

Development Strategy of the University of Zagreb Faculty of Civil Engineering for the period 2024-2029



University of Zagreb
Faculty of Civil Engineering



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University of Zagreb Faculty of Civil
Engineering for the period from 2024 to 2029
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Foreword

The University of Zagreb Faculty of Civil Engineering is the leading higher education and scientific institution in the Republic of Croatia in the field of civil engineering, and according to numerous indicators, the leading civil engineering Faculty in the region.

The year 1919 and the establishment of the Technical College in Zagreb are considered to be the beginning of the Faculty's activities. Throughout its history, the Faculty has operated in various environments, and it has been operating as an independent institution within the University of Zagreb since 1991.

In its 105-year-long tradition, the Faculty has made an immeasurable contribution to the development of the civil engineering profession in the Republic of Croatia by educating high-quality engineers, but it also continuously supports the development of the Croatian economy through scientific research. The Faculty of Civil Engineering is proud of its rich tradition of professional work and the involvement of its teaching staff in the most demanding projects throughout the Republic of Croatia, in all branches of civil engineering. The participation of teaching staff in scientific and professional projects ensures that students of the Faculty of Civil Engineering receive an education that is aligned with current needs and trends in the profession, ensuring that future generations of civil engineering experts are trained to face the challenges of the 21st century. The Faculty is currently recognised by the public for the role it played in activities related to the recent earthquakes, however, the professional and scientific potential that the Faculty can offer to the wider community covers all other areas of civil engineering as well.

Creating a stimulating environment by promoting the principles of excellence, deepening the cooperation of employees and adjusting the institutional framework will enable an additional step forward in the quality and recognition in all areas of activity of the Faculty.

This document determines the strategic framework for the development of teaching and scientific research activities and cooperation with the business sector of the University of Zagreb Faculty of Civil Engineering, as well as the development of the quality assurance system and institutional development for the period from 2024 to 2029.



General Information about the Faculty

DEVELOPMENT STRATEGY OF THE UNIVERSITY OF ZAGREB
FACULTY OF CIVIL ENGINEERING FOR THE PERIOD 2024-2029

General Information about the Faculty

The Civil Engineering study programme commenced with the setup of the Technical College in Zagreb on 1 October 1919. The Civil Engineering Department of the College was located on the first floor of the remodelled building of the former school on Roosevelt Square no. 6. The Technical College grew in 1926 into the Technical Faculty within the University of Zagreb.

In 1940, the Faculty moved to a new building in Kačićeva street no. 26, where civil engineering classes were held until March 2023, when the complete renovation of the main and courtyard building at that location began.

In 1956, the Technical Faculty was divided into several Faculties. Among them was the Faculty of Architecture, Civil Engineering and Geodesy, which was split into three faculties in 1962, thus creating the independent Faculty of Civil Engineering of the University of Zagreb.

In 1977, the Faculty of Civil Engineering merged with the Institute of Civil Engineering of Croatia and started operating as the Faculty of Civil Engineering, within the newly established Croatian Institute of Civil Engineering. In the same year, two existing higher Civil Engineering Colleges joined the Faculty, which continue to operate as Civil Engineering studies for obtaining a higher professional qualification.

With the cessation of the Institute of Civil Engineering on 1 July 1991, the Faculty of Civil Engineering once again began operating as an independent institution within the University of Zagreb.

In 1948, Construction, Traffic and Transportation and Hydrotechnical courses were introduced, and in 1970, the Organisational-Technological course was introduced. Since 1977, the Construction Organisation study has been held as a possibility to continue education after completing the college-level study programme. This study was gradually discontinued in 1988.

At the University of Zagreb Faculty of Civil Engineering, in the academic year 2005/2006, a new system of civil engineering studies was introduced, which, in accordance with the recommendations of the Bologna Declaration, was composed of three studies: a) undergraduate university study of Civil Engineering, b) graduate university study of Civil Engineering and c) postgraduate study of Civil Engineering.

Official permits for conducting undergraduate and graduate studies were issued by the Minister of Science, Education and Sports on 2 June 2005, on the basis of Article 51, Paragraph 2 of the Act on Scientific Activities and Higher Education (Official Gazette 123/03, 105/04 and 174/04), and on the proposal of the National Council for Higher Education. Classes of the undergraduate studies began in the academic year 2005/2006, and the first generation enrolled in graduate studies in the academic year 2008/2009. Following the reaccreditation procedures carried out by the Agency for Science and Higher Education (AZVO), the official permits were renewed in November 2012 and in December 2018.

In the provisions of the Bologna Declaration, the assurance of the quality of teaching, the mobility of students and teaching staff in the process of acquiring knowledge, and the procedure for diploma recognition are particularly highlighted. In accordance with the first provision, from the academic year 2005/2006, increased work of the Education

Committee and the Committee for Quality Assurance, and the Faculty Council passed special general acts that regulated the organisation of classes in more detail, including the attendance of students at lectures and exercises, continuous testing of students' knowledge throughout the semester, and issues related to taking exams and exam deadlines. These provisions are contained in the implementation plans that regulate education for undergraduate-level and graduate-level students. In this manner, procedures for ensuring the quality of the teaching process were introduced to all the courses, having previously implemented in several courses (initially those related to geometry, and then to others). These procedures included continuous monitoring and evaluation of the entire activity of the students – from attending classes, their activity in classes and solving exercises independently, creating programmes and seminar papers, to periodic knowledge checks at colloquiums during the semester. At most courses, students can exempt themselves from part of the exam by working regularly during the semester, and continuous work makes it easier for those who have not been exempted to pass the exam during the regular exam periods.

The academic degree of Doctor of Science in the field of civil engineering has been acquired at the Faculty of Civil Engineering since its establishment in 1919 as part of the Technical College, later the Faculty of Civil Engineering in Zagreb. The first doctorate in civil engineering was earned in 1922. Decades after its establishment, the Faculty of Civil Engineering in Zagreb was the only institution in Croatia that completed the procedures for obtaining a doctorate in the scientific field of civil engineering.

The official permit for conducting doctoral studies was issued by the Minister of Science, Education and Sports on 10 July 2007, based on Article 51, Paragraph 2 and Paragraph 4 of the Act on Scientific Activity and Higher Education (Official Gazette 123/03, 105/04 and 174 /04), and on the proposal of the National Council for Higher Education. On the basis of the positive accreditation recommendation of the Agency for Science and Higher Education from 30 September, 2019, the Ministry of Science and Education issued a certificate on 11 October 2019 confirming that the Faculty of Civil Engineering of the University of Zagreb meets the requirements for higher education, which refers to the conducting of the doctoral study programme in Civil Engineering.

Today, the Civil Engineering doctoral study programme is based on the implementation of competitive scientific research, within the framework of relevant national and international scientific projects, which have a strong possibility of application in practice, and thus contribute to the development of a society based on continuous development. Doctoral studies are organised and conducted in the scientific field of technical sciences from the field of construction and the field of basic technical sciences from several research branches (geotechnics, hydro engineering, engineering structures, materials in construction, engineering mechanics, construction management and transportation engineering). Upon completion of doctoral studies, the academic title of Doctor of Science in the field of Technical Sciences is acquired.

In the period from 2018 to 2023, 101 doctoral students were enrolled in the Civil Engineering doctoral programme, of whom 13 were international doctoral students. Doctoral theses were defended by a total of 34 doctoral students, out of which 23 were Assistants and Associates on projects, employed by the Faculty, while 11 were doctoral students who come from other institutions or companies. In addition, 9 doctoral theses were written and defended in English. Also, 61 new dissertation topic proposals have been submitted, 20 of which are in English.

The university specialist programme received an official Permit on 10 July, 2007 for carrying out a specialist study programme in the area of technical sciences, in the field of civil engineering, with the following specialisations: Hydro Engineering, Engineering Structures, Bridges, Fire Engineering, Numerical and Experimental Analysis of Structures, and Organisation and Management in Construction.

