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Introduction

1. INTRODUCTION

Gender equality is one of the highest values of the constitutional order of the Republic of Croatia and a basis for interpretation of the Constitution [1]. According to the Gender Equality Act [2], gender equality means that women and men are equally represented in all areas of public and private life, that they have equal status, equal opportunities to exercise all rights, and equal benefits from the results achieved. Gender equality is one of the fundamental values of the European Union (EU) and a universally recognized human right, and is essential for the well-being, economic growth, prosperity, good governance, peace, and security [3]. Based on the evaluation of the EU support to gender equality, and following consultations with stakeholders, the EU policy framework focuses on the following five pillars:

- 1. Making the EU engagement for gender equality more effective
- 2. Promoting a strategic EU engagement at the country, regional and multilateral levels
- 3. Towards a gender-equal world: focusing on key thematic areas of engagement
- 4. The EU leads by example
- **5.** Reporting and communicating results.

The Faculty of Civil Engineering of the University of Zagreb provides undergraduate, graduate and postgraduate education in all branches of civil engineering, and continuously develops and improves higher education, advances scientific research and lifelong learning, and actively participates in the development of the profession and in implementation of new technologies [4].

By this Gender Equality Plan, the Faculty of Civil Engineering of the University of Zagreb:

- identifies the existing structure of employees and students,
- analyses the existing relevant data and reviews the existing policies and procedures related to gender equality,
- clearly expresses its position as being the place of equal opportunities,
- demonstrates a clear orientation towards the integration of all principles of gender equality in educational and scientific research processes,
- commits itself to continuously monitor the fulfilment of gender equality goals, and to react in a
 timely manner through application of appropriate policies and measures in order to fully
 implement the principles of gender equality in the policies, measures, and procedures of the Faculty,
- commits itself to promote positive examples both inside and outside of the Institution.

In these times of rapid technological innovations, companies require highly skilled employees in the fields of science, technology, engineering and mathematics (STEM) [5]. Such skills are needed. for proper implementation of new technologies, and high-level skills in various areas of STEM are indispensable for encouraging innovation in the most advanced areas of expertise. However, only one in five young people in Europe completes tertiary education in the field of STEM. This number should be increased by promoting STEM education, especially among young women. Currently, only half as many women as men graduate in the field of STEM in the EU, although there are large differences in numbers between the Member States. One of the measures within the European Pillar of Social Rights Action Plan – Skills Agenda for Europe is to increase the number of people holding a degree in STEM, to promote entrepreneurial and transverse skills by increasing attractiveness of STEM studies and careers, with measures closely targeted to attract girls and women, and to encourage an interdisciplinary and innovative approach to teaching and learning in schools, vocational education and training institutions, and higher education establishments. The data published by the Croatian Bureau of Statistics [6] reveal that in 2019 the employment rate of women as related to the working age population was 41.3%. Out of 23,859 people employed in the field of research and development, 49% were women, most of them in higher education (60%), followed by the public and private non-profit sector (22%), and business sector (18%). In the total number of unemployed persons in 2020, the share of women was 55%, out of which 81% with an unfinished or finished primary and secondary school education, 8% with first degree university studies, i.e., vocational studies and undergraduate studies, and 11% with completed graduate studies, master's degree studies and doctoral studies.



Legal framework

2. LEGAL FRAMEWORK

According to the Constitution of the Republic of Croatia [1], the freedom, equal rights, national and gender equality, peace-making, social justice, respect for human rights, inviolability of ownership, conservation of nature and the environment, the rule of law and a democratic multiparty system are the highest values of the constitutional order of the Republic of Croatia and the basis for interpreting the Constitution. All persons in the Republic of Croatia shall enjoy rights and freedoms, regardless of race, colour, gender, language, religion, political or other opinion, national or social origin, property, birth, education, social status or other status.

General framework for the protection and promotion of gender equality as a fundamental value of the constitutional order of the Republic of Croatia is laid down in the Gender Equality Act [2], which also defines and regulates the methodology for protection against gender-based discrimination, and for establishment of equal opportunities for women and men. Gender equality means that women and men are equally present in all segments of public and private life, that they have an equal status, equal access to all rights, and equal benefits from the results they achieve. Educational and scientific institutions are required to implement gender-equality training programmes for their employees. Discrimination on the basis of gender (hereinafter referred to as "discrimination") refers to any difference, exclusion or limitation based on one's gender which renders more difficult or denies equal recognition, enjoyment or exercise of human rights of men and women in political, educational, economic, social, cultural, civil and any other sphere of life. There shall be no discrimination on the grounds of one's marital or family status. Less favourable treatment of women for reasons of pregnancy and maternity shall be deemed to be discrimination. Direct discrimination is any treatment where, on the grounds of gender, one person is treated or has been treated or might be treated less favourably than another in a comparable situation. Indirect discrimination occurs when a neutral legal provision, criterion or practice puts persons of one gender in an unfavourable position in comparison to persons of the other gender, unless that provision, criterion or practice can be objectively justified by a legitimate aim and the means of achieving that aim are appropriate and necessary.

