global labour market.

1.2.5. Professional activity

The Faculty is dedicated to strengthening of cooperation with companies and achieves excellent results in various professional activities. In the previous period, a significant number of international and national professional projects was implemented and many cooperation agreements with business entities (194) were signed with the purpose of monitoring or improving agricultural production. Also, employees of the Faculty have published many professional papers and articles.

With its research activities, education of agronomists, and continuous improvement and modernisation of tools used for knowledge and skills transfer within its lifelong learning programmes, the Faculty serves the social community and contributes to the development of society in general.

The Faculty delivers 7 active lifelong learning programmes. There are also new lifelong learning programmes devised, of which the Training programme for organoleptic evaluation of wine, fruit wines and flavoured wine products has to be mentioned, for which a call for admission of participants has been published this year. The training programme is intended for agronomists who want to acquire additional competencies. Following the labour market trends, the Faculty shall focus on creation of lifelong learning programmes in the field of agronomy by putting emphasis on preservation of agro-ecosystems and green agriculture, as aligned with the European Green Deal.

In the past period, the Faculty has profiled its services referring to laboratory analysis and field experiments. Laboratory analyses of soil and plant material are carried out by CAAU, and service field demonstration and professional experiments are carried out by the Faculty experiment stations. Since the Faculty has invested significant funds in laboratory equipment and equipping the experiment stations, which now dispose of a harvester, four tractors and all essential connecting machinery, in the coming period the Faculty shall intensify cooperation with business entities.

The transfer of knowledge and technology is an important feature in the Faculty's development strategy, as it shall ensure profiling of the Faculty on the knowledge market and contribute to positive outcomes of the agricultural activities in the region and beyond. It should be noted that the economy in eastern Croatia, as well as agricultural and food sector have advanced in the previous period, and their further growth and even greater competitiveness are expected. Therefore, the Faculty will strongly engage in future cooperation with the economy sector through transfer of new knowledge, technologies and/or innovative products. Since the Faculty already secured preconditions for strengthening of these activities, it is expected that it will achieve an increase in the number of registered innovations and patents in cooperation with economy or independently.

The work of the Alumni Association of graduates and friends of the Faculty will be intensified, which is foreseen in this Strategy. The Faculty plans to strengthen the connections between members of the Alumni Association of graduates and friends of the Faculty with employees, students and the public through organisation of various workshops, forums and training courses. In this way, the Faculty aims to strengthen its connections with the economy and achieve even greater cooperation possibilities and professional projects.

1.3. Overview of strategic elements with defined action areas

The most important segments of the Faculty's activities are reflected in the leading aims that include long-term development guidelines expressed in a broader context. The Faculty Development Strategy for the academic years 2023/2024 to 2027/2028 envisages actions in the following 5 strategic areas:

1. Organisation and quality of work,
2. Teaching activity and students,
3. Scientific research activity,
4. International relations, and
5. Cooperation with economy sector and transfer of knowledge and technology.

Each strategic area determines specific strategic aims and corresponding measures, sets the implementation deadlines, defines measurability, specifies authorities and bodies in charge for execution of activities, and describes the performance indicators.

2. Mission and vision of the Faculty of Agrobiotechnical Sciences Osijek

The Faculty of Agrobiotechnical Sciences Osijek is in the transition processes of inclusion into European integration, which requires international competitiveness and adaptation to the European higher education area. In such surroundings, the Faculty has clearly defined its mission and vision, which will significantly contribute to the creation of a high-quality Development Strategy for the academic years 2023/2024 to 2027/2028.

2.1. Mission

The mission of the Faculty of Agrobiotechnical Sciences Osijek is to develop and systematically improve dynamic and multidisciplinary teaching and research environment. Such an environment supports the development of existing and creation of new research potentials and innovations, critical thinking and creativity, and ensures an excellent transfer of the latest knowledge and skills. The Faculty provides education of experts in the biotechnical sciences, in the field of agronomy, and it contributes to the sustainable development of science and technology by continuously developing knowledge and skills, thereby serving the community and social progress.

2.2. Vision

As a leading research and higher education institution in the field of biotechnical sciences in the region, the Faculty of Agrobiotechnical Sciences Osijek has a clear and unique scientific potential for development of an excellent and competent educational and scientific profile recognisable at the international level. The Faculty will continue to educate recognised, high-quality and competitive experts and will become recognisable in biotechnical and interdisciplinary scientific areas in which it will achieve excellence at the international level, actively participate in the European Higher Education and Research Areas, all for the purpose of profiling itself as a biotechnical centre of excellence for knowledge and technology transfer to the economy sector.

3. SWOT analysis of the Faculty of Agrobiotechnical Sciences Osijek

STRENGTHS

- long tradition and rural environment
- clear structure of organisation and management of the Faculty
- implemented process of digital transformation of business
- continuous work on recognition and visibility of the Faculty in community
- involvement of scientific and teaching staff in professional and organisational bodies, from local to international level
- significant number of signed agreements on cooperation with akin faculties and universities in the EU and in the countries of South-eastern Europe
- successful long-term interdisciplinary scientific cooperation with other University constituent units and institutes
- significant teaching and research potential
- full coverage of the teaching process by the Faculty teaching staff
- optimal teacher-student ratio
- implemented system of student mentoring
- lecture halls equipped with IT equipment and teaching aids
- involvement of students in all activities at all decision-making levels
- implemented system of monitoring teachers' quality
- developed interactive communication between students and employees
- availability of digital teaching materials
- established teaching bases for provision of quality professional practice
- significant number of published scientific and professional papers and participation in national and international conferences
- established research teams that perform scientific activities and Faculty scientific and research projects
- strengthening of the scientific research potential through management of human resources and laboratory equipment management, and established Biotechnical Scientific Research Centre – BSRC

- well-functioning doctoral study programme
- publication of the Agriculture Scientific Journal indexed in the WoS and SCOPUS database
- tradition in organising national and international scientific and professional conferences as well as various workshops and popularisation events
- support for application and implementation of international projects as a basis for international cooperation and initiatives
- increased visibility and recognition at the international level, which attracts foreign students, researchers and partners
- joint study programme in English, with a significant number of teachers capable of teaching in English
- continuous increase in number of Faculty employees and students engaged in international mobility programmes
- established experiment stations for teaching, research and transfer of knowledge and innovations to the economy sector
- significant cooperation with the economy sector
- training courses, transfer of technology and cooperation on preparation of studies that support development of economy at local, regional, national and international level
- development and implementation of new methods and introduction of ISO standards

WEAKNESSES

- not enough candidates interested in enrolling studies and lifelong learning programmes offered by the Faculty
- insufficient activity and motivation of students
- inconsistency in teaching workload and overlapping of course contents
- insufficient activity of teaching staff in publishing of university materials
- library fund not updated
- insufficient funds for publishing activities
- no experiment station for animal production
- insufficient equipment in some laboratories
- weak motivation of employees to apply for funding of scientific projects
- insufficient funds for pre-financing and co-financing of projects
- small number of published papers with high impact factor (quartiles Q1 and Q2)
- lack of additional criteria for encouraging the excellence of Faculty staff
- not enough foreign visiting professors involved in teaching
- weak motivation of staff for longer trainings abroad at international higher education and scientific institutions
- not enough mobility of teachers for teaching abroad
- non-systematic monitoring of alumni career progress
- low interest of Faculty staff to engage in Faculty activities which are not directly related to scientific-teaching work
- inappropriate structure of staff in the Central Agrobiotechnical Analytical Unit - CAAU
- insufficient utilisation of existing laboratory equipment
- insufficient cooperation with professional institutions
- no registered patents and innovations
- no Office for innovation and technology transfer