In addition, with the confirmation from 2 March 2023, the university specialist study programme Earthquake Engineering, which is conducted in the area of technical sciences, the field of civil engineering and the field of basic technical science, was entered in the Register of Study Programmes. With the confirmation of the Ministry of Science and Education dated 29 April 2024, the university specialist study programme Water Loss Management was entered in the Register of Study Programmes.

The Faculty of Civil Engineering wants to maintain its position as the largest civil engineering Faculty in Croatia, which is reflected, among other things, in the scientific research activities of its employees. A strong research culture and supportive environment has led to significant improvements in scientific productivity over the years. The scientific activity of the Faculty is reflected in a significant number of published scientific papers, but also in numerous national and international projects in which Faculty employees participate, as well as in the participation of employees at scientific and other gatherings.

The implementation of extensive scientific research within scientific research projects funded by various national and international programmes form the backbone of scientific activity of the Faculty of Civil Engineering. In the period from 2018 to 2023, there was a noticeable increase in the number of projects. In several projects, cooperation was achieved with eminent international scientific institutions and industrial partners. This has enabled the employment of doctoral students and their research, training, participation in conferences, publication of papers and the acquisition of experience during study stays at other institutions. During the academic year 2022/2023, a total of 52 projects from national and international funds were implemented at the Faculty of Civil Engineering, and Faculty researchers participated in 8 COST actions.

In its 105 years of existence, the Faculty of Civil Engineering has remained faithful to the high standards of teaching, scientific research and professional activity, and has managed to maintain its leading position as an institution in the Republic of Croatia, covering all branches of civil engineering and construction-related fields. In 2023, a new Statute was adopted in line with the new Act on Higher Education and Scientific Activity (Official Gazette 119/2022), and the new Statute of the University of Zagreb from March 2023. With the new Statute, the Faculty made an additional step forward in the quality assurance system by establishing the Department for Quality Assurance and Improvement, which performs activities in the field of internal quality assurance and improvement, and by forming the Committee for Quality Assurance and Improvement as a permanent working body of the Faculty Council, as well as by appointing a Vice Dean for Quality Management.

At the time of writing up of this Strategy, the Faculty of Civil Engineering faces major challenges, primarily related to the complete renovation of the Faculty's buildings and the relocation of employees and students to new separate locations, and the new Act on Higher Education and Scientific Activity, which brings significant changes that will be reflected in the coming period on all activities of the Faculty. Therefore, the adoption of a Development Strategy for the next five-year period is an opportunity to determine priority activities with the aim of further improving the level of quality and recognition of teaching, scientific and professional work.

1.1 Organisational Structure

The Faculty is managed by the Faculty Council and the Dean. The Dean is assisted in his work by the Vice Deans and the Faculty Secretary. The Faculty has a Vice Dean for Education, a Vice Dean for Science and International Cooperation, a Vice Dean for Business and Development and a Vice Dean for Quality Management (according to the Faculty Statute, the appointment of the mentioned Vice Deans is carried out from the academic year 2024/2025).

The fundamental organisational units of the Faculty are departments, branches and an independent chair, while the other organisational units are the Department of Common Services, the Library and the Department for Quality Assurance and Improvement. The Secretariat with the Student Office, Accounting, IT Support, Technical Service, Centre for Projects, Innovation and Technology Transfer, Career Centre and Office for International Relations and Cooperation also operate within the framework of common services.

The Faculty is organised into eight departments, one branch and one independent chair:

- Department of Geotechnics
- Department of Hydrosience and Engineering
- Department of Structural Engineering
- Department of Mathematics
- Department of Materials
- Department of Organization, Technology, and Management
- Department of Transportation Engineering
- Department of Engineering Mechanics
- Branch – Croatian Centre for Earthquake Engineering
- Independent Chair for Buildings.

A Faculty department performs its activities predominantly in one scientific area, i.e., field. The scope of activity of the department includes: organisation and carrying out of teaching, scientific and professional activities; participation in the preparation of the Faculty's budget; participation in the development of the Faculty's investment plan; care about employee's training, especially that of associates; proposing scientific and professional training in the country and abroad; discussing and giving opinions and proposals on issues referred to by Faculty bodies.

A Faculty branch, in accordance with the law governing institutions, performs part of the Faculty's activities and participates in legal transactions. The branch is not a legal entity, and through its activities and operations, rights and obligations are acquired by the Faculty. The scientific and professional branch of the Faculty is the Croatian Centre for Earthquake Engineering.

An independent chair is an organisational unit of the Faculty within which undergraduate and graduate courses are held. The Chair for Buildings is the Faculty's independent chair.

Chairs and laboratories are established within the departments. The chair is an organisational unit of the department where teaching, scientific and professional activities are carried out. Laboratories are organisational units of departments where, as a rule, research work related to the activity of the Faculty is carried out.

Departments are managed by heads of departments, independent chairs and chairs by chiefs of chairs, and branches and laboratories by leader of branch and leaders of laboratories. The Department of common services is coordinated by the Secretary of the Faculty.

The head of department leads the professional and coordinates the scientific and teaching activities of the department. The chief of the independent chair coordinates the professional and leads the scientific and teaching activities of the independent chair. The chief of the chair leads the teaching and scientific activities of the chair. The leader of the branch represents and organises the work and operations of the branch.

The Faculty Council is an professional body of the Faculty, and it establishes permanent and temporary working bodies for the purpose of solving particular matters within its own authority, which are determined by the Faculty Statute.

Permanent working bodies of the Faculty Council are:

- Education Committee
- Committee for Science and International Cooperation
- Committee for Management and Development
- Degree and Final Examination Committee
- Textbooks, Scripts and Publications Committee
- Committee for Continuing Professional Development
- Committee for Quality assurance and development
- Student Disciplinary Tribunal
- Discipline Committee
- Ethics Committee.

Both students and the alumni participate in the organisational structure of the Faculty. Elected student representatives are equal members of the Faculty Council, study Year Councils and some committees. Students make good contacts with teaching staff, especially at graduate-level studies, and with the Dean and Vice Dean for Education, in teaching and non-teaching activities. They are actively involved in the organisation of the Faculty's participation in the University Fair, presentations of the Faculty in secondary schools, in sports competitions, in the organisation of student gatherings, etc.

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About the Development Strategy

DEVELOPMENT STRATEGY OF THE UNIVERSITY OF ZAGREB
FACULTY OF CIVIL ENGINEERING FOR THE PERIOD 2024-2029

About the Development Strategy

Recently, the Faculty of Civil Engineering carried out activities in accordance with the Development Strategy for the period from 2012 to 2017 (accepted at the 155th regular session of the Faculty Council held on 15 February 2012) and the Development Strategy for the period from 2018 to 2023 (accepted at the 199th regular session of the Faculty Council held on 6 December 2017).

The Development Strategy of the Faculty of Civil Engineering for the period from 2024 to 2029 defines a **general goal** as the basis for the development of all activities, as well as **strategic goals** for the development of teaching and research activities, as well as institutional development, cooperation with the business sector and quality assurance. For each area, **special goals** have been determined with highlighted specific **activities**, performance indicators, methods of implementation, responsible implementers and implementation deadlines. The reference documents listed in 6 were used when designing the Development Strategy.

In **teaching activities**, the Strategy emphasizes the key activities of **supplementing and adapting study programmes** and harmonising study programmes with the needs of the labour market through **cooperation with stakeholders from the business sector**. Furthermore, the need to participate in the registration procedures of occupational standards and qualification standards in the **Register of the Croatian Qualification Framework**, the creation of a stimulating environment for teaching in English and the integration of **digital technologies** into teaching processes at all levels is highlighted. Within the framework of existing study programmes, efforts will be made to increase the share of teaching in laboratories with the use of modern **didactic aids**, students will be encouraged to participate in professional practice and connect with employers through the activities of the Career Centre. The need for continuous promotion of the Faculty's study programmes and **digitisation of the administration of the teaching process** (as part of the digital transformation of the Faculty) is emphasised as support for teaching staff and students. It also strives to continuously improve the knowledge of teaching staff and associates by acquiring new and increasing existing competencies.

