DEVELOPMENT STRATEGY

2024 – 2030

UNIVERSITY OF SPLIT
FACULTY OF ELECTRICAL ENGINEERING,
MECHANICAL ENGINEERING AND
NAVAL ARCHITECTURE

IMPRINT

DEVELOPMENT STRATEGY OF THE FACULTY OF ELECTRICAL ENGINEERING, MECHANICAL ENGINEERING AND NAVAL ARCHITECTURE FOR THE PERIOD FROM 2024. TO 2030.

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The Strategy draft was delivered to all employees of the Faculty during public hearing which lasted from July 12 to July 26, 2024.

The Strategy was adopted at the IX. regular session of the Faculty Council, held on September 11, 2024.

All terms used in this document are gender neutral.

Contents

Foreword

The Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture (FESB) of the University of Split (hereinafter referred to as the Faculty) is one of the leading technical faculties in the Republic of Croatia with a long tradition of research in the field of technical and natural sciences and education in the fields of Electrical Engineering and Information Technology, Computer Science, Mechanical Engineering and Naval Architecture.

The development strategy defines the direction of the Faculty's activities and development in the coming years. This document is the result of an analysis of current needs, thoughtful planning and anticipation of future challenges with a clear vision to improve the quality of higher education, research and cooperation with industry and society as a whole.

> *The foundations of our strategy include sustainable development, new technologies, innovation, digitalization and internationalization.*

The strategy is based on the most important national documents that determine the development of the Republic of Croatia in the coming period and on the guidelines set out in the Development Strategy of the University of Split.

Our strategy emphasizes the importance of digital transformation and the use of advanced technologies in all areas of society. As a faculty that educates future professionals in the fields of Electrical Engineering and Information Technology, Computer Science, Mechanical Engineering and Naval Architecture, it is our mission to be at the forefront of integrating digital and modern technologies into education and research processes.

With a focus on developing key competencies and skills, necessary to compete in the global market, our faculty will continue to invest in modernizing study programs, laboratory capacities and

scientific research to contribute to the country's economic development and the creation of a sustainable, innovative society.

The strategy emphasizes continuous improvement of the teaching process, development of new teaching methods and close cooperation with industry and the job market, ensuring that our students acquire the relevant knowledge and skills needed to succeed in a dynamic and rapidly changing global environment. The Faculty will actively work to intensify international cooperation and exchange of students and faculty and strengthen its position as a regional leader in higher education and scientific research.

Our vision is clear: to create a modern, inclusive and innovative educational environment that promotes excellence in teaching and research and contributes to the development of the economy and society as a whole. We are aware that the implementation of this strategy will require the dedicated work, cooperation and commitment of all members of our academic community as well as external stakeholders, but we are convinced that together we will successfully achieve all the goals we have set and play a key role in the development of technical sciences and the preparation of professionals for the challenges of the 21st century.

Dean

Branimir Lela, PhD, full professor

Introduction 01

Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split is a modern higher education and scientific research institution dedicated to development and application of the newest technologies with the strategic goal of attaining the highest international standards in scientific research, higher education and professional activities. Faculty core activities include higher education, scientific research, development and professional activities in the area of technical sciences – Electrical Engineering, Computer Science, Mechanical Engineering and Naval Architecture. As an institution providing education to experts in these areas, the Faculty was established with the primary purpose of supporting the development of the economy in the region. By providing training to leading professionals in these areas, the Faculty successfully fulfilled its role and secured necessary human resources for the development of industrial sectors based on various fields of engineering sciences. The academic excellence of the Faculty as scientific research institution has been confirmed by a number of successful research projects and published scientific papers, as well as collaboration with renowned national and international scientific research and academic institutions. The Faculty is also actively involved in collaborative research projects and programmes on both national and international levels and participates in the activities of scientific centres of excellence, acting as organiser and co-organiser of academic and research conferences on national and international levels.

The Faculty aligns its Development Strategy for the next period with the following university, national and European strategic documents:

- University of Split Development Strategy for the period from 2021 to 2025;
- Republic of Croatia National Development Stategy until 2030;
- Republic of Croatia Smart Specialisation Stategy until 2029;
- Goals and Indicators Catalogue, Ministry of Science and Education, September 2023;
- European Strategy for Sustainable Development EU 2030;
- European Framework Programme for Research and Innovation Horizon Europe for the period from 2021 to 2027

Following the previous Faculty Development Strategy for the period from 2017 to 2021 and the overall growth and development during the past 64 years, by taking into consideration total educational, research and infrastructural capacities of the Faculty, the Strategy for the next period defines the following:

- mission and vision, and
- global and special strategic goals;

while the tasks, indicators and criteria. as well as persons and bodies responsible for the implementation of determined strategic goals will be specified in an action plan drawn up upon the adoption of the Strategy.

FESB – Past and Present 02

The Faculty of Electrical Engineering in Split was established in 1960 as a fully autonomous and independent organization within the University of Zagreb. The Centre for part-time study of Mechanical Engineering in Split was founded in the same year and operated within the Faculty of Mechanical Engineering and Naval Architecture in Zagreb. During the five years of Centre for Part-time Study activity, it was noticed that the preliminary part of study could be more effectively organized by using the resources of the Faculty of Electrical Engineering in Split. In 1965 the Centre for Part-time Study was replaced by the Mechanical Technology Department, which was founded at the Faculty of Electrical Engineering in Split, providing the two first years of study in Mechanical Engineering. The study programme provided an opportunity to continue the study programme in Zagreb after the fourth semester. In 1968 the Naval Architecture study programme was established at the Department of Mechanical Engineering. The next step in the development of the Faculty was the introduction of postgraduate studies. Postgraduate studies in the field of Electronics and Telecommunications were conducted in 1969 and 1970.