OPPORTUNITIES

- restructuring of studies and creation of new innovative studies and life-long learning programmes, and adjustment of enrolment quotas to the labour market requirements
- application of different teaching methods adapted to smaller groups of students
- implementation of new innovation agenda of green, digital and social transformation for development of innovations and technology transfer
- using of international networks for exchange of guest teachers and researchers with the aim of raising the quality of scientific-teaching process
- development of the Biotechnical Scientific Research Centre for animal production and biotechnology by using available infrastructural and development projects
- better organisation of practices through the establishment of teaching bases
- increase in number of research projects and funding sources for doctoral students (assistants) through the Croatian Science Foundation and EU projects
- accreditation of new laboratory methods as a benchmark with the aim of upgrading the scientific research process and stronger market positioning
- increase in the number of excellent papers published in the Agriculture Journal and increase in the number of citations
- support for publishing activity by implementing a system for digital publication and availability of scientific and educational materials
- creation of promotional materials and new, modern and well-organised website for the purpose of promoting the Faculty at national and international level
- intensifying the work of the Alumni Association of Faculty graduates and friends through cooperation with the economy sector
- training of staff assigned to professional positions for performance of professional activities required by CAAU
- development of new technologies for production, patenting and branding of technologies and products
- development of online and international studies within national and European funded projects

THREATS

- migration and emigration of the population
- neglecting of agriculture as a strategic branch
- the uncertainty of agricultural production due to climate changes
- less programmes related to agriculture in secondary schools
- significant reduction in the number of high school students lowered number of those who enrol in studies
- reduced interest in agricultural studies, unattractiveness of agricultural profession and unrecognised position of agronomists in society
- large number of professional and university programmes in biotechnical sciences, in the field of agriculture
- increasing competitiveness of the agricultural faculties from other EU countries
- constant reduction of state investments in higher education
- insufficient financing of scientific-research projects at the national, regional and local level
- further reduction of financial resources for research from EU programmes and funds, which affects the number of employed young researchers and assistants
- lack of funds for experiment stations and purchasing of equipment (capital equipment)
- insufficient level of previous knowledge of students-freshmen
- unrecognizability of the profession on the labour market
- potential decrease in professional cooperation with the economy sector due to acquisition of foreign technological solutions and intellectual property

4. Faculty's strategic aims for the period of 2023/2024 - 2027/2028

4.1. Encouraging development and improvement of human and material resources through digital transformation

Overall aim: Stimulation of development and improvement of human and material resources through systematic and high-quality management of the Faculty by applying digital transformation scheme. Availability of information along with continuous advancement of visibility and allocation of resources from national and international funds. Rationalisation of costs for carrying out scientific research, field trials and practical teaching, as well as successful transfer of technologies and innovations, aiming at the strongest possible positioning of the Faculty on the labour market.

Strategic aim 1

To create a creative, innovative and motivating environment for improvement of organisation and quality

Measure 1.1. Monitoring the realisation and success of the Faculty's Development Strategy while updating documents for quality assurance and career development, and using indicators to adjust the strategic directions of development and/or the corresponding action plan

- ▶ Executive authorities: dean, vice-deans, Faculty Council, heads of Faculty departments, Faculty academic secretary, Committee for quality assurance
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Decision on approval of the Progress Report on the realisation of the Development Strategy issued by the Faculty Council
 2. Quality assurance documents
 3. Documents on the career development of students devised according to needs, surveys and other input information
 4. Number of organised workshops on the quality assurance system for administrative staff working in Library, student services and professional services provision

5. Number of organised trainings on the application of standards and guidelines for quality assurance in the European Higher Education Area (ESG).
6. Number of people who attended workshops or trainings
7. Collecting feedback through surveys: satisfaction of non-teaching and administrative staff, student evaluation of teachers' performance, teachers' self-evaluation, feedback from external stakeholders; questionnaire for students who have completed undergraduate, graduate and doctoral studies
8. Posts on the Faculty website

Measure 1.2. Encouraging the development of students' entrepreneurial skills within the Biotechnical Scientific Research Centre, and empowering them through professional practices in a systematic and responsible way, aiming to facilitate their better employability and self-employment

- ▶ Executive authorities: dean, vice-deans, head of CAAU, Innovation and technology transfer office
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Equipping the Biotechnical Scientific Research Centre and involving students in its work, enabling them to acquiring entrepreneurial competencies
 2. Ordinance on work procedure of the Biotechnical Scientific Research Centre
 3. Number of bachelor and graduate theses prepared on practical and innovative solutions within the Biotechnical Scientific Research Centre and Experiment station for innovation and technology
 4. Number of prepared posts or tabular presentations announced on the Faculty website about practical and innovative solutions made by students and teachers

Measure 1.3. Raise the level of efficiency of the Faculty's organisational units

- ▶ Executive authorities: dean, vice-deans, Faculty Council, heads of Faculty departments, head of CAAU, heads of divisions, head of Experiment station for innovation and technology
- ▶ Implementation deadline: end of 2028
- ▶ Performance indicators:
 1. New and more efficient organisational forms of integrated management of CAAU and the Experiment station for innovation and technology
 2. Strengthening the competencies of staff working the Office for international relations and projects for managing of international projects
 3. Conducted workshop on improving the Faculty's organisational structure
 4. Conducted workshop on personal data protection in accordance with the law

5. New systematisation of workplaces according to norms and division of working hours
6. Implemented system of evaluating the work performance and improving business ethics
7. Report on the staff opinion on the business environment based on the conducted survey

Strategic aim 2

Ensuring the availability of information while continuously improving visibility

Measure 2.1. Intensification of activities by which the Faculty and university teachers contribute to the academic profession, and to the University and local community progress, while ensuring better visibility on the Faculty website

- ▶ Executive authorities: dean, vice-deans, heads of Faculty departments, Faculty academic secretary, heads of divisions
- ▶ Implementation deadline: end of 2028
- ▶ Performance indicators:
 1. Number of professional activities carried out by teachers (public lectures, round tables, published papers and other types of public activities)
 2. Number of conducted educational activities for the public
 3. Number of science popularisation events focused on promotion of citizen science organised or co-organised by the Faculty
 4. Updated website containing accurate information for users of the Faculty's professional services
 5. Annual internal audit

Measure 2.2. Usage of Faculty's comparative advantages for better national and international positioning

- ▶ Executive authorities: dean, vice-deans, Faculty Council, heads of Faculty departments, Faculty academic secretary, heads of divisions
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Number of organised meetings of alumni, Faculty friends and other associations with the aim of promoting agronomy as a profession and presenting Faculty's achievements and its potential
 2. Improvement of digital operations
 3. Improved infrastructure for access to various digital contents
 4. Developed plan to increase the visibility of digital contents
 5. Prepared promotional materials of the Faculty
 6. Number of implemented activities for improving visual identity of the Faculty