Within the scope of **scientific research**, the Faculty of Civil Engineering places a primary focus on **excellence in scientific research**, at the same time striving to improve the quality of postgraduate studies by modernising the curriculum and encouraging student mobility. In addition, it emphasizes the importance of **strengthening the innovation potential** of the Faculty. This includes developing the skills of employees for the development of innovations, encouraging collaborative research, improving the marketability of research results, and increasing the visibility of the Faculty in all segments of society. Special attention will be paid to the implementation of the systematic policy of open science.

In **business and development**, the Faculty of Civil Engineering focuses on strong cooperation with the economy in order to achieve joint business successes and encourage innovation in the construction sector. Through long-term strategic partnerships with leading companies, the Faculty will actively participate in solving the most complex engineering challenges by forming multidisciplinary teams with representatives of the construction industry. At the same time, the focus will be on **the transfer of knowledge** by integrating practical experiences into educational programmes and encouraging the active participation of the Faculty in the implementation of construction projects. This holistic strategy ensures that education, research and practical experience together contribute to progress in the construction sector.

The Development Strategy for the period from 2024 to 2029 will lay the foundations for strengthening inter-institutional unity, deepening employee cooperation and modernisation of teaching methods. By creating a stimulating environment

that promotes the principles of excellence, the goal is to achieve additional progress in the quality and recognition of the Faculty. **Promoting a culture of quality** and **establishing a management and quality assurance system** in all segments of work are the priorities of the Faculty of Civil Engineering, and their goal is to satisfy the needs of all stakeholders - students and their future employers, teaching staff and their domestic and international partners, as well as other employees of the Faculty.



Mission and Vision

DEVELOPMENT STRATEGY OF THE UNIVERSITY OF ZAGREB
FACULTY OF CIVIL ENGINEERING FOR THE PERIOD 2024-2029

Mission and Vision

The Faculty provides university education at the undergraduate, graduate and postgraduate levels in all branches of construction and related branches, continuously develops and improves higher education, scientific research activities and lifelong education, and takes care of the development of the profession and the application of new technologies, thus contributing to the sustainable development of the economy and society as a whole.

The Faculty of Civil Engineering in Zagreb has defined its role in the future of higher education and science with the following components of its Vision:

- To retain and strengthen the leading position of the university and scientific research centre in the country, which covers all branches of construction
- To achieve international recognition by developing the culture of quality in higher education and research by applying the best European and world practices, promoting the mobility of students and researchers, and become one of the regional centres of excellence in individual disciplines, and at the same time a "cooperation bridge" among the countries of the European Union and the region
- To retain and strengthen cooperation with the business sector in research -development and highly-expertise projects, specialized lifelong higher education and development of the alumni network for mutual support and progress
- To secure material, human, financial and spatial resources in the long-term for the improvement of teaching and research capacities of the Faculty, providing a stimulating and desirable place for studying and scientific work,
- To increase the Faculty's scientific activity and recognition by further encouraging the participation of scientists in international and national scientific research, development and other projects and publishing scientific papers in high-ranking journals.

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SWOT Analysis

DEVELOPMENT STRATEGY OF THE UNIVERSITY OF ZAGREB
FACULTY OF CIVIL ENGINEERING FOR THE PERIOD 2024-2029

SWOT Analysis

P O S I T I V E	STRENGTHS	OPPORTUNITIES
	Tradition and recognition in the environment.	The labour market's increased need for civil engineers and increased interest in enrolling in all levels of study programmes.
	Education of students at all levels and in all branches of construction.	Improvement of teaching activities through modifications and improvements to study programmes at all levels.
	International accreditation of undergraduate and graduate studies.	Harmonisation of study programmes with the Croatian Qualification Framework.
	Amount of contracted funds for competitive scientific research and development projects.	The innovation potential of the results of scientific research work.
	Cooperation with students through the bodies of the Faculty and the Career Centre.	Social role and reputation of the Faculty.
	Library activities and related materials and learning space.	Digital competencies of employees.
	Organisation of nationally and internationally recognised scientific meetings.	Connecting with alumni by relaunching the alumni association.
	Number and quality of published works in prestigious primary ways of scientific communication.	Forming partnerships with international educational and research institutions.
	The Faculty is the publisher of the nationally and internationally recognised journal OTMCJ, and members of the teaching staff participate in the editorial work of numerous scientific journals.	Development of specialised programmes for the needs of the construction industry as part of lifelong education.
	System of accredited laboratories and modern technological infrastructure.	Application of new innovative approaches and digital technologies in student education.
	Expertise recognised in the construction sector.	Development of study programmes focused on sustainable construction techniques and materials.
	Encouraging innovation and developing new technologies through cooperation with industry.	Increased networking of research groups within the Faculty.

N E G A T I V E	WEAKNESSES	THREATS
	Failure to maintain a study programme in English.	Speed of harmonisation of the higher education system with the new legal framework at all levels.
	Limited resources for administrative support for all activities of the Faculty.	Difficult recruitment of quality personnel due to the non-competitiveness of personal income compared to the private sector.
	Insufficient number of associates who are financed from the state budget.	Evaluation of the success and quality of study programmes based on passing rates, and pressure to reduce academic criteria in order to increase passing rates.
	Weak motivation of students for extracurricular activities and involvement in scientific research and professional projects.	The influence of scientific productivity on the level of teaching quality.
	The ratio of computers to the number of undergraduate students.	Threatening demographic trends in the Republic of Croatia.
	Slow implementation of new technologies in teaching.	Higher education financing policy.
	Insufficient integration of mandatory professional practice into the curriculum.	Emigration of highly educated specialists.
	A system for promoting results and success in the media.	Intellectual property and copyright infringement.
	The level of digitisation of business.	Level of dependence on state funding.
	Lack of centres specialised in advanced research.	Work at an alternate location during the full renovation of the Faculty's buildings.

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Development Strategy by Sector

DEVELOPMENT STRATEGY OF THE UNIVERSITY OF ZAGREB
FACULTY OF CIVIL ENGINEERING FOR THE PERIOD 2024-2029

Development Strategy By Sector

5.1 Introduction

The strategic and key goals for achieving the Faculty Mission and Vision are:

- systematic assurance of high quality of existing study programmes and teaching processes of undergraduate, graduate and postgraduate studies
- focusing the teaching process on students while encouraging participation in extracurricular activities
- strengthening the connection between the Faculty and external stakeholders through participating in various forms of teaching activities
- promotion of scientific excellence
- strengthening innovation potential
- improving research and innovation resources
- implementation of Open Science Policy
- digitization and improvement of the Faculty's work organisation and development of human resources
- strengthening the Faculty's role in the technological and economic development of Croatia
- ensuring conditions for sustainable business development
- advancement of quality assurance system in all segments of the Faculty's activities.

This Strategy covers the period until 2029, and its content will be supplemented in case of the adoption of new strategic documents at the level of the Republic of Croatia and/or the University of Zagreb. In order to monitor the implementation of the Strategy and a timely intervention, a report on its implementation will be prepared annually, as part of the annual report on the quality assurance system with a metric presentation of the achieved results and a comparison with the previous period.

5.2 Development Strategy of Activities in Education

The special goals of the Development Strategy in terms of the Faculty's teaching activity include **the systematic provision of high quality of existing study programmes and teaching processes of undergraduate, graduate and postgraduate studies**, which is planned through **the modernisation and improvement of existing teaching processes** and the revision of the learning outcomes of study programmes. Furthermore, special goals include **focusing the teaching process on students while encouraging participation in extracurricular content and strengthening the connection between the Faculty and external stakeholders through participation in various forms of teaching activities**.