1960 ➤ **1965** ➤ **1971**

Faculty of Electrical Engineering established in Split

The study in Mechanical Engineering was initiated

Faculty is renamed and gets its current title

In 1971 the Faculty was renamed as the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split (FESB). Since 1974 the Faculty has been a constituent part of the University of Split. The Faculty, as one of the co-founders of the University, significantly contributed to its establishment and development.

The four-year Mechanical Engineering study programme with its own curriculum was finally completed in 1976. Regarding the takeover of the educational programmes that were previously conducted at the Nautical College, the two-year post-secondary study programmes in Electrical Engineering, Mechanical Engineering and Naval Architecture were introduced in the 1979/80 academic year, according to the initiative of the University of Split in 1978.

Two new undergraduate study programmes were established in 2002: Computing and Industrial Engineering. The activities of the Bologna process of the harmonisation of the higher education systems in Europe were intensified at the end of 2004. Within this process, the Faculty introduced new undergraduate and graduate programmes in 2005. At the same time, the Faculty adopted a new credit transfer system called ECTS (European Credit Transfer System) stemming from the activity and educational workload of a student.

1980 2005 2007

First phase of new Faculty building was completed

New studies were started within Bologna process

Second phase of building at location Visoka finished

The new study programmes were organized in accordance with the recommendations of the European accreditation agencies. Five undergraduate programmes were established: Electrical Engineering and Information Technology, Computing, Mechanical Engineering, Naval Architecture and Industrial Engineering, as well as seven graduate programmes: Control and Systems, Electrical Engineering, Electronics and Computer Engineering, Communications and Information Technology, Computing, Mechanical Engineering and Industrial Engineering. Also, four professional undergraduate programmes were established: Electrical Engineering, Computing, Mechanical Engineering and Naval Architecture. Furthermore, in 2006 two postgraduate programmes for obtaining a Doctor of Science degree were established: Electrical Engineering and Information Technology and Mechanical Engineering. In 2018 a graduate programme in Naval Architecture was also established.

The first phase in the construction of the new Faculty building was completed in 1980 at the location Visoka within the university campus and the second phase of the building was completed in 2007 so the Faculty today has a little bit less than 30.000 m^2 of modernly equipped space necessary for high-quality studying and scientific and professional work. The Faculty building has 9 auditoriums, 15 lecture halls, 85 laboratories, 8 computer labs and one modern, well-equipped distance learning classroom.

Based on teaching, scientific research, administrative and technical processes, the Faculty is divided into: departments, chairs, the Chair for General Courses, the Computer Centre, the Library and the Dean's Office. The department is an academic organizational unit that organises and carries out teaching, scientific and professional work. The Faculty consists of the following Departments:

- Department of Power Engineering
- Department of Electronics and Computing
- Department of Mechanical Engineering and Naval Architecture
- Department of Mechanical Technology
- Department of Mathematics and Physics

The chairs are sub-organisational units within departments. The Chair for General Courses organizes and conducts courses of general content. The Computer Centre performs tasks related to the use of ICT for teaching, scientific research and professional activities. The Library collects, processes and provides staff and students with publications, journals and information necessary for scientific-educational and professional activity. The Dean's Office performs legal, executive, administrative, financial, technical and other support activities.

Today FESB is one of the largest constituents of the University of Split, regarding human resources, and the largest engineering faculty outside of Zagreb. The Faculty has more than 240 employees, among which there are 55 full professors, 35 associate professors, 20 assistant professors, 6 senior lecturers and lecturers, 40 senior assistants and assistants and 15 laboratory technicians, participating in the teaching activities, scientific research and professional work.

The vitality of the Faculty, as a scientific and research institution, has been confirmed through numerous successful research projects, published scientific papers, and collaborations with renowned domestic and foreign scientific and academic institutions.

The Faculty's key activities are higher education, scientific research and professional work in the field of technical sciences – in the areas of Electrical Engineering, Computer Science, Mechanical Engineering, Naval Architecture and basic technical sciences, as well as scientific research in the field of natural sciences - in the areas of Mathematics and Physics.

30.000

square meters of total surface

> 240

staff members

156

employees in scientific-teaching and associate positions

19

different study programmes

33

research groups

Mission and Vision

03

OUR MISSION

- development and application of the latest technologies, with the aim of achieving the highest international standards in scientific research, higher education and professional activities;
- constant improvement of teaching processes by means of scientific research activities, using the most up-to-date teaching methods
- education of top-quality experts in the field of technical sciences, the scientific areas of Electrical Engineering, Computer Science, Mechanical Engineering, Naval Architecture and basic technical sciences, capable of becoming torchbearers in the development of Croatian economy;
- active co-operation with scientific, higher education and economic partners in Croatia and abroad;
- provide the opportunity for internal and external mobility to its students and staff;
- rational use of human and material resources for the development of scientific and teaching activities, and professional work in the field of technical and natural sciences.

The Faculty adjusts its activities to modern world trends in the development of scientific research, professional and educational activities. This adjustment refers to a continuous and systematic improvement of all the following areas: establishment, organization and implementation of study programmes; increased efficiency in the educational and scientific research process; connecting educational, scientific and professional activities, as well as setting up and improving internal organization.

O U R

VISION

The Faculty continuously aligns itself with its mission and directs its development towards the establishment of an educational and scientific research centre of excellence in the field of technical sciences, the subject areas of Electrical Engineering, Computing, Mechanical Engineering, Naval Architecture and the basic technical sciences, as well as in the field of natural sciences, the subject areas of Mathematics and Physics. The task of the Faculty is to retain its status as one of the leading higher education institutions, as well as one of the leading scientific research institutions in the above-mentioned areas of engineering and natural sciences in the Republic of Croatia, constantly aspiring to reach European standards in teaching and research productivity.