Measure 2.3. Intensification of the ALUMNI Association work targeting former students and friends of the Faculty

- ▶ Executive authorities: president and secretary of the ALUMNI Association, dean
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Number of workshops and forums co-organised with the ALUMNI Association
 2. Annual report on the activities of the ALUMNI Association
 3. Database of the ALUMNI Association members used for coordinating the activities and exchange of information

Strategic aim 3

Continuous allocation of financial means from national and international funds and rationalisation of expenditures

Measure 3.1. Support for development of teachers' competencies and project applications from all funding sources

- ▶ Executive authorities: dean, vice-deans, heads of Faculty departments, heads of divisions, Office for international relations and projects
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Number of workshops for development of teachers' competencies through training on application and implementation of projects
 2. Number of training programmes completed by public procurement officers
 3. Decision on rewarding the main applicant or partner in the approved project, depending on the project budget allocated to the Faculty
 4. Established Fund for co-financing of strategic projects through which strategic scientific infrastructure of the Faculty will be strengthened
 5. Regulations on additional criteria for promotion that will increase scientific productivity and the quality of the teaching process
 6. Report on the number of submitted, approved and realised projects

Measure 3.2. Improvement of business procedures and raising of employees' awareness of the necessity of rational use of the Faculty resources

- ▶ Executive authorities: dean, vice-deans, heads of Faculty departments, heads of divisions, Office for international relations and projects
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Report on applied business procedures complying with the principles of environmental protection and new measures for waste disposal

2. Number of activities directed towards the rational use of Faculty resources and raising awareness about necessity to lower the harmful impact on environment
3. Investment and modernisation plan for maintenance and landscaping
4. The amount of funds invested in increasing the efficiency of Faculty building maintenance
5. Annual report of Faculty business operations prepared by the dean

Strategic aim 4

Encouraging development for the transfer of knowledge and innovations by conducting field researches and practical teaching

Measure 4.1. Strengthening the Experiment station for innovation and technology, Central Agrobiotechnical Analytical Unit and Biotechnical Scientific Research Centre, intensifying the adoption of top technologies and new methods

- ▶ Executive authorities: dean, vice-deans, Committee for development and organisation of experiment stations for technology and innovation transfer, heads of Faculty departments, heads of experiment stations, head of CAAU and heads of all sub-units, Office for innovation and technology
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Devised digital business organisation plan, determined needs for experimental areas, facilities, equipment and employees working in the Experiment station for innovation and technology
 2. Built cellar and winery at the Experiment station in Mandićevac
 3. Increased areas of experiment stations in Faculty's ownership or in lease
 4. Regulation on integration of CAAU, Biotechnical Scientific Research Centre and Experiment stations for innovation and technology
 5. Agreements with partners and sponsors for equipping of CAAU, Biotechnical Scientific Research Centre and Experiment stations for innovation and technology
 6. Training of staff working in CAAU, Biotechnical Scientific Research Centre and Experiment stations for innovation and technology through courses, seminars and workshops for more successful and functional handling of equipment
 7. Purchased strategically important equipment for the Faculty development as determined by the Decision on procurement of strategic equipment for FABSOS
 8. Number of accredited methods and authorised laboratories in CAAU, quality assurance and management through maintenance of ISO 9001:2015 standard
 9. Updated database of laboratory analyses and services aiming to assure more transparent data management

Measure 4.2. Establish a lifelong learning system for Faculty non-teaching and administrative staff of the Faculty

- ▶ Executive authorities: dean, vice-deans, heads of Faculty departments, Faculty academic secretary, heads of divisions, head of CAAU and heads of sub-units
- ▶ Implementation deadline: continuously until 2028
- ▶ Performance indicators:
 1. Report on the needs for professional development of non-teaching and administrative staff of the Faculty
 2. Presented performance indicators related to application of newly acquired knowledge
 3. Number of non-teaching and administrative staff who attended lifelong learning courses in the country and abroad

4.2. Teaching activity and students

Overall aim: Ensure high-quality education of students within up-to-date and attractive study programmes in the field of biotechnical sciences, which includes the acquisition of theoretical knowledge and practical skills necessary for their good positioning on the labour market. Increasing the share of active learning in the teaching process, which, in addition to easier acquisition of professional competencies, will contribute to better critical thinking skills, intellectual curiosity, personal growth and social responsibility. Continuous work on the introduction and implementation of lifelong learning programmes that support the transition to green economy in accordance with the National Plan for the Development of Education and Training until 2027. Encourage teachers to constantly improve their teaching skills and apply their knowledge gained through scientific and research work in teaching. Assure provision of high quality education in order to gain recognition of the Faculty in the European higher education area and to raise attractiveness of studying at the Faculty.

Strategic aim 1

Raising of the quality and attractiveness of studying at the Faculty

Measure 1.1. Termination of existing and introduction of 6 new university undergraduate study programmes

- ▶ Executive authorities: dean, vice-dean for teaching and quality assurance, Committee for teaching, Committee for quality assurance, Faculty Council, heads of Faculty departments, Quality assurance office
- ▶ Implementation deadline: September 2027
- ▶ Performance indicators:
 1. Conducted analysis of existing university undergraduate study programmes (number of students, exam passing rate, drop out rate, satisfaction with studies)

2. Proposals for the names and structure of new university undergraduate study programmes adopted by the Faculty Council
3. Appointed committees for preparation of new university undergraduate study programmes
4. Prepared curricula for 6 new university undergraduate study programmes adopted by the Faculty Council
5. Acquired licence for delivery of 6 new university undergraduate study programmes
6. Announced call for admission of students to studies

Measure 1.2. Introduction of 6 new university graduate study programmes

- ▶ Executive authorities: dean, vice-dean for teaching and quality assurance, Committee for teaching, Committee for quality assurance, Quality assurance office, Faculty Council, heads of Faculty departments
- ▶ Implementation deadline: September 2027
- ▶ Performance indicators:
 1. Conducted analysis of existing university graduate study programmes (number of students, exam passing rate, drop out rate, satisfaction with studies)
 2. Proposals for the names and structure of new university graduate study programmes adopted by the Faculty Council
 3. Appointed committees for preparation of new university graduate study programmes
 4. Prepared curricula for 6 new university graduate study programmes adopted by the Faculty Council
 5. Acquired licence for delivery of 6 new university graduate study programmes
 6. Announced call for admission of students to studies

Measure 1.3. Revision of professional undergraduate, university undergraduate and graduate study programmes entered in the Register of Study Programmes

- ▶ Executive authorities: dean, vice-dean for teaching and quality assurance, Committee for teaching, Committee for quality assurance, Faculty Council, heads of Faculty departments, Quality assurance office
- ▶ Implementation deadline: end of 2028
- ▶ Performance indicators:
 1. Completed analysis of existing study programmes (number of students, exam passing rate, drop out rate, satisfaction with studies)
 2. Prepared plan for deletion of professional studies from the Register of study programmes