The Faculty's Development Strategy includes **the planning of digital transformation**, which in the teaching process is reflected in the systematic encouragement of the improvement of existing e-courses and the formation of new ones, with the aim that all courses have their own e-version, as well as the continuous improvement of students' digital competences with the use of modern specialised computer programmes. The introduction of the e-courses' review process carried out by the e-learning committee and the definition of criteria for selecting the best e-course on an annual basis would encourage the improvement of e-teaching at the Faculty. Digital transformation includes the modernisation of the digital teaching administration, which includes implementation plans, teaching hours and exam plan, and the teaching workload.

The Faculty will encourage the individual and independent work of students from the first year of undergraduate studies with an emphasis on practical skills. By encouraging students' extracurricular activities, providing support in the continuation of their careers and supporting graduated students, the teaching process will be focused on students. The teaching programme will be adjusted to the needs of the labour market, and current knowledge of scientific research in certain fields of construction will be implemented in the teaching. By including external stakeholders in the revision process of study programmes, as well as by encouraging students to go on professional practice, efforts will be made to strengthen the ties between the Faculty and employers.

Due to the new guidelines related to lifelong education, improvement of the quality of the lifelong education programme is planned, including professional development programmes in construction and programmes for acquiring the conditions for admission to higher levels of study. There are new guidelines for the recognition of previous non-formal and informal learning, which will require the regulation of the procedure for checking and recognising previously acquired learning outcomes and the formation of a body at the Faculty responsible for carrying out the procedure.

Bearing in mind the period that has passed since the last change of the study programmes, **as a key activity in the teaching activity in the coming period, changes and additions to the study programmes of undergraduate, graduate and postgraduate studies are stressed**. This will be preceded by a review of learning outcomes, analysis of recommendations from external and internal evaluation procedures, analysis of the alignment of the actual workload of students and defined ECTS points, analysis of alignment of content and detection of overlapping teaching content, optimisation of the order of course execution and evaluation of ECTS points of the course, analysis of teaching methods and methods fulfilment of conditions for registration for exams and methods of checking learning outcomes and passing exams, analysis of progression in several years of study, analysis of enrolment in the first year of undergraduate studies, analysis of progression through studies and withdrawal from studies, and analysis of workload of teaching employees. The role of teaching employees in the process of the mentioned revision is crucial, and it will be necessary for teaching employees (Lecturers in charge and associates) to define the basic entry competencies for their courses, in cooperation with lectures in charge of programme-related courses, revise course contents and teaching methods and methods for checking learning outcomes, and propose the withdrawal of existing or introduction of new courses.

Students and external stakeholders should be involved in the entire process (getting feedback on the necessary additional skills of young civil engineering engineers for their easier inclusion in the labour market). By including students (through surveys and focus groups) in the revision process of study programmes, their status is strengthened, making them more motivated for academic success and social engagement. An additional effort should be made, aimed at raising the motivation and self-confidence of students, creating a positive atmosphere and a sense of belonging and appreciation from the first day of enrolment at the Faculty.

Also, the revision will **analyse the application of study programmes in English and the integration of digital technologies** into teaching processes, which requires continuous work on improving the competencies of teaching employees, so that a hybrid approach to learning and teaching provides students with the necessary tools for success in the digital age, and so that such circumstances are created that allow for easier acceptance of new teaching methods of teaching employees.

5.2.1 Implementation Plan of Special Goals and Activities

Special objective 1. SYSTEMATICALLY ENSURING THE HIGH QUALITY OF EXISTING STUDY PROGRAMMES AND TEACHING PROCESSES OF UNDERGRADUATE, GRADUATE AND POSTGRADUATE STUDIES					
Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for implementation
1.1.	Continuous modernisation and improvement of existing teaching processes with an emphasis on teaching content in English and the integration of digital technologies and modern pedagogical approaches	Funds invested in the digital system and tools to support the teaching process and user education	Comparison with the previous period	Vice Dean for Business and Development; Head of the IT Service	End of academic year
		The committee for e-learning was formed. Number of reviewed e-courses.	Defining the e-college review process (criteria for evaluating e-learning materials)	Vice Dean for Education; Board for textbooks, scripts and publications; Lecturers in charge	Until the end of 2024
		The number of computers available in the computer classrooms and the number of titles available in the Library	Comparison with the previous period; Annual report of the Vice Dean for Education	Vice Dean for Education; Head of IT support, Head of the library; Vice Dean for Science and International Cooperation	End of academic year
		Funds invested in equipping and maintaining laboratories where classes are held (didactic aids), lecture halls and libraries	Comparison with the previous period	Vice Dean for Business and Development; Vice Dean for Education	End of academic year
		Number of newly published university and college textbooks and peer-reviewed teaching materials	Comparison with the previous period	Vice Dean for Business and Development; Vice Dean for Education	End of academic year
		Implementation of modern knowledge in teaching and the number of project-oriented courses at undergraduate and graduate studies	Feedback from graduate students; Comparison with the previous period	Vice Dean for Education; Lecturers in charge, Department for Quality Assurance and Improvement	End of academic year
		Number of courses that can be taught in English	Comparison with the previous period; Annual report of the Vice Dean for Education	Vice Dean for Education	Continuously
		The number of undergraduate and graduate students who participated in the Faculty's professional practice programme	Annual report of the Vice Dean for Education; Comparison with the previous period	Vice Dean for Education; Head of the Career Centre	Continuously
		Number of activities aimed at raising awareness of academic integrity and research ethics	Comparison with the previous period; Annual report of the Vice Dean for Quality Management	Vice Dean for Quality Management; Head of the Career Centre; Library	End of academic year

1.2.	Revision of undergraduate, graduate and postgraduate study programmes and alignment with the needs of the labour market	Defining procedures and procedures for surveying students, teaching staff and external stakeholders, as well as procedures for analysing and reporting survey results	Annual report of the Vice Dean for Quality Management; Annual report of the Committee for Quality Assurance and Improvement	Vice Dean for Quality Management, Head of the Committee for Quality Assurance and Improvement	Until the end of 2025
		Conducting surveys to evaluate the study as a whole at the end of the study	Report on the analysis of student surveys with recommendations for improvement	Head of the Department for Quality Assurance and Improvement	Continuously
		Monitoring the indicators of the quality of study programmes by analysing the student success	Annual report of the Vice Dean for Education, Annual report on the work of doctoral studies, Annual report of the Vice Dean for science and international cooperation	Head of the Department for Quality Assurance and Improvement	Continuously
		Analysis of the actual workload of the student in relation to the number of ECTS points of the course	Report on the implementation of the analysis and results	Vice Dean for Education; Vice Dean for Quality Management; Head of the Department for Quality Assurance and Improvement	Until the end of 2024
		In cooperation with other stakeholders, enter the occupational standard and qualification standard in the CQF Register	Annual report of the Vice Dean for Education	Vice Dean for Education	Until the end of 2029
		Revision of learning outcomes of undergraduate studies	Report on the implementation of the analysis and results	Vice Dean for Education; all teaching employees of the Faculty	Until the end of 2025
		Prepared a proposal for changes to the study programme of undergraduate, graduate and doctoral studies based on learning outcomes that reflect the needs of the labour market and contemporary requirements of science and the profession	Annual report of the Vice Dean for Education; Annual report of the Vice Dean for Quality Management	Vice Dean for Education, Vice Dean for Science and International Cooperation, Vice Dean for Quality Management	Until the end of 2029
		Analysis of the expediency of starting graduate studies in English	Report on the implementation of the analysis and results	Vice Dean for Education; Head of the Department for Quality Assurance and Improvement	Until the end of 2026