Discrimination in the field of employment and labour is forbidden in the public or private sectors, including government bodies, in relation to:

- 1. requirements for employment, self-employment, or carrying out a professional activity, including the criteria and requirements for the selection of candidates for particular jobs in any activity and at all levels of professional hierarchy,
- 2. promotion at work,

- **3.** access to all types and all levels of education, career counselling, professional advancement and training, additional training and retraining,
- **4.** employment and working conditions, all occupational benefits and the benefits resulting from occupation, including equal pay for the equal work and work of equal value,
- **5.** membership and participation in workers' associations or employers' associations or in any other professional organisation, including privileges arising from such membership,
- 6. balance between professional and private life,
- **7.** pregnancy, birth, parenting and any form of custody.

Job vacancies must be advertised by clearly stating in the advertisement that persons of both genders may apply for the job. No expressions shall be used in job advertisements that cause or might cause discrimination on the grounds of gender, marital or family status, and sexual orientation. When writing job assignment decisions or other decisions on the rights and obligations of civil servants, the title of the work position shall be written in the masculine and feminine gender.

Institutions dealing with education as their primary activity shall systematically implement measures to ensure equal access to education at all levels, and conduct activities in relation to the professional advancement and promotion of employees in charge of training and education. At all levels of education and training, appropriate attention shall be paid to achieving equal representation of both genders in the population of students, and all educational institutions shall pay particular attention to the achievement of equal representation of both sexes in managing bodies.

The Anti-discrimination Act [7] provides for the protection and promotion of equality as the highest value of the constitutional order of the Republic of Croatia, creates prerequisites for the realisation of equal opportunities, and regulates protection against discrimination on the grounds of race or ethnic affiliation or colour, gender, language, religion, political or other belief, national or social origin, property, trade union membership, education, social status, marital or family status, age, health condition, disability, genetic heritage, native identity, expression or sexual orientation. It is stated in Article 3 that harassment is any unwanted conduct caused by any of the grounds referred to in Article 1 paragraph 1 of this Act with the purpose or effect of violating the dignity of a person, and of creating an intimidating, hostile, degrading or offensive environment. Sexual harassment is any verbal, non-verbal or physical unwanted conduct of sexual nature with the purpose or effect of violating the dignity of a person, and of creating an intimidating, hostile, degrading or offensive environment. Discrimination is prohibited in all its manifestations.

The Gender Equality Strategy for 2020-2025 [8], published by the European Union, is based on the following principles:

- 1. Being free from violence and stereotypes
- 2. Thriving in a gender-equal economy
- **3.** Leading equally throughout society
- 4. Gender mainstreaming and an intersectional perspective in EU policies
- 5. Funding actions to make progress in gender equality in the EU
- **6.** Addressing gender equality and women's empowerment across the world.

Gender stereotypes are a root cause of gender inequality and affect all areas of the society. Gender mainstreaming ensures that policies and programmes maximise the potential of all (women and men, girls and boys) in all their diversity. The aim is to redistribute power, influence, and resources in a fair and gender-equal way, tackling inequality, promoting fairness, and creating opportunity.

Everyone should be safe in their homes, in their close relationships, in their workplaces, in public spaces, and online. Improving the work-life balance of workers is one of the ways of addressing the gender gaps in the labour market. Both parents need to feel responsible and entitled when it comes to family care. The Work-Life-Balance Directive [9] introduces minimum standards for family leave and flexible working arrangements for workers, and promotes equal sharing of caring responsibilities between parents. Combining work with domestic work and care responsibilities is a challenge, especially for women.