3. Discussion and adoption completed at the Faculty Council
4. Completed procedure for deleting of professional studies from the Register of study programmes
5. Activating the dormant status for the university undergraduate study programme in Agriculture (code in the Register of study programmes 243)
6. Activating the dormant status for the university graduate study programmes (codes in the Register of study programmes 562, 563, 564, 565, 566, 1842 and 1847)

Measure 1.4. Increasing the number of students enrolled in undergraduate and graduate studies of the Faculty

- ▶ Executive authorities: vice-deans, Committee for quality assurance, Committee for Faculty promotion, Quality assurance office, heads of Faculty departments, Scientific Forum, all employees
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Analysis of the Faculty's admission policy
 2. Systematic analysis of labour market needs and adjustment of admission quotas
 3. Increasing the participation of employees and students by 20% in activities related to the Faculty promotion (Festival of Science, Open Door Day, Career Day, presentation of the Faculty in secondary schools and at fairs, professional events, etc.)
 4. Organised visits of secondary school students and prepared interactive workshops at the Faculty and its experiment stations
 5. Increasing the Faculty's presence in digital media with the aim of promoting and increasing visibility compared to the previous five-year period
 6. Creation of promotional materials for the study programmes offered by the Faculty

Measure 1.5. Increasing the study success rate at the Faculty

- ▶ Executive authorities: dean, vice-deans, Committee for teaching, Committee for quality assurance, Quality assurance office, Faculty Council, Office for student support and career counselling, heads of Faculty departments
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Analysis of the study success rate at the Faculty for the period from 2018/2019 - 2022/2023
 2. Increase in the number of students who complete their studies within determined study duration compared to the average number of the previous five-year period
 3. Shortened average duration of studies compared to the average duration of the previous five-year period

4. Involvement of students in the work of Faculty bodies in accordance with valid acts
5. Increase of the library fund (increased publishing activity of Faculty teachers primarily)
6. Analysis of the mentoring system of study year coordinators and the student tutor system, as well as prepared recommendations for improvement of their work and their adoption by the Faculty Council
7. Developed system of inclusion of vulnerable groups of students in the teaching process
8. Drafting and implementation of the Regulations on evaluation of students' extracurricular activities
9. Amendments to the Regulations on awarding of students
10. Amendments to the Regulations on assessment of students' performance within the European Credit Transfer System
11. Integrated principles of gender equality into the teaching process in accordance with the Gender Equality Plan of Josip Juraj Strossmayer University of Osijek
12. Intensification of the activities provided by the Office for student support and career counselling through organisation of events that enable interaction between students and employers, support for students in planning and implementing professional, cultural, social and sports activities
13. Monitoring and analysis of the employability of graduates

Measure 1.6. Intensification of lifelong learning programmes delivery

- ▶ Executive authorities: vice-dean for teaching and quality assurance, Committee for teaching, head of the Centre for Lifelong Learning, Faculty Council, Programme council of the Centre for Lifelong Learning, heads of Faculty departments
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Analysis of labour market needs and recommendations of the National Plan for the Development of Education and Training until 2027
 2. Adopted Decision on deactivation of lifelong learning programmes for which there is little interest from participants
 3. Elaborated qualification standards for ongoing lifelong learning programmes
 4. Proposals for lifelong learning programmes adopted by the Faculty Council
 5. Elaborated qualification standards for newly proposed lifelong learning programmes
 6. Created one (1) lifelong learning programme that can be delivered in English in cooperation with a foreign institution
 7. Prepared promotional material for Faculty's lifelong learning programmes

Strategic aim 2

Monitoring and systematic improvement of the teaching process quality

Measure 2.1. Strengthening the implementation of the teaching process quality system in accordance with ESG

- ▶ Executive authorities: vice-deans, Committee for teaching, Committee for quality assurance, Quality assurance office, Faculty Council
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Analysis of the current state of the teaching process quality
 2. Prepared reports on monitoring the teaching process quality for the previous five-year period
 3. Updated Manual on quality assurance
 4. Continuous monitoring of the teaching process quality according to the Manual on quality assurance

Measure 2.2. Improvement of teachers' competencies

- ▶ Executive authorities: vice-deans, Committee for teaching, Committee for quality assurance, Quality assurance office, Faculty Council, all employees engaged in teaching
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Analysis of realised activities aimed at improvement of teachers' competencies in the previous five-year period
 2. Completed surveys among students about teachers' performances as determined by the Manual on quality assurance
 3. Completed teachers' self-evaluation as determined by the Manual on quality assurance
 4. Completed peer review of teachers' competencies as determined by the Manual on quality assurance
 5. Analysis of the results obtained from surveys and evaluations and preparation of recommendations and guidelines for improvements of teachers' competencies
 6. Number of teachers who attended workshops, lectures and seminars related to teaching skills, pedagogical and didactic skills, assessment methodology, harmonizing of assessment with learning outcomes, etc., increased by 10% compared to the previous five-year period

Strategic aim 3

Development of a stimulating environment for the internationalisation of the teaching process

Measure 3.1. Improvement of the teaching process and increase of the number of students enrolled in the University graduate study programme in Digital Agriculture

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, Committee for teaching, Faculty Council, Office for international relations and projects, heads of Faculty departments
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Analysed interest and success in studying within the graduate study programme of Digital Agriculture
 2. Made amendments to the study programme and reduced number of teachers engaged in the graduate study programme of Digital Agriculture
 3. Number of created teaching materials in English language
 4. Created website for the graduate study programme of Digital Agriculture
 5. Created promotional materials for the graduate study programme of Digital Agriculture

Measure 3.2. Development of an English-taught joint graduate study programme and an online graduate study programme

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, Committee for teaching, Faculty Council, Office for international relations and projects, heads of Faculty departments
- ▶ Implementation deadline: end of 2027
- ▶ Performance indicators:
 1. Analysed needs of the labour market
 2. Identified partner for devising of a joint study programme and established cooperation
 3. Prepared graduate study programme curriculum adopted by the Faculty Council
 4. Acquired licence to deliver the graduate study programme
 5. Announced call for admission to the study

Measure 3.3. Increase of the incoming mobility of students

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, Committee for teaching, Faculty Council, Office for international relations and projects, heads of Faculty departments
- ▶ Implementation deadline: end of 2027
- ▶ Performance indicators:
 1. Analysed current state of the incoming mobility of students
 2. Updated list of courses taught in English
 3. Appointed buddy student to act as a support to incoming students
 4. Prepared Information Package in English published on the Faculty website
 5. Organised at least one (1) workshop, summer school, short-term blended mobility or blended intensive programme for incoming students
 6. Increased incoming mobility of students by 10% compared to the previous five-year period

Measure 3.4. Increase of the outgoing mobility of students

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, Committee for teaching, Faculty Council, Office for international relations and projects, heads of Faculty departments
- ▶ Implementation deadline: end of 2027
- ▶ Performance indicators:
 1. Analysed current state of the outgoing mobility of students
 2. Intensive continuous promotion of mobility opportunities for home students through lectures and workshops
 3. Encouraging students to participate in international workshops, summer schools and short-term blended mobilities, and blended intensive programmes (BIPs)
 4. Created promotional material
 5. Increased outgoing mobility of students by 10% compared to the previous five-year period.