The Faculty provides its users with quality services in higher education and scientific research and encourages active participation in the European higher education and research area. It also links the educational process with scientific research and the economy through its active involvement in scientific and technological projects, encouraging actively at the same time the collaboration with other educational institutions, institutes, as well as professionals and experts from industry.

SWOT Analysis 04

During the 64 years of its existence, the Faculty has achieved impressive results which have contributed to its affirmation as a leading scientific and higher education institution in the region and one of the most significant institutions in the Republic of Croatia. The prerequisite for adopting an effective development strategy in the following period is an analysis of the current situation and results achieved in the previous strategy. This involves an overview of external and internal factors in order to determine the best way to achieve the desired strategic goals.

SWOT analysis is a tool to identify the internal strengths and weaknesses of an organisation and external opportunities and threats which the Faculty encounters. In the context of time strengths and weaknesses represent the present based on the past, while opportunities and threats represent the future based on the past and the present

STRENGTHS/ADVANTAGES

Tradition and recognisable character in teaching, scientific and professional activities

Human resources for teaching, scientific research and professional activity at national and international level

Good collaboration with professional associations, chambers and the Academy of Engineering

Spatial facilities and equipment for scientific research and teaching activities

Well-developed co-operation with other higher education and scientific research institutions in a national and international terms

Recognisability of certain student associations and a significant number of students participating in their activities

Ensured safe access and support for students with disabilities

Recognisability of certain research groups and/or certain scientists

The Faculty promotes academic integrity and freedoms, and actively participates in preventing all forms of unethical behaviour, intolerance and discrimination

Great interest for international mobility, exhibited by students and employees, in order to establish contacts and improve professional competencies

High-quality doctoral studies

Potential for interdisciplinary research

Well-established partnership with the industry, local administration and self-government

Weaknesses/Disadvantages

Great disproportion in numbers of enrolled students in specific study programmes

Insufficient number of international competitive scientific research projects

Lack of research and teaching staff in certain fields

Imbalanced workload on teachers in their teaching activities

Lack of studies in English and lack of active foreign students enrolling entire study programmes

Excessive fragmentation and closed character of research groups and lack of co-operation among them

Activities and organisation of the library are not harmonised with the needs of the Faculty

Insufficient number of associates, particularly assistants, for implementation of teaching processes

Lack of clear and comprehensive remuneration system

Insufficient outgoing mobility of teaching staff

Low number of the best high school graduates, who achieve 850 or more scores at the entrance exam, who enrol into Faculty

Weak motivation of students and low exam passing rates among certain study groups, specifically in their first year of study

Teachers are overloaded by administrative tasks having a growing trend

Procedures for detecting plagiarism are not fully defined

Insufficient involvement of alumni in the development of co-operation with the industry and stronger networking

There is no mechanism for continuous synchronization of teaching curriculum with the needs of the industry

Inadequate promotion of scientific and teaching activities in the national broadcasting media

The influence of the Faculty in University relations is not proportionate to its size and significance

Local economic entities show little interest in scientific research

Insufficient involvement of teachers in knowledge transfer processes

Insufficient recognisability of scientific capacities of the Faculty

Poor digital harmonisation of business activities

Low interest in doctoral studies

Lack of interdisciplinary research

Procedures to verify harmonisation between the workload and allocated ECTS credits in a particular course are not being carried out

OPPORTUNITIES/OPTIONS

Greater effort put in application and implementation of international competitive projects, principally those financed by the European Union

Involvement in initiatives carried out by the University through national and international activities and coope-ration

Better scientific liaison with other universities and scientific institutions, principially with the members of the SEA-EU alliance, in order to improve teaching and research capacities

Building stronger liaisons with other institutions and strengthening of employees' professional and social skills through ERASMUS mobility programme

Enhancing collaboration with economic entities and local administration

Introduction of programme financing by the line ministry

Attracting a larger number of the best high school graduates

The need of the industry for experts educated at the Faculty

Huge potential for knowledge transfer into the economy

Attractive geographical location

Launching different lifelong learning programmes, particulary those related to micro-qualification

THREATS/FEARS

Existence of a larger number of higher education institutions offering study programmes of identical or similar profiles at a relatively small geographical distance

Limited staff employment opportunities at the Faculty, particularly for graduates of doctoral studies, with simultaneous low absorptive capacity of enterprises in the region

Worrying trends in the world economy, reflected in layoffs and reductions of workers in the technological sector

Insufficient motivation of young scientists in terms of stronger support and financing of starter scientific research projects

Unfavourable demographic trends

Emergence of generative AI tools

High proportion of administrative workload when applying for and implementing projects

A large number of students entering the labour market before finishing their studies

Unattractive salaries for young scientists compared to those in the real sector

Interdisciplinary study programmes are not recognised by professional chambers and legal regulations

Unstable legal framework with regulations that change frequently

Unclearly defined legal framework for generating own income on the market

Insufficient funding for scientific research from government and private funds and foundations