During implementation of research and development projects, beneficiaries of various programmes should take into account the gender perspective and promote gender mainstreaming in project activities. For example, gender mainstreaming should be promoted during implementation of projects funded through the Operational Programme Competitiveness and Cohesion [10]. This means that project stakeholders need to take into account the gender perspective, consciously bearing in mind the impact of gender differences on project activities that needs to be addressed or improved. At the same time, it is important that gender equality is promoted in the activities. The term gender neutral refers to situations in which an activity has no differential positive or negative impact in terms of gender relations or equality between women and men. The gender neutrality on a project should be based solely on the result of a gender impact assessment. This assessment includes an analysis and assessment of the effects of the project objectives and measures on the genders and on the principle of equality between women and men. The topics of the assessment are the needs, goals, target groups, activities, communication and examples of best practice within the project, as related to the status, living conditions, needs and expectations of different genders.

Labour regulations of the Faculty of Civil Engineering [11] specify the conditions of employment contracts; protection of life, health and privacy of employees; probationary work period, professional education and training; working hours; vacation and leave periods; protection of pregnant women, parents and adoptive parents; protection of employees who are temporarily or permanently unable to work; salaries; material rights of employees; ban on competition between employees and the Faculty; reparation of damages; termination of employment contracts; and fulfilment of work-related rights and obligations by Faculty employees.

Normative structure of students and employees of the Faculty of Civil Engineering

3.1. Undergraduate and graduate studies

3.2. Doctoral studies

3.3. Faculty employees

3. NORMATIVE STRUCTURE OF STUDENTS AND EMPLOYEES OF THE FACULTY OF CIVIL ENGINEERING

3.1. UNDERGRADUATE AND GRADUATE STUDIES

Teaching activities at the Faculty of Civil Engineering are organized in the form of three-year undergraduate studies at the end of which students acquire 180 ECTS credits and the academic title of Bachelor of Civil Engineering (univ. bacc. ing. aedif.), and two-year graduate studies giving right to 120 ECTS credits and the academic title of Master of Civil Engineering (mag. ing. aedif.). Graduate studies are held in seven distinct areas (academic majors). Undergraduate studies in civil engineering are the same for all students, i.e., no academic majors can be selected at that level. Up to 240 students are enrolled each year for undergraduate studies and 203 for graduate studies. Over the last three years, an average of 855 students attended undergraduate studies while 385 attended graduate level studies. The distribution of students by gender is shown in Figure 1. In the last three academic years, approximately 46% of female students and 54% of male students attended undergraduate studies (Figure 1a), and 51% of female students and 49% of male students completed their studies (Figure 1 b). The ratio of male to female students in graduate studies is similar, with the share of female students increasing by 2% in the last academic year compared to previous years (Figure 1c). An average of 50% of male students and 50% of female students completed their graduate studies in the last three academic years, and the share of female students who completed their graduate studies in the previous academic year was 52% (Figure 1d).

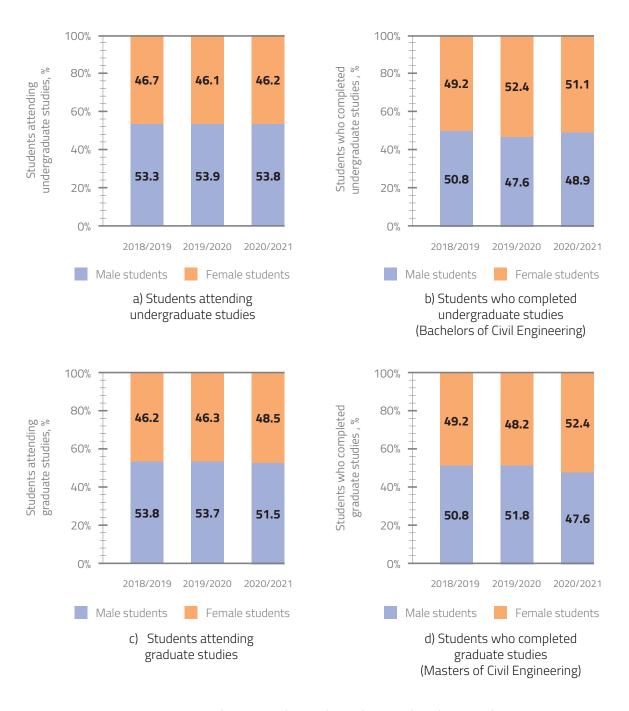
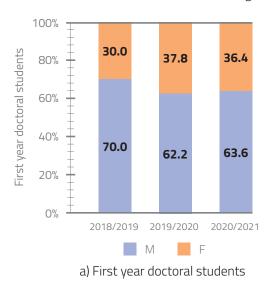
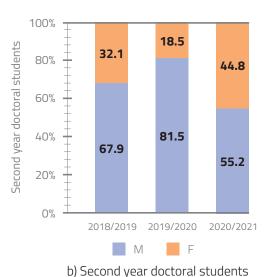