4.3. Scientific research activity

Overall aim: Continuous raising of the scientific and research activities quality while achieving recognition in the areas Faculty's activities and developing of a multidisciplinary research environment with effective use of research capacities. Stronger focus should be directed towards the increase of awarded competitive scientific research projects and effective use of all comparative advantages in order to improve cooperation with other research teams in regional, national and international surroundings. The above stated should be in accordance with the specific strategic goals directed towards smart, inclusive and sustainable growth, which are defined by the Smart Specialisation Strategy of the Republic of Croatia and the European Framework Programmes for Research and Innovation. Attention will be focused on raising the quality of Doctoral study programme and the quality of young researchers. Development and implementation of the open science system shall be achieved by increasing the number of published scientific papers and other scientific materials in the open science concept. Promotion of ethical principles, academic integrity and responsible behaviour in science will be an imperative.

Strategic aim 1

Achieving recognition in research areas through continuous raising of scientific excellence

Measure 1.1. Intensification of work performed by the Faculty's research teams

- ▶ Executive authorities: dean, vice-deans, research teams, Board for science, Faculty Council
- ▶ Implementation deadline: end of 2028
- ▶ Performance indicators:
 1. Increased number of project proposals and scientific papers related to the activities of research teams
 2. Number of established research teams and comparison with the previous period
 3. Updated Regulations on the establishment and work of the Faculty's research teams with the definition of minimum scientific and professional activities

Measure 1.2. Strengthening of scientific cooperation and increasing of the Faculty's participation in competitive scientific research projects

- ▶ Executive authorities: dean, vice-deans, research teams, Office for international relations and projects, Office for science, Board for science, Faculty Council
- ▶ Implementation deadline: continuously

- ▶ Performance indicators:
 1. Number of published scientific papers in the a1 category and their distribution according to quartiles, the number of scientific papers in the a2 and a3 categories and comparison with the previous reporting period
 2. Number of citations per scientist and comparison with the previous period
 3. Number of submitted competitive scientific projects proposals and comparison with the previous period
 4. Updated module of Projects in CroRIS, which contains information about projects transferred from POIROT Information System at the Faculty level
 5. Number of signed project grant agreements and participation in project realisation, and comparison with the previous period
 6. Number of other scientific activities and comparison with the previous period

Measure 1.3. Strengthening of human resources engaged in scientific and research work by hiring excellent students and scientists and increasing student participation in projects

- ▶ Executive authorities: dean, vice-deans, Central administration office, Faculty Council, departments, CAAU
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Number and type of advancements of scientists and comparison with the previous period
 2. Number of newly employed assistants on projects and in teaching
 3. Number of newly employed scientists
 4. number of assistant professors in relation to the total number of scientific-teaching staff
 5. Number of newly employed technicians and laboratory associates

Strategic aim 2

Continuous raising of quality of scientific research and developing a multidisciplinary research environment with effective use of research capacities

Measure 2.1. Encouraging excellence and scientific productivity of employees

- ▶ Executive authorities: dean and vice-deans, Committee for awarding of teachers and associates, Office for science, Office for international relations and projects, departments, CAAU
- ▶ Implementation deadline: continuously

- ▶ Performance indicators:
 1. Number and type of awards presented to employees according to the Ordinance on awarding the excellence of teachers and associates
 2. Number and type of awards won at the local, regional, national and international levels
 3. Number and type of other awards won by Faculty staff

Measure 2.2. Increase in the scientific productivity of employees through publication of greater number of scientific papers indexed in the WoS database in the Q1 and Q2 quartiles

- ▶ Executive authorities: vice-dean for science and postgraduate studies, IT office, Board for science, Office for science, departments, CAAU
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Number of published papers indexed in WoS-base in the Q1 and Q2 quartiles
 2. Improved already existing support system for publishing of scientific papers in prestigious journals (Q1 and Q2 quartiles)
 3. Number and quality of papers, which publication was financed from the Science Fund
 4. Created list of h-index of scientists in relevant citation databases
 5. Prepared list of Faculty staff with active profiles (Research Gate, LinkedIn)
 6. Updated Regulation on the Science Fund

Measure 2.3. Increase in the number of citations per scientist

- ▶ Executive authorities: employees, vice-dean for science and postgraduate studies, Board for science, Office for science, IT office, departments
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Number of citations per Faculty and per scientists in the WoS and Scopus database
 2. Total number of citations of the Faculty and scientists per years and comparison with the previous period

Measure 2.4. Increase in the number of developed competitive project proposals and the increase in the number of projects approved for funding

- ▶ Executive authorities: dean, vice-deans, Board for science, Office for science, Office for international relations and projects, departments, CAAU
- ▶ Implementation deadline: end of 2025 and continuously

- ▶ Performance indicators:
 1. Number of in-house workshops on calls, application procedures and project management
 2. Number of notifications sent to employees about announced calls for project proposals
 3. Number of applications for project managers/associates within national scientific research projects
 4. Number and type of national scientific research projects approved for funding
 5. Amount of funds used for pre-financing/co-financing of competitive scientific research projects

Measure 2.5. Improvement of research infrastructure

- ▶ Executive authorities: dean, vice-deans, Faculty Council, departments, IT office, CAAU
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Adopted and implemented Rulebook on the work of the Central Agrobiotechnical Analytical Unit
 2. Number of CAAU activities carried out through organisational units and comparison with the previous period
 3. Number of accredited laboratory methods and comparison with the previous period
 4. Number of other scientific activities and comparison with the previous period
 5. Number and value of newly acquired capital equipment to be used for strengthening of science and innovation potential
 6. Established CAAU digital database for transparent data management
 7. Continuous assurance of CAAU quality management through maintaining ISO 9001:2015 standards
 8. Revised and digitalised Catalogue of Faculty equipment
 9. Updated Module referring to Equipment and Services in CroRIS, which contains information transferred from the Šestar information system at the Faculty level

Measure 2.6. Encourage the cooperation of Faculty researchers with individual researchers and research teams at other University constituent units

- ▶ Executive authorities: dean, vice-deans, Board for science, Office for science, departments, CAAU, research teams, employees
- ▶ Implementation deadline: continuously

- ▶ Performance indicators:
 1. Number of project proposals and projects approved for funding developed in cooperation with other University constituent units
 2. Number of published scientific papers prepared with researchers from other University constituent units
 3. Number of joint doctoral theses
 4. Developed system for cooperation with the economy sector with the aim of forming joint interdisciplinary teams for research and development of innovations, new technologies and patents
 5. Number of papers published in co-authorship with businessmen
 6. Number of project proposals and projects approved for funding developed in cooperation with economy sector

Measure 2.7. Increase in the number of visiting researchers at the Faculty and encouraging the Faculty researchers to spend a research period at other universities

- ▶ Executive authorities: vice-deans, Board for science, Office for science, Office for international relations and projects, departments, CAAU
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Number of visiting researchers per year
 2. Number of Faculty researchers doing research/specialisation at other universities

Strategic aim 3

Raising the quality of the Doctoral study programme and improving the quality of young researchers