1.3.	Development of mechanisms for systematic evaluation and rewarding of high quality and innovation in the teaching process and encouragement of the development of teacher competencies	The number of organised workshops and courses for the development of digital and pedagogical competencies of teaching staff and the number of members of teaching staff – workshop participants	Annual report of the Vice Dean; Comparison with the previous period	Head of the Department for Quality Assurance and Improvement	Continuously
		Elaboration of criteria for evaluation and systematic rewarding of teacher excellence - amendment of the general act on rewarding teaching employees	Comparison with the previous period; Annual report of the Vice Dean for Education	Dean; Vice Dean for Education; Department for Quality Assurance and Improvement	Until the end of 2025
		Conducting and analysing surveys to evaluate the work of teaching staff every academic year or semester	Annual report of the Committee for Quality Assurance and Improvement	Vice Dean for Quality Management; Quality Assurance and Improvement Department	Continuously
		Analysis of the teaching workload of teaching employees and associates	Comparison with the previous period	Vice Dean for Education; Head of the Department for Quality Assurance and Improvement	Continuously

Special Objective 2. DIRECTING THE TEACHING PROCESS TO STUDENTS WHILE ENCOURAGING PARTICIPATION IN EXTRACURRICULAR ACTIVITIES					
Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for Implementation
2.1.	Encourage student participation in extracurricular activities while systematically rewarding excellence and creating a motivating environment for learning and social contribution	Number of students attending workshops, scientific/professional meetings and number of workshops, scientific/professional meetings (additional education at the Faculty)	Annual report of the Vice Dean for Education	Vice Dean for Education; Head of the Career Centre	Continuously
		The amount of financial resources invested in the modernisation of the study space at the Faculty	Comparison with the previous period	Vice Dean for Business and Development; Accounting	End of academic year
		Number of awarded students for academic and other success	Annual report of the Vice Dean for Education; Comparison with the previous period	Vice Dean for Education; Head of the student office	End of academic year
		The number of papers submitted for the Rector's Award, and the number of winners of the Rector's and Dean's Awards	Comparison with the previous period; Annual report of the Vice Dean for Education	Vice Dean for Education; Head of the student office	End of academic year
		Monitoring the number of student-mentors	Rulebook on the student-mentor system was adopted	Vice Dean for Education; Department for Quality Assurance and Improvement	Until the end of 2026
		The amount of financial resources invested in supporting student activities and informing students about the teaching processes at the Faculty (production of a study brochure).	Comparison with the previous period	Vice Dean for Business and Development; Vice Dean for Education; Accounting	End of academic year
		The number of students involved in the Faculty Council, committees and commissions of the Faculty	Comparison with the previous period	Secretary General	End of academic year
		Number of students involved in research and professional projects	Comparison with the previous period	Head of the Department for Quality Assurance and Improvement; Head of the Career Centre	End of academic year

2.2.	Provide support to students in career development while maintaining contacts with graduates and ensuring high employability of students	Employability monitoring alumni by periodic surveys	Annual report of the Vice Dean for Quality Management	Vice Dean for Quality Management; Head of the Career Centre	Continuously
		Number of Career Centre activities aimed at providing support to students in career development and number of participants (e.g. Job Fair)	Report of the Vice Dean for Education	Head of the Career Centre	Continuously
		Activated alumni association and its continuous support to students and involvement in the activities of the Faculty	Association registered in the Register of Associations of the Republic of Croatia; Number of alumni members associations that participate in the work of the Faculty's bodies	Vice Dean for Quality Management; Head of the alumni association	Until the end of 2026
		Number of organised alumni meetings at the Faculty	Comparison with the previous period	Vice Dean for Quality Management; Head of the Career Centre; Head of the alumni association	End of academic year
2.3.	Maintain a high level of interest in the study programmes of the Faculty	The number of presentations of the Faculty's study programmes in secondary schools and the contacts made with principals whose students are successful students of the Faculty	Comparison with the previous period; Annual report of the Vice Dean for Education	Head of the Career Centre; Vice Dean for Education	End of academic year
		Participation or organisation of meetings for the popularisation of higher education	Annual report of the Vice Dean for Education	Vice Dean for Education; Vice Dean for Science and International Cooperation	Continuously
		The amount of financial resources invested in the promotion of study programmes of the Faculty	Comparison with the previous period	Vice Dean for Business and Development; Accounting	End of academic year

Special Objective 3. STRENGTHENING THE CONNECTION BETWEEN THE FACULTY AND EXTERNAL STAKEHOLDERS THROUGH THEIR PARTICIPATION IN VARIOUS FORMS OF TEACHING ACTIVITIES					
Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for implementation
3.1.	Improvement of existing and development of new programmes of lifelong education, and definition of procedures for recognition of previous non-formal and informal learning	A general act was adopted that regulates lifelong education at the Faculty	A public consultation was held on the proposal of a general act to regulate lifelong education, which is carried out at the Faculty	Vice Dean for Business and Development; Head of the Committee for Continuing Professional Development	Until the end of 2025
		Organised distinction programme for acquiring requirements for admission to graduate studies	Annual report of the Vice Dean for Education	Vice Dean for Education	Until the end of 2025
		Number and type of lifelong education programmes	Annual report on implemented programmes of lifelong education	Head of the Department for Quality Assurance and Improvement	Continuously
		A general act was adopted which regulates the procedures for recognising previous non-formal and informal learning	A public consultation was held on the proposal for a general act to regulate procedures for the recognition of previous non-formal and informal learning	Vice Dean for Education	Until the end of 2024
		Monitoring the quality of the implementation of lifelong education programmes and procedures for recognising previous non-formal and informal learning (surveys and analyses of the number of participants and passing rates)	Annual report of the Committee for Quality Assurance Improvement and	Head of the Department for Quality Assurance and Improvement	Continuously
		The amount of financial resources invested in programmes of lifelong education	Monitoring of financial resources invested in lifelong education programmes on an annual basis	Vice Dean for Business and Development; Accounting	Continuously
3.2.	Strengthening the teacher-student-employer relationship by implementing professional practice programmes and joint mentoring	Number of activities of the Career Centre aimed at promoting professional practice (introductory lectures for freshmen, announcements on the website, job fair, etc.)	Annual report of the manager of the Career Centre; Comparison with the previous period	Vice Dean for Education; Head of the Career Centre	End of academic year
		Number of student works in cooperation with employers and through professional practice programmes	Annual report of the head of the Career Centre; Comparison with the previous period	Vice Dean for Education; Head of the Career Centre	End of academic year
		Accepted proposal of the Rulebook on professional practice	Drafted proposal of the Rulebook on professional practice	Dean; Vice Dean for Education; Head of the Career Centre	Until the end of 2026
		Analysis of surveys of students and employers who have completed a certain form of professional practice	Annual report of the head of the Career Centre; Comparison with the previous period	Head of the Career Centre	End of academic year

3.3.	Encourage the involvement of external stakeholders in teaching activities and participation in the work of the Faculty's bodies	The number of external stakeholders involved in the work of the Faculty's bodies, especially the number of external stakeholders involved in the analysis and revision of study programmes	Comparison with the previous period	Vice Dean for Business and Development; Vice Dean for Education	Continuously
		The number of employers involved in programmes to ensure professional practice	Comparison with the previous period; Annual report of the manager of the Career Centre	Head of the Career Centre	End of academic year
		Number of expert lectures held	Comparison with the previous period	Vice Dean for Education, Head of the Career Centre	End of academic year

5.3 Development Strategy for Scientific Research Activities

The strategic goal for scientific research activity in the period from 2024 to 2029 includes the following specific goals: **promoting scientific excellence** and international recognition and **strengthening innovation potential** in order to increase the market competitiveness of research results and actively respond to the needs of the business sector. Also, **by improving of research and innovation resources**, the aim is to create a stimulating environment that will encourage high-quality research in the construction sector. Special attention will be focused on **the implementation of the open science policy**.

The specific goal of **promoting scientific excellence** through a series of key activities includes providing strong institutional support to researchers, developing the capacity of young researchers, encouraging competitive applications of competitive projects, publishing scientific papers in prestigious primary means of scientific communication and strengthening general research potential. The main goal is to improve the system of evaluating researchers in order to support excellence in scientific work, increase international recognition, encourage global cooperation, facilitate cooperation with users of research results and increase the social importance of research.