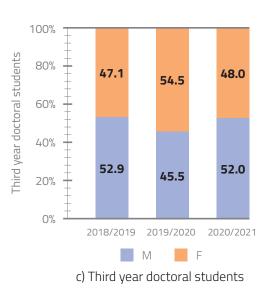
Figure 1. Students attending undergraduate and graduate studies

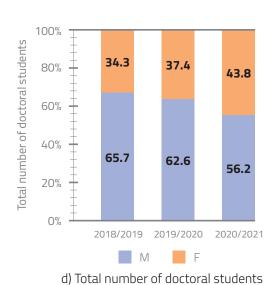
3.2. DOCTORAL STUDIES

Up to thirty students are enrolled each year in postgraduate doctoral studies of civil engineering. An average of 16 students enrolled in the first year of these studies over the last three academic years. 180 ECTS credits are awarded upon completion of doctoral studies of civil engineering, giving right to the academic title of Doctor of Science in the scientific field of technical sciences. At all years of study (Figures 2a - 2c), the number of male students (61% on average) exceeds the number of female students (39% on average). However, according to the data on the number of students who completed their doctoral studies in the last three academic years, the number of male and female students is the same (Figure 2e).











e) Students who completed postgraduate doctoral studies in last three years (doctors of science in the scientific field of technical sciences)

Figure 2. Students of postgraduate doctoral studies

3.3 FACULTY EMPLOYEES

In 2020, the Faculty had a total of 205 employees, i.e., 53% women and 47% men. That number increased to 226 employees in 2021 (54% women and 46% men) and to 232 in 2022 with the same women to men ratio (Figure 3a). If only jobs related to employees in scientific and teaching positions are considered (excluding technical and administrative staff), i.e., postdoctoral students, assistant lecturers and lecturers, senior lecturers and professional associates, then the number of men exceeds that of women (Figure 3b). Technical-administrative staff includes administrative secretaries, laboratory assistants, technical associates, registry office employees, accounting officers, librarians, and faculty building maintenance employees.

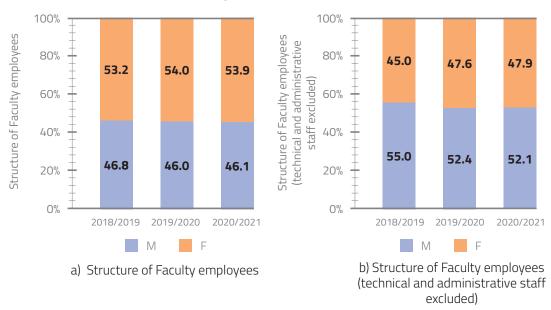


Figure 3. Structure of employees

The structure of employees according to work positions is shown in Figures 4 a) to 4 c). Figure 4 c) shows the structure of employees in 2022. Most employees are in scientific and teaching positions (assistant professors, associate professors, full professors – first appointment and full professors in permanent positions), i.e., a total of 72 people, out of which 46% women and 54% men. Among assistant lecturers, lecturers, senior lecturers and professional associates, the number of women and men is equal, while women are more represented in technical and administrative work positions (70%).