Measure 3.1. Increase the number and quality of study advisors/mentors at the Doctoral study programme and improve the monitoring of doctoral students' activities. Improve the cooperation between the study advisor/mentor and the doctoral student through a clear definition of their rights and obligations

- ▶ Executive authorities: vice-dean for science and postgraduate studies, Committee for the doctoral degree award, coordinators of the Doctoral study programme modules, Office for science
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Number of new study advisors at the Doctoral study programme
 2. Number of new mentors at the Doctoral study programme
 3. Total number of study advisors and mentors at the Doctoral study programme
 4. Number of organised workshops for mentors

Measure 3.2. Increase in the number of defended doctoral theses

- ▶ Executive authorities: vice-dean for science and postgraduate studies, Committee for the doctoral degree award, coordinators of the Doctoral study programme modules, Office for science
- ▶ Implementation deadline: end of 2026 and continuously
- ▶ Performance indicators:
 1. Number of doctoral theses defended in the period 2023-2026 compared to 2019-2022
 2. Number of doctoral theses prepared as a scientific monograph in the period 2023-2026 compared to 2019-2022
 3. Number of doctoral theses prepared as a collection of scientific papers in the period 2023-2026 compared to 2019-2022
 4. Number of doctoral theses prepared within the international double doctorate in the period 2023-2026 compared to 2019-2022

Measure 3.3. Increase in the number of students at the Doctoral study programme, especially the number of students from other institutions or from the economy sector

- ▶ Executive authorities: vice-dean for science and postgraduate studies, Committee for the doctoral degree award, coordinators of the Doctoral study programme modules, Office for science, Committee for cooperation with the economy sector and innovations
- ▶ Implementation deadline: end of 2026 and continuously
- ▶ Performance indicators:
 1. Number of enrolled doctoral students per year
 2. Number of doctoral students from other institutions and the economy sector
 3. Number of foreign doctoral students
 4. Prepared educational and promotional materials about the Doctoral study programme in Croatian and English language

Measure 3.4. Further implementation of a system of stimulating the best graduate students to enrol the Doctoral study programme while ensuring selection of quality research topics and study advisors/mentors

- ▶ Executive authorities: vice-deans, Committee for teaching, Committee for the doctoral degree award, coordinators of the Doctoral study programme modules, Office for science
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Number of announced calls for admission and applicants for the Enrolment Scholarship, i.e. doctoral students applying for the Graduation Scholarship

2. Number of candidates selected for the Enrolment Scholarship, and number of doctoral students selected for the Graduation Scholarship
3. Number of submitted and successfully evaluated topics of doctoral theses

Measure 3.5. Support the doctoral students to carry out part of their research at other institutions in the country or abroad, which will contribute to acquiring of comprehensive knowledge in a related scientific field

- ▶ Executive authorities: vice-deans, Committee for the doctoral degree award, coordinators of the Doctoral study programme modules, Office for science, Office for international relations and projects
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Number of researches conducted for doctoral theses outside the Faculty in national scientific-teaching and scientific institutions
 2. Number of researches conducted for doctoral theses in foreign institutions
 3. Number of researches conducted for a doctoral thesis in economy sector
 4. Number of signed agreements that facilitate scientific research as a part of doctoral thesis preparation

Measure 3.6. Internationalisation of the Doctoral study programme

- ▶ Executive authorities: vice-deans, Committee for the doctoral degree award, coordinators of the Doctoral study programme modules, Office for science, Office for international relations and projects
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Number and titles of courses within the Doctoral study programme that can be taught in English language
 2. Number of doctoral theses written in English language
 3. Number of joint doctoral theses
 4. Exchange of scientific-teaching staff and doctoral students

Strategic aim 4

Development and implementation of the open science system by increasing the number of scientific papers and other scientific materials published within the open science concept

Measure 4.1. Develop the open science concept and provide training to employees and doctoral students about the benefits of such concept

- ▶ Executive authorities: vice-deans, Office for science, Office for international relations and projects, Library, IT office
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Created and updated the Faculty's own repository (NIB)
 2. Updated Dabar National Repository
 3. Conducted training for employees to archive scientific materials in Faculty's own repository
 4. Continued current practice of filling in the doctoral student statement on the archiving and public defence of the doctoral thesis
 5. Created guidelines for the adoption of open science policy
 6. Number of activities aimed at promotion of the open science policy

Measure 4.2. Analysis of the use of the Faculty repository (NIB) and its further update and upgrade

- ▶ Executive authorities: vice-deans, Office for science, Office for international relations and projects, Library, IT office
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Number of scientific papers archived in open access in Faculty's and national repositories
 2. Number of archived review papers in open access in Faculty's and national repositories
 3. Number of professional papers archived in open access in Faculty's and national repositories
 4. Number of archived qualification theses (bachelor, master, specialist and doctoral theses) in open access in Faculty's and national repositories
 5. The ratio of papers archived in open access in Faculty's and national repositories in relation to the total number of papers published by the Faculty employees

Strategic aim 5

Promotion of ethical principles, academic integrity and responsible behaviour in science

Measure 5.1. Continue the practice of filling in the doctoral student's statement on the authenticity of the doctoral thesis and academic integrity for publication in the Faculty's and national repositories

- ▶ Executive authorities: vice-deans, Office for science, Office for international relations and projects, Library, IT office
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Number of doctoral theses in the national repository
 2. Number of doctoral theses in the Faculty repository
 3. Number of doctoral theses with delayed publication
 4. Number of scientific papers resulting from doctoral theses
 5. Number of scientific papers created from doctoral theses in open access

Measure 5.2. Improvement of the institutional management of intellectual property and intensification of activities aimed at the popularisation of science

- ▶ Executive authorities: dean, vice-deans, Office for science, Office for international relations and projects, Library, IT office
- ▶ Implementation deadline: end of 2024 and continuously
- ▶ Performance indicators:
 1. Prepared Regulations on intellectual property management
 2. Number of organised workshops and attendees in workshops on the use of anti-plagiarism software and tools
 3. Report on the visibility and recognition of the Faculty's journals
 4. Number of papers per categories published in Faculty's journals
 5. Number of papers by Faculty employees (main authorship) per categories published in Faculty's journals with an expressed percentage compared to papers by authors outside the Faculty and foreign authors (comparison at the level of 3 years)
 6. Number of citations of papers published in Faculty's journals (comparison at the level of 3 years)

4.4. International relations

Overall aim: Strengthening of international cooperation, presence and reputation of the Faculty in the European and global higher education area through cooperation with leading global institutions within the EU framework programmes for research and innovation and cohesion policies

Strategic aim 1

Increase of the mobility of students and researchers through international exchanges and joint research projects

Measure 1.1. Through targeted international promotions and cooperation, actively attract candidates, especially from countries that are insufficiently represented at the Faculty