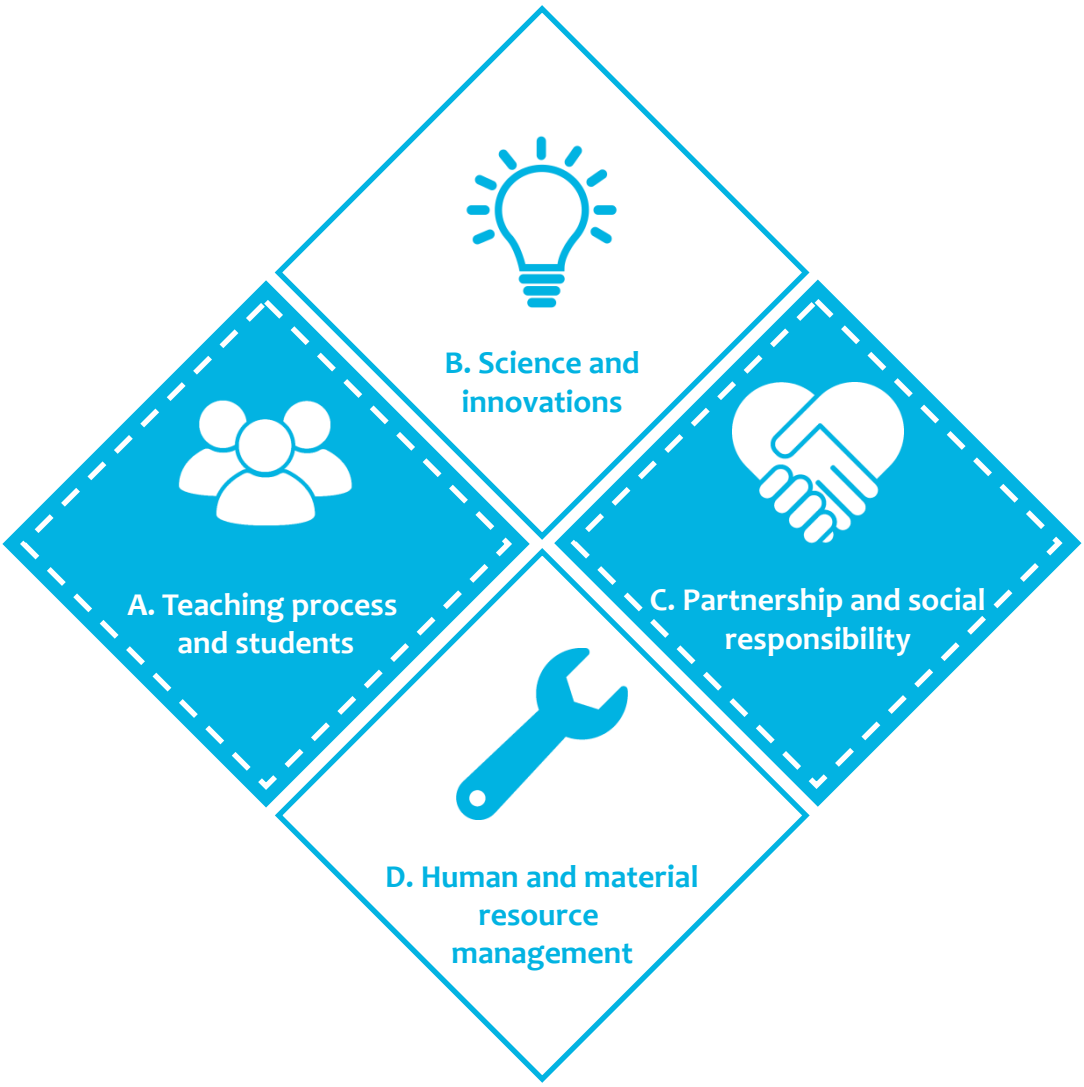
High accommodation costs and lack of accommodation capacities for students

Unfavourable economic structure in national and local environment, oriented predominantly to tourism and service-providing activities, and insufficient number of economic initiatives based on knowledge

Unstable geopolitical situation and inflationary pressure

Strategic Goals 05

In the process of identifying strategic areas, global and special strategic goals, the specific role of the Faculty as a public institution largely financed from the state budget was taken into consideration. Four strategic areas of the Faculty development in the period from 2024 to 2030 were identified:



In accordance with the selected strategic areas, general strategic goals and special goals within each global goal are identified. Consequently, this Strategy was created according to these groups, allowing more effective monitoring, analysis and evaluation of achievements. For each of the special goals, an action plan will be drawn up, defining activities for its implementation, as well as deadlines and responsible persons. Action plan will be adopted by the Faculty Council and it will serve as a basis for tracking the scope of goal fulfilment.

STRATEGIC GOAL

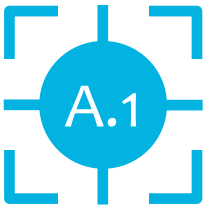
TEACHING PROCESS AND STUDENTS

Guarantee the relevance and high quality of student education in the field of technical sciences and related multidisciplinary fields through the synergy of teaching, research and innovation activities

Students, along with teachers, are the main value of the Faculty whose primary role is the education of young professionals, who will lead the way not only of economic development with their knowledge, skills and capabilities, but they will also contribute to the development of society as a whole. The Faculty will provide its users with quality services in the field of higher education, ensure and develop all aspects of education and encourage active participation in the European higher education area. It is necessary to provide equal access to studies in accordance with the individual capabilities of candidates. Teaching process will be linked with scientific research and professional activities of the Faculty ensuring high level of educational quality. Continuous support will be given to student activities, student associations as well as to the infrastructure available to students. Mobility of students and teachers will be strongly encouraged primarily through ERASMUS+ programme in order to increase the international visibility and reputation of the Faculty, especially its study programmes. The introduction of new teaching methods will also be encouraged and promoted in order to increase efficiency of studying.

SPECIAL GOAL

Improving the quality of study programmes



Continuous improvement of the quality of study programmes is a basic task of the Faculty and to achieve this it is necessary to continuously analyse, modernise and adapt the existing study programmes in accordance with the needs of the labour market and with technical development. A prerequisite for a good quality teaching process is a balanced teacher workload. The feedback on the quality of the teaching process and satisfaction of students and teachers with the teaching process will be obtained using surveys. It is also necessary to introduce new study programmes so that students can acquire knowledge and competencies for the modern labour market characterised by fast technological development and this can be achieved most efficiently by performing study programmes together with other reputed institutions. It is planned to draw up occupational standards, as well as qualification standards related to study programmes and register them with the Croatian Qualifications Framework (CROQF).