The purpose of this comprehensive approach is to **strengthen the Faculty's innovation potential**. This will be achieved by improving the skills of employees for the development of innovations, encouraging cooperation with partners from different sectors, increasing the market readiness of research results and increasing the visibility of the Faculty in society. Cooperation between the Faculty and the business sector will be strengthened through collaborative projects, thus encouraging a greater number of doctoral students from the business sector and the establishment of companies based on research results. A key component is the establishment of effective mechanisms for the transfer of knowledge and technology to the business sector, with a special emphasis on the establishment of a clear communication channel for transferring the needs of the business sector to the Faculty. This goal will be achieved by the re-establishment of an alumni association that will promote the exchange of information and connections with alumni outside Croatia, especially those who work in reputable scientific research institutions around the world.

Finally, **the improvement of research and innovation capacities** plays a key role in achieving strategic goals. This includes activating earmarked and own revenues to ensure adequate support for researchers. It is planned to improve and strengthen research capacities, with a special emphasis on strengthening the role of the Centre for Projects, Innovation and Technology Transfer, with systematic institutional support through the education and training of research support staff and the employment of new administrative staff. Continuous investments will enable the strengthening of research capacities by purchasing and modernising laboratory equipment. During the ensuing period, insisting on greater mobility of researchers at all levels is planned, including participation in short-term and long-term research

mobilities. The goal is to increase the number of researchers from the business sector and to provide support for the employment of PhDs by establishing spin-off companies and employing them in the business sector.

In accordance with **the policy of open science**, all the mentioned activities will be carried out transparently and open to the participation, cooperation and contribution of all interested stakeholders, which will be ensured by encouraging the free sharing and availability of research results, methods and other things under conditions that allow their reuse as and repeatability and verifiability of the research itself. This is in accordance with national and European goals that rely on the principles of open science which contribute to faster progress, sustainable development and international recognition of Croatia.

All of the above reflects the Mission and Vision of the Faculty to not only shape the future in the field of construction, but also actively contribute to general social and economic progress by generating innovations and risky research ideas that will contribute to the development of the Croatian economy.

5.3.1 Implementation Plan of Special Goals and Activities

Specific Objective 4: PROMOTION OF SCIENTIFIC EXCELLENCE					
Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for implementation
4.1.	Investment in capacity development of young researchers	Funds invested in the research activities of young researchers	Comparison with the previous period	Head of the Centre for Projects, Innovation and Technology Transfer	End of academic year
		Number of newly employed doctoral students	Comparison with the previous period	Head of the Personnel Affairs Department	End of academic year
		Number of newly employed assistant professors	Comparison with the previous period	Head of the Personnel Affairs Department	End of academic year
4.2.	Encouraging participation in competitive projects	Number of reported research, development and other projects	Comparison with the previous period	Head of the Centre for Projects, Innovation and Technology Transfer	End of academic year
		The number of signed contracts on the allocation of funds for the implementation of research, development and other projects	Comparison with the previous period	Head of the Centre for Projects, Innovation and Technology Transfer	End of academic year
		Contracted funds for the implementation of research, development and other projects	Comparison with the previous period	Head of Accounting	End of academic year
4.3.	Encouraging the publication of scientific papers in international journals with a high impact factor	Number of publications indexed in Web of Science database	Comparison with the previous period	Head of the AGG library	End of academic year
		Number quotes publication indexed in the Web of Science database	Comparison with the previous period	Head of the AGG library	End of academic year

		Number of publications in journals of the Q1 category (according to Web of Science) with an above-average impact factor, i.e. an impact factor above the median of the field	Comparison with the previous period	Head of the AGG library	End of academic year
		Number of scientific papers published in co-authorship with researchers from abroad	Comparison with the previous period	Head of the AGG library	End of academic year
		Number of scientific papers published in co-authorship with researchers from various scientific disciplines and with researchers from business	Comparison with the previous period	Head of the AGG library	End of academic year
		Number of dissertations based on the Scandinavian model	Comparison with the previous period	Head of department for postgraduate studies	End of academic year
4.4.	Systematic evaluation of the research contribution of employees	Drafted proposal for changes to the Remuneration Ordinance	The proposal for changes to the Remuneration Ordinance was adopted	Vice Dean for Science and International Cooperation; Vice Dean for Education, Vice Dean for Quality Management; Vice Dean for Business and Development	Until the end of 2026
		Number of awarded employees for scientific activity	Comparison with the previous period	Head of the Department for Quality Assurance and Improvement	End of academic year

Special Objective 5: STRENGTHENING THE INNOVATION POTENTIAL					
Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for implementation
5.1.	Improving skills for innovation development	Adoption of the Ordinance on intellectual property management	Rulebook adopted	Vice Dean for Science and International Cooperation	Until the end of 2025
		Development of the innovation and intellectual property management system	Adopted procedures	Head of the Centre for Projects, Innovation and Technology Transfer	Until the end of 2025
		Workshops on innovation management, protection and commercialisation of intellectual property	The CePITT website	Head of the Centre for Projects, Innovation and Technology Transfer	Continuously
5.2.	Encouraging collaborative research	Number of submitted collaborative research	Comparison of the situation with the previous period	Head of the Centre for Projects, Innovation and Technology Transfer	End of academic year
		The number of signed contracts on the allocation of funds and contracted funds for the implementation of collaborative research	Comparison of the situation with the previous period	Head of the Centre for Projects, Innovation and Technology Transfer; Head of Accounting	End of academic year
		Number of doctoral students from industry	Comparison with the previous period	Head of Department for Postgraduate Studies	End of academic year
5.3.	Increasing market readiness of research results	Networking through the research entrepreneurship programme	Comparison of the situation with the previous period	Vice Dean for Science and International Cooperation	End of academic year
		Number of applications for intellectual property protection	Comparison of the situation with the previous period	Vice Dean for Science and International Cooperation	End of academic year
		The number of completed technology and knowledge transfer models	Comparison of the situation with the previous period	Vice Dean for Science and International Cooperation, Vice Dean for Business and Development	End of academic year
		Number of start-up /spin-off companies	Comparison of the situation with the previous period	Vice Dean for Science and International Cooperation, Vice Dean for Business and Development	End of academic year

Special Objective 6: IMPROVEMENT OF RESEARCH AND INNOVATION RESOURCES					
Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for implementation
6.1	Strengthening institutional support for researchers	Providing administrative support for application and implementation of research, development and other projects	Published procedures for application and implementation	Head of the Centre for Projects, Innovation and Technology Transfer	Until the end of 2024
		Number of newly hired administrative staff to support project implementation	Comparison with the previous period	Vice Dean for Science and International Cooperation	End of academic year
		Number of additional education and training of administrative staff to support researchers	Comparison with the previous period	Vice Dean for Science and International Cooperation	End of academic year
6.2	Strengthening research capacities	Modernisation and procurement of research equipment	Comparison of the purchase value of the equipment with the previous period	Head of Accounting	End of academic year
		Number of newly employed researchers	Comparison with the previous period	Head of the Personnel Affairs Department	End of academic year
		Provided funds for mobility in accordance with the Ordinance on additional education and training of employees	Comparison with the previous period	Vice Dean for Science and International Cooperation	End of academic year
		Number of additional education and training of researchers outside Croatia	Comparison with the previous period	Head of the Office for International Cooperation	End of academic year
		The number of foreign members in the commissions for defence of dissertation topic proposals, evaluation and defence of dissertations	Comparison with the previous period	Head of Department for Postgraduate Studies	End of academic year
		Number of dissertations with dual mentoring	Comparison with the previous period	Head of Department for Postgraduate Studies	End of academic year
6.3.	Increasing visibility in all segments of society	Number of dissertations in English	Comparison with the previous period	Head of Department for Postgraduate Studies	End of academic year
		Number of international postgraduate students	Comparison with the previous period	Head of the Office for International Cooperation	End of academic year
		Publication and development of the Faculty journal OTMCJ	Comparison of the number of issues and the resonance factor with the previous period	Editor in chief	End of academic year
		Number of international scientific gatherings organised by the Faculty	Comparison with the previous period	Head of the Office for International Cooperation	End of academic year
		Number of presentations of scientific activity through electronic and other media and in the social community	Comparison of the situation with the previous period	Vice Dean for Science and International Cooperation	End of academic year