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, Office for international relations and projects, Office for science
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Report on the mobility of incoming and outgoing students and researchers according to the type of mobility (teaching or professional training), country and university, field of research or study programme
 2. Analysis and comparison of services and support systems for foreign students and researchers at similar universities in the Netherlands, Hungary and Germany
 3. Developed communication plan for active promotion of activities and study programmes offered by the Faculty
 4. Created promotional materials for study programmes delivered by the Faculty
 5. Targeted international promotion through electronic media and other available channels, and through the Study in Croatia initiative at international education fairs
 6. Increased international recognition of the Faculty on social media networks
 7. Number of new signed agreements on cooperation with international institutions for the exchange of students and researchers and joint projects
 8. Number of incoming students, academic and non-academic staff

Measure 1.2. Establish cooperation with higher education institutions cooperating within the COLORS European University Alliance, with foreign embassies in the Republic of Croatia and with recruiting agencies in the target countries

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, vice-dean for science and postgraduate studies, Office for international relations and projects, Office for science

- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Meeting with representatives of higher education institutions and offices for international cooperation within the COLOURS European University Alliance and with target universities in Africa and Türkiye
 2. Meeting with representatives of foreign embassies in the Republic of Croatia, consulting and recruiting agencies in the target countries
 3. Identified common interests with international partner universities
 4. Increased number of joint international activities and programmes (summer/winter schools, blended intensive mobility programmes, international gatherings, research projects, etc.) in cooperation with universities from the COLOURS European University Alliance and with other international universities
 5. Number of new institutional partnerships with research centres, universities and industry
 6. Increased number of outgoing mobility of students and staff

Strategic aim 2

Strengthening of strategic international partnerships

Measure 2.1. Encourage the development of innovative educational programmes and curricula in cooperation with key international partners, and establishing of mentoring/co-mentoring system within university postgraduate study programmes through global networks and partnerships

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, vice-dean for science and postgraduate studies, Office for international relations and projects
- ▶ Implementation deadline: end of 2026 and continuously
- ▶ Performance indicators:
 1. Organised workshop for academic staff on the possibilities of internationalisation of study programmes
 2. Increased number of proposals for international joint study programmes, short study programmes or professional programmes delivered in different teaching formats (onsite or online on platforms MOOC, COIL, BIP, etc.)
 3. Intensified use of digital technologies for internationalisation of study programmes through an increased number of delivered international online programmes or activities
 4. Increased mentoring/co-mentoring of international students at postgraduate study programmes

Measure 2.2. Encouraging mid-term and long-term incoming and outgoing mobility of academic staff with financial support, and increase of the number of prominent international visiting professors and researchers at the Faculty

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, vice-dean for science and postgraduate studies, Office for international relations and projects, Office for science
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Organised workshop for academic staff on the possibilities of using international funding sources for realisation of mid-term and long-term mobility
 2. International dimension integrated into the professional development of academic staff through additional institutional criteria for achieving of excellence
 3. Regulations on the Fund for International Cooperation
 4. Regulations on the appointment of visiting professors and researchers at the Faculty

Strategic aim 3

Increase of the access to international funding sources for mobility, scholarships, research projects and educational initiatives

Measure 3.1. Continuously monitor the calls for funding of mobility, research projects and educational initiatives

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for science and postgraduate studies, Office for international relations and projects, Office for science
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Defined calendar of published calls and announced calls by international funding sources and dissemination of information among staff and students
 2. Information sessions on available international sources of funding and the application procedure for international projects
 3. Greater visibility of previous and ongoing international projects

Measure 3.2. Increase the participation of Faculty employees in international research networks and consortia

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for science and postgraduate studies, Office for international relations and projects, Office for science
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Participation in sessions, workshops and gatherings of international associations and global networks active in the field of biotechnical sciences
 2. Membership in the boards of international associations and global networks
 3. Participation in the organisation of meetings and workshops of international associations and global networks

Strategic aim 4

Support to and improvement of internationalisation activities of teaching and non-teaching staff

Measure 4.1. Improve the skills of teaching and non-teaching staff required in the process of study programmes internationalisation and for implementation of international projects

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, Office for international relations and projects
- ▶ Implementation deadline: September 2026 and continuously
- ▶ Performance indicators:
 1. Professional training of staff working in the Office for international relations and projects, empowering them for provision of support in proposing and implementing international projects
 2. Professional training of staff working in the Office for international relations and projects, empowering them for provision of support in internationalisation of study programmes
 3. Delivered workshop for academic staff on the internationalisation of study programmes
 4. Promotion of prominent professors, scientists and students with international experience through electronic media and other available channels
 5. Support provided to academic staff in preparation and implementation of study programmes in cooperation with international universities, organisation of international meetings and participation in international networks and associations
 6. Support for inclusion of international visiting professors in teaching

Measure 4.2. Improve coordination and cooperation between the Office for international relations and projects and the Office for student support and career counselling

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, vice-dean for teaching and quality assurance, Office for international relations and projects
- ▶ Implementation deadline: June 2026 and continuously
- ▶ Performance indicators:
 1. Continuous analysis of courses and activities offered to foreign students and staff
 2. Developed protocol for supporting foreign students in their studies and activities conducted in a foreign language, as well as support to visiting teachers and researchers
 3. Developed training for new students included in the Buddy programme to enable them to provide support to foreign students

Strategic aim 5

Encouraging cultural exchange and international understanding among students and staff

Measure 5.1. Training of students and staff on intercultural understanding and communication

- ▶ Executive authorities: vice-dean for international cooperation and English-taught studies, Office for international relations and projects, Office for student support and career counselling, Office for science
- ▶ Implementation deadline: end of 2025 and continuously
- ▶ Performance indicators:
 1. Organised cultural event or activity for promotion of international understanding in cooperation with incoming students and staff

4.5. Cooperation with economy sector and transfer of knowledge and technology

Overall aim: Strengthening of efficiency and increasing the amount of knowledge and technology transfers resulting from scientific and professional projects into the Croatian and regional economy sector, with the purpose of assuring sustainability and transparency of the research results and encouraging the spin-offs, real sector investments in research and innovation, and boosting the development of the entire sector.

Strategic aim 1

Increase of the knowledge and technology transfer

Measure 1.1. Devising of activities aimed at increased transfer of knowledge and technologies

- ▶ Executive authorities: vice-dean for development of experiment stations and technology transfer, vice-dean for business and investment management, Committee for business and investment management, Committee for cooperation with the economy sector and innovations, Innovation and technology transfer office
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Defined action plan
 2. Number of devised activities that connect science and economy
 3. Number of innovative concepts and/or intellectual property developed in cooperation with the economy sector
 4. Number of projects with a high level of technological readiness

Measure 1.2. Establishment and regular updating of the business entities database for more efficient transfer of knowledge, technologies and innovations

- ▶ Executive authorities: Dean, vice-dean for development of experiment stations and technology transfer, vice-dean for business and investment management, Committee for business and investment management, Committee for cooperation with the economy sector and innovations, Innovation and technology transfer office, all employees
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Printed materials about the Faculty activities for the business sector
 2. Number of contacts and projects realised with business entities
 3. Established and regularly updated database on business entities

Measure 1.3. Encouraging the realisation of professional activities, applied research within the framework of partnerships with business entities, strengthening of human resources for applied research and professional activities, provision of services on the market (authorisation of laboratories, accreditation of methods), intensifying the transfer of knowledge and technologies (intensification of cooperation with business entities through development of new joint projects, signing of new cooperation agreements, carrying out part of the research/practical work of postgraduate (doctoral) students in business entities