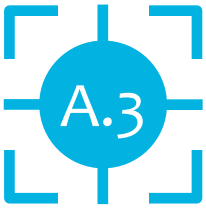
SPECIAL GOAL

Enhancing students' standard

Student activities, in particular those carried out through student associations, contribute to improving the social and professional knowledge and skills of students. Partnership and mutual communication with students is a foundation to upgrade all forms of student standard. Therefore, support will be extended to all student associations and all student activities, which additionally contribute to the development of student skills and competencies and increase the reputation of the Faculty, taking into consideration the needs of students with disabilities, as well as those belonging to vulnerable and underrepresented groups. Students will be allowed to continuously use the facilities and other resources of the Faculty, enabling them unhindered development of their full potential in relation to acquiring knowledge and skills during studying. Special support will be extended for participation in national and international competitions in the respective fields of the Faculty.

SPECIAL GOAL

Increasing international visibility and recognisability



Achieving a high reputation and recognisability of study programmes in the global area of higher education is a strategic goal of the Faculty because international reputation can contribute to the arrival of top-class students, which is particularly important having in mind the negative domestic demographic situation. Therefore, outgoing mobility of students and teachers of the Faculty will continue to be encouraged and promoted and procedures to facilitate mobility will be set up in view of enabling both teachers and students to acquire social skills and enlarge the network of international contacts. Incoming mobility of students and teachers will also be encouraged to increase the visibility of study programmes and the Faculty. Teachers will be particularly encouraged to perform teaching completely in the English language in order to ensure the quality of the teaching process and increase the number of incoming students. To obtain feedback on satisfaction with the mobility system, procedures will be put in place to conduct surveys among domestic and guest students and teachers.

SPECIAL GOAL

Boasting the efficiency of studying

The largest number of students who quit their studies are first-year students. Therefore, it is necessary to invest more effort and work to motivate not only freshmen but also other students, to take their academic obligations more responsibly. In view of achieving better performance of students, it is necessary to systematically monitor and analyse the fulfilment of their duties. The disproportion between given ECTS credits and actual student workload will be analysed. Scholarship opportunities and rewarding model for the best students will also be considered. Study programmes and the Faculty will be promoted to attract the best high school graduates in view of increasing the efficiency of studying, respectively to reduce the number of students who leave the university and increase the number of those who successfully manage their academic duties. Special attention will be given to monitoring the employability of students who have graduated from some of the Faculty programmes.

SPECIAL GOAL

Upgrading teaching methods and technologies

Ensuring the quality of the teaching process, respectively acquiring of learning outcomes and competencies by students depends on the methodology and model of teaching. Modern methods of teaching will be encouraged which develop students' critical thinking and reasoning, such as project-based learning, flipped classroom, research learning, collaborative learning etc. To implement the mentioned modern methods of teaching it is necessary to improve teachers' competencies. Fieldwork education will also be encouraged as well as students' involvement in scientific and professional projects and the use of open code programme in teaching. Particular attention will be given to designing activities which will encourage and develop students' entrepreneurial skills and contribute towards cooperation with the industry.

STRATEGIC GOAL

SCIENCE AND INNOVATIONS

Reinforce excellence and international recognisability of research, development and innovation activities in all scientific fields and accompanying branches that the Faculty covers

B

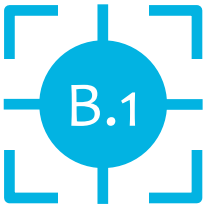
Scientific activity is inseparably linked with the university curriculum and it is the basic prerequisite for good quality higher education. In the strategic document Europe 2020, and all strategic initiatives arising from it, the accent is put on the knowledge triangle between education, research and innovations, which makes the foundation to achieve synergistic effects coming out of investments into science and innovations from national, regional and international funds. It is for this reason that the Faculty will continue to develop as a research institution, recognisable for its prominent researchers and research groups and it will constantly aim at increasing scientific excellence, visible through publishing in scientific journals of the highest quality, obtaining scientific results with significant international resonance and leading and actively participating in international scientific collaborations. The activities which encourage applications to internationally competitive scientific projects from fields of fundamental and industrial research and experimental development will be further enlarged, following positive feedback from top national and international higher education institutions.

The Faculty also sees its future in the strengthening of interdisciplinary research, which may give added value to the quality of scientific work, with the aim of solving challenges complying with selected thematic priority areas, defined by the Smart Specialisation Strategy of the Republic of Croatia and European Framework Programme for Research and Innovation. In this context, the relevance of research for the society as a whole will also be considered and the fulfilment of ethical standards as well as ethical outcomes of technology application will be taken into consideration.

It should be pointed out that previously mentioned strategic goals can only be implemented with increased investments in research and development. Unfortunately, in this regard, the Republic of Croatia lags behind other member states of the European Union and the proportion of expenses for research and development in gross domestic product of the Republic of Croatia is significantly below the EU average. Due to hampered and insufficient funding of science, the proportion of persons employed in the research and development sector in the total workforce in the Republic of Croatia has stagnated in the last 10 years or more, while in the EU employment in the same sector grows. Sufficient and well-developed human resources in research and development are a cornerstone of scientific and technological progress, because of which it is necessary to establish a programme of career development support for young scientists and work on building a positive public attitude toward research career, to motivate young people to choose employment in scientific and higher education system. In these activities a prominent place belongs to doctoral studies, as a means to attract the most talented young people – from our country, and also from abroad – using the advantages of attractive geographic location. From the other side, mobility and training of researchers will be promoted to establish partner relationships with the most competitive similar foreign universities, to strengthen research and professional potential of the Faculty.