Special Objective 7: IMPLEMENTATION OF OPEN SCIENCE POLICY					
Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for implementation
7.1.	Improvement of competences for Open Science	Education of employees about the principles, possibilities and challenges of Open Science	The CePITT website	Head of the AGG library	Continuously
		Education of employees about the possibilities of using common, open research infrastructures	The CePITT website	Head of the AGG library	Continuously
		Establishment of systematic support for self-archiving of papers and research data in the institutional repository	Published procedures for self-archiving	Head of the AGG library	Until the end of 2024
7.2.	Support and infrastructure for open science	Adoption of Ordinance on Open Science policy	Ordinance adopted	Vice Dean for Science and International Cooperation, Vice Dean for Quality Management	Until the end of 2025
		Research data management protocol	Published protocol	Head of the AGG library	Until the end of 2025
		Provide the infrastructure for an open publication publishing system	Comparison with the previous period	Dean, Vice Dean for Science and International Cooperation, Vice Dean for Quality Management	End of academic year

5.4 Strategy of Institutional Development, Cooperation with the Business Sector and Quality Assurance

The **Strategy** of institutional development of the Faculty of Civil Engineering is based on **the digitalisation and improvement of the work organisation of all departments of the Faculty and the development of human resources, strengthening the role of the Faculty in the technological and economic development of Croatia and ensuring the conditions for sustainable business development**. Improvement of the quality assurance system in all segments of the Faculty's activities **will ensure continuous progress and increase the efficiency of the Faculty of Civil Engineering's operations**. **In particular, digitisation** stands out here, which will increase business efficiency by automating processes, digital management of documentation and optimisation of communication within the Faculty, for which the Faculty will actively encourage **further education and employee development**.

The Faculty will continuously **develop a strong partnership with the economy** with the aim of achieving joint business success and **encouraging innovation in the construction sector**. The key elements of this strategy include cooperation with leading companies, focus on engineering challenges, transfer of professional knowledge to students, and active participation in the realisation of construction projects. In line with these **long-term strategic partnerships**, the Faculty will have access to the real challenges and needs of the industry, which will enable **the adaptation of educational programmes and research activities to the needs of the market**.

The Faculty will actively participate in solving complex engineering tasks, which will include the **formation of multidisciplinary teams with experts from the construction industry** and the Faculty who will work together on innovative

solutions. In addition, the Faculty will encourage **research aimed at the development of advanced technologies, materials and sustainable practices in construction**. This includes active participation in the planning, design, construction and management of projects. With such engagements, the Faculty will not only contribute to projects from the real sector but will also **strengthen the connection between theory and practice**.

By actively participating in professional projects, students will have the opportunity to acquire relevant knowledge and experience. The Faculty will implement teaching programmes that integrate practical experiences, allowing students to apply theoretical knowledge to real problems. Mentoring from industry experts will also be emphasised to support students' career development.

In addition, the Faculty will actively encourage **research projects** focused on **the application of new technologies, sustainability and innovation in the construction sector**. Through cooperation with the economy, research teams will have access to real data and resources that will accelerate the development of new knowledge and technological solutions. A special strategic goal of the Faculty is the construction of **the Centre for Research and Development of a Safe and Sustainable Built Environment** at the Borongaj University Campus in Zagreb. In the Centre, conditions will be created for scientific research in all branches of construction, and a significant improvement of the scientific and research work of the Faculty of Civil Engineering will be enabled. The Centre implies investment in research, development and innovation infrastructure and the implementation of organisational reform of the Faculty of Civil Engineering of the University of Zagreb with the aim of improving the process of transforming the Faculty into an internationally competitive higher education institution that creates new scientific, social and economic value.

Ultimately, the strategy of the Faculty of Civil Engineering is focused on creating **sustainable cooperation between the academic and business community**, which will result in the development of highly qualified experts and innovative solutions that will advance the construction industry.

An important factor in all areas of the Faculty's activities **is the promotion of a culture of quality and the establishment of an effective management and quality assurance system**. One of the more important goals of this strategy **is to ensure quality as a permanent process integrated into the teaching, scientific, innovation, professional and administrative work of the Faculty** through self-evaluation, student surveys, periodic internal and external evaluation, and especially through the cooperation of internal and external stakeholders.

Special Objective 8. DIGITISATION AND IMPROVEMENT OF THE FACULTY'S WORK ORGANISATION AND DEVELOPMENT OF HUMAN RESOURCES					
Activity		Key Performance Indicators	Monitoring mechanisms	Holders of activities	Deadlines for implementation
8.1.	Digitisation and increasing the efficiency of the Faculty's operations	Digital documentation management	Conducted analysis of the use of digital tools and evaluation of the achieved results	Vice Dean for Business and Development	End of academic year
		Optimisation of communication within the Faculty, defined clear procedures and procedures in the business process	Business processes are available and clearly described on the Faculty's website	Vice Dean for Business and Development	End of academic year
8.2.	Introduction of new and restructuring of existing organisational forms in accordance with the Ordinance on the organisation of workplaces	Amendments to the Ordinance on the organisation of workplaces	Adopted amendments to the Ordinance on the structure of workplaces	Vice Dean for Business and Development	End of academic year
8.3.	Training of employees of the Faculty's administrative services for business-related activities	Number of training sessions for employees of common services	Comparison with the previous period	Vice Dean for Business and Development	End of academic year

Special Objective 9. STRENGTHENING THE ROLE OF THE FACULTY IN THE TECHNOLOGICAL AND ECONOMIC DEVELOPMENT OF CROATIA					
Activity		Key Performance Indicators	Monitoring mechanisms	Holders of activities	Deadlines for implementation
9.1.	Connecting with public and private companies, professional chambers and offering highly professional services in the study and project process	Number of signed cooperation agreements	Comparison with the previous period	Vice Dean for Business and Development; Head of the Career Centre; Head of accounting	End of academic year
		Number of held seminars, trainings and lectures in public	Usporedba s prethodnim razdobljem	Vice Dean for Business and Development; Head of the Centre for Projects, Innovation and Technology Transfer	End of academic year
		companies	Comparison with the previous period	Vice Dean for Business and Development; Head of the Centre for Projects, Innovation and Technology Transfer	End of academic year
		Visibility of projects of wider social significance on the Faculty's website	Comparison with the previous period	Vice Dean for Business and Development; Heads of the Departments	Continuously

9.2.	Informing the professional public about the achieved results	Number of seminars held for the purpose of presenting research results	Comparison with the previous period	Vice Dean for Business and Development; Head of the Centre for Projects, Innovation and Technology Transfer	Continuously
		Number of contracts / financial resources realised in cooperation with the economy by applying research results	Comparison with the previous period	Vice Dean for Business and Development; Head of Accounting	Continuously
		Number of published professional papers	Comparison with the previous period	Vice Dean for Business and Development; Head of the AGG library	Continuously
		Number of organisations and sponsorships of expert meetings	Comparison with the previous period	Vice Dean for Business and Development; Head of the Centre for Projects, Innovation and Technology Transfer	Continuously
9.3.	Construction of the Centre for Research and Development of a Safe and Sustainable Built Environment at the Borongaj University Campus	Registration for the public call for the construction and equipping of the Centre, public procurement, start and completion of works	Monitoring of individual phases of the project through comparison with the previous period	Dean; Vice Dean for Business and Development; Heads of the Institute	Depending on the provision of funds
		Strengthening the research capacities of the Faculty of Civil Engineering and contributing to the economic development of the Republic of Croatia in accordance with the principles of sustainable development	The number of newly founded laboratories and realised collaborations with research organisations and the economy	Vice Dean for Business and Development; Vice Dean for Science and International Cooperation; Head of the Centre for Projects, Innovation and Technology Transfer	Continuously, after the establishment of the Centre