- ▶ Executive authorities: vice-deans, Committee for the doctoral degree award, coordinators of the Doctoral study programme modules, Committee for postgraduate specialist studies, Committee for cooperation with the economy sector and innovations, Board for bachelor papers, Board for master theses, Office for science
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Number of contracts and projects realised with business entities
 2. Gained income from projects and cooperation with the economy sector
 3. Number of established projects with industry on preparation of bachelor and master theses
 4. Number of conducted researches in the economy sector for doctoral dissertations
 5. Number of commercialised products or services
 6. Adopted Regulations on intellectual property

Strategic aim 2

Improving the work of the Experiment stations for innovation and technology

Measure 1.1. Equipping of the Experiment stations for innovation and technology

- ▶ Executive authorities: dean, vice-dean for development of experiment stations and technology transfer, Committee for development and organisation of experiment stations, employees
- ▶ Implementation deadline: end of 2026 and continuously
- ▶ Performance indicators:
 1. Number of activities and/or projects for procurement of equipment for the experiment stations
 2. Description of activities aimed at equipping of experiment stations
 3. Number of newly acquired movable and immovable equipment
 4. Number of activities aimed at building and equipping of the Biopark for animal production and biotechnology

Measure 1.2. Intensification of research and professional cooperation through activities realised at the experiment stations

- ▶ Executive authorities: dean, vice-dean for development of experiment stations and technology transfer, Committee for development and organisation of experiment stations, employees
- ▶ Implementation deadline: continuously
- ▶ Performance indicators:
 1. Number of scientific and professional research conducted at the experiment stations
 2. Number of professional cooperation projects realised by the experiment stations
 3. Number of activities of business entities carried out at the experiment stations (Field Days and similar promotional activities)

5. Risks, priorities and methods of the Strategy implementation

The implementation of the Development Strategy of the Faculty of Agrobiotechnical Sciences Osijek is essential for improving the quality of teaching, research and overall work of the Faculty. However, the process of strategic tasks performance carries numerous risks and challenges. By considering them, this Strategy is based on the real resources that are at the Faculty's disposal, yet it follows development trends in the biotechnical sciences and higher education in order to open up space for the Faculty development in the next five-year period.

The main risks in the implementation of this strategic plan, as well as ways of mitigating them through effective implementation can be summed into several groups. One of the main risks for the Faculty is related to the lack of financial resources, and the limited budget can jeopardise the realisation of planned activities. The Faculty of Agrobiotechnical Sciences Osijek gains significant part of funds for teaching through programme contracts from the Ministry, and a part of funds is secured through project activities. Both sources of financing will be used to achieve strategic tasks, while taking care of the proper spending of allocated funds. The implementation of this Strategy will not be possible if there will be a reduction in the funding of the Faculty through programme contracts, because project funds cannot be used for financing of development activities.

In addition to financial risks, the Faculty is also faced with a lack of training of administrative and other employees, which, along with inappropriate infrastructure and equipment, can influence the realisation of the Development Strategy. For this reason, the emphasis shall be put on careful utilisation of financial resources, and on permanent education of all employees and students so that the existing scientific and other infrastructure can be used more efficiently. Also, the fundamental risks refer to the maintenance of the existing and the development of new personnel structure motivated to undertake organisational changes foreseen in this Strategy. Human resources are a key factor to the realisation of planned activities. The Faculty will face the challenge of attracting and retaining the best students and young scientists for its own human resources development. In this respect, it will be necessary to invest our own resources and to request the University and the Ministry to develop stimulating mechanisms to retain young scientists in the system. The occurring changes in our surroundings and in our own human resources structure require bold steps towards organisational adjustments. The Strategy envisages the development of human resources, and the increase in project activities. It defines aims and guidelines for future development that should partially eliminate the mentioned risks, and guarantee the Faculty's prosperity.

The decrease in the number of students at the Faculty and the excess of admission quotas are additional risks associated with the implementation of the Faculty's Development Strategy. The reasons for this can be found in depopulation, migration, demographic factors, distribution of agricultural land as a basic resource for agricultural production, lower income in agriculture, the treatment of agriculture as a profession in the business sector and in increased competition from similar study programmes. Reduced number of students affects the financing of the Faculty's material costs and questions the implementation of the new plan and program, which foresees the development of new study programmes aligned with the needs of the labour market. Therefore, it is important to make efforts towards boosting of Faculty's competitiveness on the higher education market, to invest in promotional activities and to promote internationalisation. The realisation of the strategic tasks is a step more into that direction. All mentioned risks were taken into account when determining the strategic tasks. Through appropriate implementation of activities, the Faculty will try to eliminate or reduce their impact.

The basic priorities of this Strategy and the overall approach to its implementation are related to scientific and educational positioning in strategic areas. The approach to implementation is described through activities that will take place according the two leading perspectives - the learning perspective and the process perspective, which are fundamental to the realisation of the mission and vision. In the scientific component, positioning in strategic areas will begin with the establishment of mechanisms for monitoring of scientific productivity and appropriate actions for open science and assurance of scientific excellence. Project activities will focus primarily on strategic areas and competitive project funding schemes. Incoming and outgoing mobility will be used for boosting of networking and finding of new project partners. This will require additional investment in human resources and the development of organisational procedures to support project activities.

In terms of teaching, the emphasis will be put on implementation and digitalisation of the new study programmes. New undergraduate studies will enable harmonisation of study programmes with labour market trends, and with provision of professional practice, students will gain practical skills in addition to theoretical knowledge. The graduate study will be further profiled and specialised to provide additional knowledge in the field of biotechnology.

The overall maturity of the institution will be raised through implementation of a functional integrated model for connecting of strategic management capacities for and continuous monitoring of key indicators of the Strategy realisation success. This will require development of an appropriate information system and organisational mechanisms for change management, as well as collection and interpretation of key performance indicators.

Successful achievement of the strategic aims requires careful planning, allocation of resources, effective communication, change management, and constant monitoring and evaluation of progress. The challenges that will affect the achievement of strategic aims are primarily related to imposed restrictions in human

resources, the permanent obligation to ensure high competitiveness of study programmes that we carry out in new scientific areas of biotechnology, precision agriculture, renewable energy sources, geo-information systems and environmental protection. Science funding is becoming more competitive and is mainly provided through the European funds and programmes that set an exceptional level of competition. We need to put significant efforts into development of study programmes in agricultural and related fields and to build human resources for their delivery. Determined strategic aims have to be achieved in conditions of stagnant employment politics and restricted financing from the state budget while agricultural and food industry, as a strategic branch of the economy requires highly educated professionals. Biotechnical sciences are and will remain the leading driver of numerous economic and social changes. The Faculty of Agrobiotechnical Sciences Osijek operates in a propulsive area with changing trends that have to be followed and addressed in order to remain competitive in the future. Such an idea is the essence of the development strategy and the fundamental strength of the Faculty of Agrobiotechnical Sciences Osijek, with which we are entering a new strategic period. Dealing with risks in a proper way will significantly increase the chances of achieving the aims set towards improving of the quality of education and research delivered by the Faculty.