SPECIAL GOAL

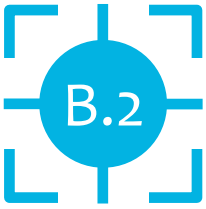
Increasing competitiveness and productivity of scientific-research work



The recognisability of scientific research work of FESB employees at international level is reflected in the publishing of scientific works and successful applications for competitive projects. To increase scientific production and improve the international influence of scientific work for the period from 2024 to 2030, with strong support to the application and implementation of projects, FESB will try to establish and continuously maintain the system for monitoring and informing of employees on project tenders. Strengthening of research through projects will be continued and scientists will be encouraged to apply to international tenders for grants (ERC/Horizon Europe, Interreg, Erasmus, ESA, NSF USA, and others) and nationally funded tenders (HRZZ, NPOO, ESIF, etc.). Scientists will be motivated to publish their works in prestigious international scientific journals through the established reward system, and the same system will be used to reward leaders of scientific research projects which will result in additional raising of scientific excellence. Action will be taken to increase the scientific recognisability and visibility of FESB as a higher education institution through the dissemination of scientific achievements in the media and via social networks.

SPECIAL GOAL

Boasting international cooperation and international influence

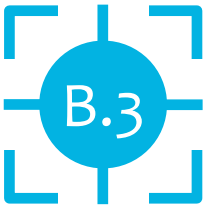


International co-operation of the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture is of strategic importance for scientific research, teaching and professional activity. As a leading scientific research constituent part of the University of Split, FESB will focus its attention on additional encouragement of applications to scientific research projects in cooperation with reputed international institutions. Scientists from the Faculty will be encouraged to publish in cooperation with top-class foreign scientists the results of joint research in the best international journals and to jointly participate in international scientific gatherings. The organisation of existing international scientific conferences, the founding of new ones, as well as the organisation of international workshops, summer schools and similar activities, will be encouraged. Several scientific research groups have been active at the Faculty. A catalogue in the English language detailing research groups will be created with the aim of larger visibility and recognisability. The Faculty will provide strong support for the launching of new scientific journals

and further increase of quality of the existing ones. Researchers will be supported to take part in the work of international research organisations and in the editing of top-class international journals and publications. It is necessary to enable the internationalisation of doctoral studies and develop ways to attract the best foreign students, which should contribute to doctorate defence with the great scientific excellence. Scientific mobility and training of researchers will also be encouraged to establish Croatian and European research infrastructure.

SPECIAL GOAL

Enhancing research-innovation infrastructure



With a view of modernising study programmes and following trends in the development of science and technology, the Faculty must also position itself in the future as an authority in education and research in its fields of activity. The same will be achieved through the establishment of new scientific research groups and the founding of new laboratories and centres, which will work on popular themes with utmost focus. To achieve this, it is necessary to carry out new investments in scientific research equipment and accompanying infrastructure which will enable new research. In view of efficient performance and optimal use of the Faculty resources, it is necessary to create a database of scientific research equipment which will be regularly updated.

SPECIAL GOAL

Strengthening of human resources for scientific research work

Strengthening human resources for scientific research work is a necessary prerequisite for increasing of scientific excellence. Total competitiveness of researchers, success in mentorship and skills for the organisation and management of research groups, as well as know-how in tender procedures for competitive national and international projects will be improved in cooperation with the Research Support and International Cooperation Office and relevant support programmes for young researchers and teachers. Strengthening of the Research Support and International Cooperation Office and organisation of trainings, workshops and counselling on project application and management will further contribute to human resources improvement and ensuring good quality conditions for scientific research work.

SPECIAL GOAL

Maintening high quality of doctoral studies

The quality of the scientific-teaching process, the role of which is to educate new generations of experts, scientists, as well as future members of academic community, is one of the basic criteria for evaluating the successfulness of the Faculty work and one of the best ways to promote it. This is why one of the goals of the Faculty is to actively improve the programme of the existing doctoral study by continuously evaluating it, monitoring mentors' success in their work, as well as monitoring and increasing efficiency of the doctoral study.

SPECIAL GOAL

Strengthening the interdisciplinary character of scientific work

Within contemporary trends, interdisciplinary scientific areas become more and more dominant. The Faculty intends to use its scientific potential to improve interdisciplinary research, using fundamental and highly specialised knowledge, human resources and equipment. To strengthen its status and recognisability in the Republic of Croatia and at international level the Faculty will promote the symbiosis of research groups from different scientific areas, as well as application of interdisciplinary scientific research projects, organisation of scientific gatherings and conferences, and publishing of scientific books, which will contribute to technological development of local economy and society as a whole.

SPECIAL GOAL

Promoting open science principles

Open science includes sharing of knowledge, scientific works and research results for the benefit of science and society as a whole. The goal of the Faculty is to promote the principles of open science among its staff to increase cooperation with other scientists, economic operators and stakeholders by means of opening, whenever possible, of the entire research process. The Faculty will motivate its employees to keep their scientific works, teaching content, research software and codes, as well as all other materials related to science and education, on open-access institutional, national and international repositories. The Faculty will encourage initiatives and educational workshops which promote open science.