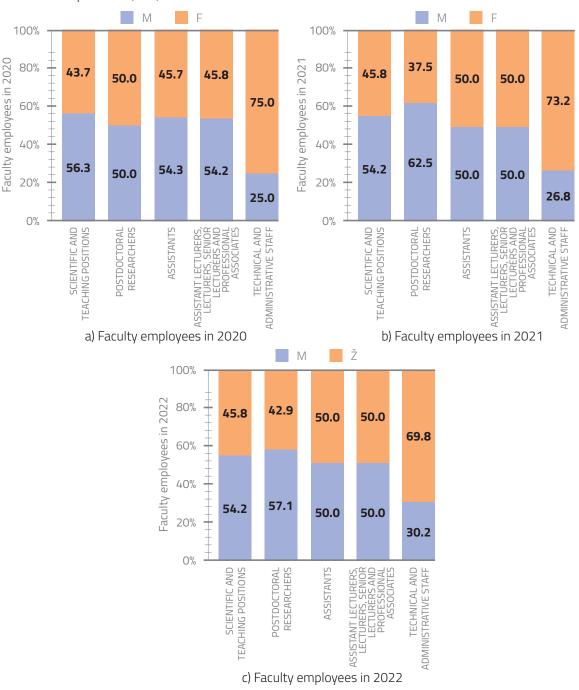


Figure 4. Faculty employees' structure by work positions

The Faculty Council is an expert body of the Faculty consisting of permanent and elected members [12]. All employees holding scientific-teaching positions are permanent members of the Council, while elected members of the Councils are representatives of other teachers who have concluded an open-ended employment contract with the Faculty, representatives of associates, representatives of other employees, and student representatives. Student representatives make up at least 15% of the total number of the Council members. The term of office of the representatives of teachers, associates and other employees in the Council extends over two academic years. The Council adopts the statutes and general acts of the Faculty, elects the dean and vice-deans, conducts elections for members of Area Councils, accepts the dean's annual report, adopts the budget and annual account of the Faculty, takes actions and makes decisions aimed at ensuring proper quality of studies and scientific work, instigates procedure for introducing programs of study, establishes new and develops existing research capacities, initiates and conducts election procedures, provides conditions for ensuring freedom of initiative to individuals and groups of researchers, teachers and students, gives opinion on the procurement, installation and use of large equipment, gives consent to the dean for undertaking legal action in the name and on behalf of the faculty in the value exceeding HRK one million, and performs other tasks specified by law, University Statutes, and Faculty Statutes. The structure of the Faculty Council by gender in the current and last two academic years is shown in Figure 5. In the observed years, the Council had on an average 94 members, out of which 58% men and 42% women (average values). In previous years, there has been a trend of increasing the share of women in the Council by approximately 2%. According to scientific and teaching titles, women are the most represented among assistant professors (currently 56%), while the number of men and women in the title of full professor (permanent position) is equal. The representation of female students among the student representatives in the Council corresponds to their representation at the undergraduate level.

Doctoral studies are conducted in the scientific field of technical sciences, i.e., in several research branches within the field of civil engineering and the field of basic technical sciences. Mentors for PhD students are persons who have been awarded at least the scientific-teaching title of assistant professor or the title of research associate. The mentor guides the doctoral student during preparation of the dissertation, monitors the quality of the doctoral student's work, encourages publication of his / her works/papers and enables the student's participation in scientific projects. At postgraduate doctoral studies, teaching is conducted by an average of 59 teachers. The distribution of teachers by gender is shown in Figure 6. In doctoral studies, the number of female teachers (40% on average) is lower compared to the number of male teachers.