Special Objective 10. ENSURING THE CONDITIONS FOR SUSTAINABLE BUSINESS DEVELOPMENT

Activity		Key Performance Indicators	Monitoring mechanisms	Holders of activities	Deadlines for implementation
10.1.	Permanent investment in the development of the Faculty's information infrastructure	Funds invested in the Faculty's information infrastructure	Comparison with the previous period	Vice Dean for Business and Development; Head of IT support	End of academic year
		Updating the website of the Faculty	Comparison with the previous period	Vice Dean for Education, Head of the IT Department	End of academic year
10.2.	Development, continuous equipment and accreditation of laboratories	Updating the catalogue of existing laboratory equipment in Croatian and English	Comparison with the previous period	Vice Dean for Business and Development; Heads of the laboratories	End of academic year
		Funds invested in maintenance and purchase of equipment	Comparison with the previous period	Vice Dean for Business and Development; Heads of the laboratories	End of academic year
		Visibility of all laboratories and constant updates on the Faculty's website	Status of the Faculty's website	Vice Dean for Business and Development; Heads of the laboratories	Continuously
		Number of accredited laboratories	Comparison with the previous period	Vice Dean for Business and Development; Heads of the laboratories	End of academic year
		Number of accredited test methods	Comparison with the previous period	Vice Dean for Business and Development; Heads of the laboratories	End of academic year

10.3.	Strengthening of professional competences and acquisition of institutional authorisations for the performance of professional duties of Faculty employees	Number of teaching staff who attended professional seminars	Comparison with the previous period	Vice Dean for Business and Development; Heads of the Departments	End of academic year
		Number of employees who have passed the professional exam	Comparison with the previous period	Vice Dean for Business and Development; Heads of the Departments	End of academic year
		Number of authorised engineers and auditors	Comparison with the previous period	Vice Dean for Business and Development; Heads of the Departments	End of academic year
		Number of authorised auditors	Comparison with the previous period	Vice Dean for Business and Development; Heads of the Departments	End of academic year
		Number of authorisations to perform professional activities	Comparison with the previous period	Vice Dean for Business and Development; Heads of the Departments	End of academic year
10.4.	Further development of academic integrity and ethics in behaviour and equality of all Faculty employees and students	Number of organised activities according to the Gender Equality Plan	Annual report of the person in charge of implementation, enforcement of the equality policy and monitoring of the policy.	Vice Deans, Dean	Continuously
		Monitoring the originality of written final and graduate theses	Annual report of the Committee for final and graduate theses	Vice Dean for Education	End of academic year
		Monitoring the number of adjustments to the teaching process for students with disabilities	Annual report of the Vice Dean for Education	Vice Dean for Education	End of academic year

Special Objective 11.

IMPROVEMENT OF THE QUALITY ASSURANCE SYSTEM IN ALL SEGMENTS OF THE FACULTY'S ACTIVITIES

Activity		Key Performance Indicators	Monitoring mechanisms	Activity holder	Deadlines for implementation
11.1.	Improvement of the quality assurance system as a continuous process integrated into the teaching, scientific, innovation, professional and administrative work of the Faculty	Preparation of annual reports and activity plan for quality assurance	Documents voted on by the Faculty Council	Vice Dean for Quality Management; Chairman of the Committee for Quality Assurance and Improvement	End of academic year
		Establishment of an effective system of collection, processing and reporting on collected data important for quality assurance	Activity schedule	Vice Dean for Quality Management; Chairman of the Committee for Quality Assurance and Improvement	End of academic year 2024/2025
		Establishment of the Department for Quality Assurance and Improvement	Decision on the establishment of the Department for Quality Assurance and Improvement and the employment of the Head of the Department	Vice Dean for Quality Management; Chairman of the Committee for Quality Assurance and Improvement	End of academic year 2024/2025 Depending on the approval of new employment
11.2.	An approach to quality management based on self-evaluation and student surveys, periodic internal and external evaluation, and cooperation between internal and external stakeholders	Defined procedures and procedures for surveys, providing feedback on survey results, follow-up and other forms of communication	Number of accepted proposals based on the results of conducted surveys	Chairman of the Committee for Quality Assurance and Improvement	End of academic year
		Reports after periodic internal, external and international evaluations	Periodic internal, external and international evaluation	Committee for Quality Assurance and Improvement, international evaluation bodies (e.g. ASIIN)	Continuously

6

Reference Documents

Reference Documents

- [National recovery and resilience plan 2021-2026](#)
- [National development strategy of the Republic of Croatia until 2030](#)
- [Implementation programme of the Ministry of Science and Education for the period 2021-2024 \(CLASS: 400-08/20-01/00088, URNO: 533-01-21-0001 from 21 December, 2020\) and Tabular representation of the Implementation Programme](#)
- [Act on Higher Education and Scientific Activity \(Official Gazette 119/2022\)](#)
- [Law on Quality Assurance in Science and Higher Education \(Official Gazette 151/2022\)](#)
- [Regulation on programme financing of public higher education institutions and public scientific institutes in the Republic of Croatia \(Official Gazette 78/2023\)](#)
- [Rulebook on the content and use of information systems in higher education \(Official Gazette 36/2023\)](#)
- [Statute of the University of Zagreb \(CLASS: 011-02/23-02/02, URBORJ: 251-25-03-04/1-23-5 from 21 March 2023\)](#)
- [Standards for evaluating the quality of universities and university components in the process of reaccreditation of higher education institutions](#)
- [Rulebook on the quality assurance system at the University of Zagreb \(2018\)](#)
- [Statute of the University of Zagreb Faculty of Civil Engineering \(CLASS: 007-06/23-09/01, UR NO: 251-64-03-23-69 from 17 May 2023\)](#)
- [Study strategy of the University of Zagreb \(2014-2025\)](#)
- [Development strategy of support for students of the University of Zagreb \(2013-2025\)](#)
- [Research, technology transfer and innovation strategy of the University of Zagreb \(2014-2025\)](#)
- [Quality assurance system strategy of the University of Zagreb \(2014-2025\)](#)
- [Work programme of the rector of the University of Zagreb for the period 2022-2026](#)
- [Quality assurance policy of the University of Zagreb \(CLASS: 640-02/12-01-17, UR NO: 380-020/084-12-1 from 3 October 2012\)](#)
- [Rulebook on the quality assurance system at the University of Zagreb Faculty of Civil Engineering \(URBROJ: 64-200-3-604/1-2012\)](#)
- [Quality Assurance Manual of the Faculty of Civil Engineering, University of Zagreb \(adopted at the 170th regular session of the Faculty Council held on 2 April 2014\)](#)
- [Study programmes of undergraduate and graduate university studies in civil engineering \(from the current year 2013/2014\)](#)
- [Report of the expert committee on the reaccreditation of the Faculty of Civil Engineering of the University of Zagreb \(July 2018\)](#)
- [Annual report on the quality assurance system for the academic year 2021/2022. and the Quality Assurance Activity Plan for the academic year 2022/2023. \(236th regular session of the Faculty Council from 8 February 2023\)](#)
- [Work programme of the candidate for the dean of the Faculty of Civil Engineering of the University of Zagreb for the academic years 2022/2023 and 2023/2024 \(229th regular session of the Faculty Council from 23 March 2022\)](#)
- [Evaluation of scientific research work and promotion of open access to scientific information and research data, 2015](#)
- [National development strategy of the Republic of Croatia until 2030](#)
- [Croatian Open Science Cloud Initiative \(HR-00Z\), 2021](#)
- [Proposal of the Croatian plan for open science, 2023](#)



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