STRATEGIC GOAL

PARTNERSHIP AND SOCIAL RESPONSIBILITY

Intensify the Faculty's influence on economy and on the development of society as a whole through accepting and actively promoting the principles of social responsibility and equality using transfer of knowledge and technologies

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Despite intensively negative economic trends in the region, reflected in actual processes of deindustrialisation and directing the focus exclusively on tourism and service activities, it is the goal of the Faculty to act as a central gathering hub for the business community in the region and beyond and become a driving force which will contribute to creation of new, multidisciplinary knowledge and values necessary for the development of the economy and social community by using the activities of knowledge transfer, technology and intellectual property, as well as marketing of the research results. At the same time, the connection with the economy must be two-way and multiple, and the interaction instruments that can be used to achieve this are primarily joint projects from the category of industrial research and experimental development in which researchers from the Faculty and partners from the industry collaborate, but also all other forms of formal cooperation with economic and public sector. To implement cooperation and joint projects with the economy, it is necessary to strengthen the trust of economic operators in the professional character and reliability of the Faculty as a research organisation, and one of the ways to achieve this is to systematically encourage socially acceptable and transparent forms of academic entrepreneurship in the form of setting up of spin-off and start-up companies.

To ensure their competitiveness on the labour market, it is crucial to include students as much as possible during their studies in cooperation programmes with the economy by means of student projects and internships and the creation of final and diploma theses but also to offer them the opportunity to further improve their knowledge, skills and competencies – after graduation from the Faculty – by expanding the range of lifelong education programmes. Furthermore, maintaining contacts and stronger connections with the alumni community, which has more than 14,000 members, present in various segments of social and business life, can significantly contribute to raising the visibility and reputation of the Faculty and, through the exchange of ideas and experiences, help career development and top-quality employment possibilities for current students.

In addition to all the above, the Faculty should continuously work hard on its promotion and branding in society as a first-class higher education and scientific research institution and as one of the main constituent parts of the University of Split. Using different activities to popularise science, it is necessary to ensure that the general public, especially the children and the young, are acquainted with the research activities carried out at the Faculty, in a way that everyone can understand them, which improves understanding of science in the public and strengthens social awareness on the importance of knowledge and science in modern society. In all its public activities and operations, the Faculty will emphasise the importance of social responsibility and promote the principles of tolerance, equality, solidarity and inclusiveness.

SPECIAL GOAL

Encouraging the implementation of applied scientific activities in co-operation with the industry, public sector and local and regional self-government units

The special goal of the Faculty is to strengthen ties with local and national economic operators, the public sector and units of local administration and self-government to transfer knowledge and technologies to them. To achieve such a goal, project applications will be encouraged in cooperation with economic operators and the public sector with an emphasis on applied research. Teachers will be encouraged to publish scientific and professional publications in co-authorship with stakeholders from the industry. Formal cooperation with the industry, public sector and local and regional administration and self-government will be strengthened on other activities in addition to joint project application and publishing of publications. Special emphasis will be put to increasing the number of students enrolled in doctoral studies who come from the industry.

SPECIAL GOAL

Commercialisation of research results and raising awareness on innovations and intellectual property management

The Faculty plans to encourage the application of scientific research and development projects which will result in the transfer of technology and knowledge to the economy, public sector, and local and regional self-government. Because of the future exploitation of research results, in addition to publishing of scientific works, protection of all forms of intellectual property will be continuously encouraged. Furthermore, in view of the commercialisation of innovations, the Faculty will provide strong support to the opening of start-up and spin-off companies to generate additional income on the market. The Faculty will further strengthen its influence on the free market by establishing a catalogue of certified experts and consultants who possess specific knowledge and experience to provide appropriate scientific, research or technological services.

SPECIAL GOAL

Including students in collaboration programmes with the industry and building stronger connection with the alumni community

Cooperation with economic operators is of essential importance for the survival and growth of the Faculty. The Faculty will continuously improve and adapt its teaching programmes to the needs of the economy. Enrolment quotas for specific study programmes will be defined by considering the real needs of the economy. The Faculty will encourage the organisation and performance of practical field classes in companies for the purpose of acquiring practical competencies. Renowned experts from the economy will be involved in the teaching process either through an advisory role, guest lectures to share experiences, organising summer schools, workshops or organising special courses to transfer specialised and professional knowledge to students. One of the goals is to carry out as many final and graduate theses as possible through joint work with economic operators and solving their problems. The Faculty will also encourage excellence by rewarding the most successful graduation theses, made in cooperation with the industry, within its financial capabilities. Connecting students with the economy will be encouraged through student internships, during which students will gain work experience solving real problems from the economy. Activities aimed at getting to know graduate students and future employers will be carried out, as well as mediation in obtaining student scholarships for the best students, which will be provided by relevant economic operators. The plan is to establish the Economic Council, as an advisory body of the Administration, with the task of intensifying coordination of activities and establishing even more productive cooperation between the Faculty and the economic community for mutual benefit. The Faculty will continue to deepen the relationship with the alumni community, whose role goes far beyond ordinary networking and – through the sharing of rich experience and knowledge – provides numerous benefits and opportunities for the professional and personal development of new generations of students.

SPECIAL GOAL

Expanding the offer of lifelong education programmes

Keeping up with the trends in the development of science and technology is one of the basic tasks of the development of the Faculty. In this context, it is necessary to offer a different spectrum of additional education opportunities in different segments of the Faculty's field of work through the improvement of existing and development of new lifelong education programmes in compliance with the Croatian Qualifications Framework (HKO), promotion of aforementioned programmes, but also through organisation of seminars and courses for training of experts coming from the industry.

SPECIAL GOAL

Promoting the Faculty and its activities in the community and science popularisation

The Faculty will continue to actively attract new students through science popularisation programmes by keeping the established partnership with educational institutions and organising various educational workshops in the STEM field intended for secondary and elementary school students. Activities include participation in programmes designed to meet public needs in technical culture, as well as activities organised within the Science Festival, all to increase public interest in science, technology, engineering, mathematics and science. By promoting the work and role of the Faculty, there will continuously be more space to expand cooperation, both with teachers in schools, as well as with businessmen and alumni, to enrich the learning experience of young generations and stimulate their interest in the technical field. Students will be encouraged to promote the study programmes and scientific activity at the Faculty through their activities.

SPECIAL GOAL

Strengthening the culture of tolerance, multiculturalism, humanitarian and volunteering work

One of the Faculty goals, as a multicultural institution, is to promote a culture of tolerance and inclusiveness. One of the ways to achieve this is to encourage students and employees to get involved in the organisation and implementation of volunteer activities, and humanitarian actions and to use their example to encourage others to participate in them.

STRATEGIC GOAL

HUMAN AND MATERIAL RESOURCE MANAGEMENT

Systematically improve the spatial infrastructure, boast the effectiveness, efficiency and economy of internal organisation and operations, and strengthen the role of the quality assurance system in all segments of the Faculty's activities

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Raising the level of efficiency of operations and business processes and optimal utilisation of material, human and financial resources are key prerequisites for ensuring further sustainable and stable development of the Faculty, and turning it into an agile, modern organisation, capable of responding quickly and adapting to new changes. One of the necessary steps to achieve this goal is the complete digital transformation of business, which is not only reflected in the improvement of already existing and establishment of new information (sub)systems, but also entails a change of paradigm and way of thinking, which will result in greater transparency and simplified workflows and internal procedures, with minimal flow of paper documents and minimal demands for end users.

Important factors for achieving operational excellence are the motivation and satisfaction of all employees, with special emphasis on employees of general (professional) services. Employees with well-utilised knowledge and skills are the source of strength in any organisation. In this regard, the Faculty will continue to develop the competencies and potentials of employees of professional services and invest in them to continuously contribute to the achievement of organisational goals. With clearly defined tasks and the necessary internal restructuring, all employees will be encouraged to work efficiently and a positive and inspiring environment will be built – based on the principles of cooperation, responsibility, respect and loyalty – in which all employees are provided with opportunities for personal growth and development.

The Faculty demonstrates its orientation towards the future through permanent care for the preservation of the environment and commitment to strengthening the green transition. In addition to already existing charging stations for electric vehicles, built-in solar and wind power plants, and in the coming period, through the application of environmentally friendly technologies, new, innovative solutions will be found for rationalising the consumption of energy resources and water, permanently increasing energy efficiency and increasing the share of energy obtained from renewable sources, all to improve environmental stability and mitigate the consequences of climate change.

SPECIAL GOAL

Improving infrastructural capacities of the Faculty

Permanent investment in the development of spatial infrastructure ensures adequate conditions for work, residence and study, which is of exceptional importance for the Faculty. It is planned to draw up an action plan for preventive maintenance of information and computer systems and networks, to increase their reliability and efficiency. The existing functionalities of the information subsystems will be upgraded, and new ones will be developed to provide better support for teaching, professional and scientific research activities. The digitalisation of activities will be crucial for establishing an efficient IT management system. Also, to ensure better information flow and availability for all users, the Croatian and English versions of the Faculty's website will be upgraded.

SPECIAL GOAL

Strengthening of green transition

Efficient energy resource management, and reduction of energy and water consumption are the strategic goals of the Faculty. The Faculty will use its spatial capacities while paying attention to the rational use of energy. The Faculty will invest its own and dedicated funds, as well as funds from national and international funds in energy efficiency through the maintenance and use of renewable energy sources, energy-efficient lighting and insulation of the Faculty building. The Faculty will implement the campaign and support workshops and seminars which raise awareness of the importance of sustainable behaviour among students and employees.

SPECIAL GOAL

Evolving and developing human resources

The most important resource of the Faculty are its students and particularly its staff, who contribute to the greatest extent to its recognition and reputation, and in addition, they are an important potential for the regional and national economy. To be able to follow business trends and successfully perform work tasks, the training and development of additional skills and competencies of employees is a special strategic goal of the Faculty. The goal will be achieved through the creation of a stimulating educational, research and professional environment desirable for residence, work and education, by investing in the improvement of working

conditions and employee satisfaction. To successfully achieve the strategic goal, it is necessary to establish a system of planning and management of human resources and to strengthen the competencies of professional service employees through attending professional training, education and workshops. Scientific and teaching staff and students will be encouraged to participate in the activities of national and international bodies which promote science and profession.

SPECIAL GOAL

Enhancing internal organisation and Faculty's business activities

To optimise business processes, be able to react faster and yield better position of the Faculty in educational, scientific research and professional segments, it is important to digitise the Faculty's business processes in all segments where possible. In this way, additional savings can be achieved, and the underlying processes become efficient in the administrative, financial and legal segments, but also in the context of the maintenance of the Faculty's equipment and building. To achieve more efficient operations and better functioning of professional services, it is necessary to change and simplify the existing business procedures and introduce new organisational forms of the internal structure.

SPECIAL GOAL

Strengthening of quality assurance system

The Faculty has actively and consistently committed itself to continually improving the quality of its entire teaching, scientific, research and professional work, while respecting national and international standards, building on previous experience and all activities that have made it stand out as one of the leading higher education institutions in the Republic of Croatia. To permanently improve the business system, it is necessary to encourage and support all mechanisms for ensuring the quality system in all areas of activity and through all normative acts of the Faculty. Hence, it is vital to monitor the implementation of the Faculty's strategic goals and, after the analysis, determine measures to improve their implementation. It is also necessary to carry out all activities in accordance with the Quality Assurance Manual and the Rulebook of the Quality Assurance system. A major contribution to the development of the quality assurance system will be the periodic self-evaluation and the monitoring of quality indicators. To strengthen the quality assurance system, the establishment of the Quality Office is planned.

Keep in touch

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