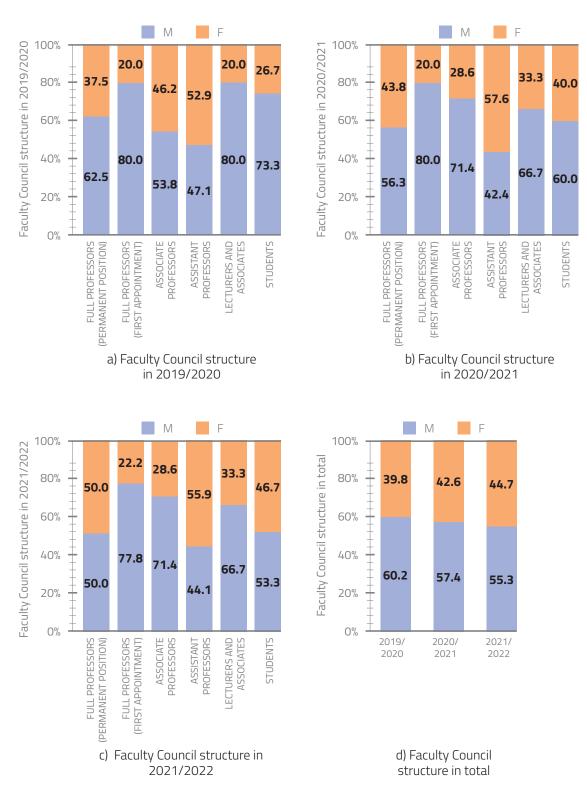


Figure 5. Faculty Council overview

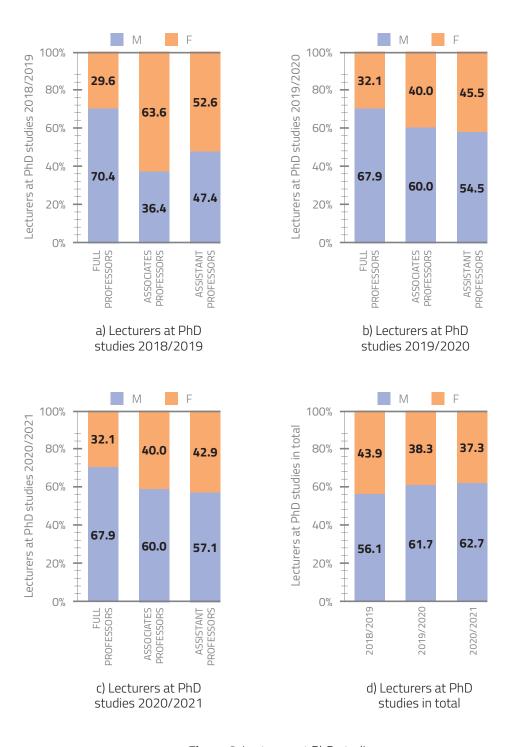


Figure 6. Lecturers at PhD studies

Action Plan

4. ACTION PLAN

The strategic framework and goals of the plan are:

- **1.** Organizational culture of gender equality promotion of gender equality in the structure and protocols of the institution
- **2.** Achieving gender equality in teaching and research
- **3.** Gender mainstreaming in educational programs
- **4.** Harmonising private and professional life achieving equal support for all employees in creating a balance between professional and personal development
- **5.** Prevention of gender-based violence and discrimination improving a system that ensures zero tolerance to any form of violence

GOAL	ACTIVITY	DEADLINE FOR IM- PLEMEN- TATION	INDICATOR	RESPONSIBLE PERSON OR WORKING BODIES
1. PROMOTION OF GENDER EQUALITY IN THE STRUCTURE AND PROTOCOLS OF THE INSTITUTION	1.1 Appointment of a person to monitor implementation of existing gender-equality policies and practices and their improvement	July 2022	Annual report	Administration
	1.2 Holding equal opportunities and non-discrimination training/education for employees	Once a year	Education feedback report	Administration
	1.3 Improving existing documents and periodically checking the language and terminology in existing documents	Once a year	Revised documents	Faculty secretary
	1.4 Conducting research among employees on the perception of gender equality in the workplace	Once a year	Research report	Administration
	1.5 Publication of the Gender Equality Plan in the Yearbook and possibly in other publications of the Faculty	Once a year	Yearbook/ publication	Administration
	1.6 Promoting gender equality in governing bodies	Continu- ously	Systematic mon- itoring of work, and data collec- tion on the wom- en to men ratio in boards, com- mittees and other working bodies of the Faculty	Administration

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2. ACHIEV- ING GENDER EQUALITY IN TEACHING AND RESEARCH	2.1 Promoting student projects in which both genders are equally represented	Continu- ously	Annual reports of the Vice Dean, an- nouncements on the website and social networks	Vice Dean for Education Vice Dean for Science
	2.2 Supporting student teams in the implementation of projects/initiatives that promote horizontal principles	Continu- ously	Annual reports of the Vice Dean	Vice Dean for Education
	2.3 Promoting examples of good practices involving gen- der equal teams in scientific and professional projects	Continu- ously	Annual reports of the Vice Dean, an- nouncements on social networks	Vice Dean for Science Vice Dean for Business
	2.4 Conducting research among students on the perception of gender equality during their studies	Once a year	Research report	Vice Dean for Education Vice Dean for Science
	2.5 Conducting assessment on gender-related impact of projects [13]	Continu- ously	Gender impact assessment; data on the women to men ratio in tar- get groups	Project man- agers
	2.6 Increasing representation of women in STEM area – organising visits and open days for primary and secondary school students (with the possibility of inviting employees' children to informal gatherings) so that they can find out more about the possibilities and options offered at the Faculty	Once a year	Report	Administration
3. GENDER MAINSTREAM- ING IN ED- UCATIONAL PROGRAMS	3.1 Promoting and using gen- der-equal terms in all docu- ments and means of commu- nication with students	Continu- ously	Examples of relevant documents and announcements	Teaching staff
	3.2 When modifying study programs, revising and imple- menting the principles of gen- der equality where applicable	When modify- ing study programs	Changes to the study program	Teaching staff
	3.3 Providing proper in- formation to students and ensuring visibility of relevant documents (procedures and regulations) related to gender equality	Continu- ously	Website, an- nouncements	Vice Dean for Education, registry office

4. HARMONISING PRIVATE AND PROFESSION- AL LIFE	4.1 Providing flexible working conditions and teleworking within reasonable limits	Continu- ously	Decisions, em- ployment con- tracts	Administration
	4.2 Excluding from employee reward schemes any periods of inactivity for dependent care (e.g., maternity leave)	July 2023	Calls for proposals for rewards	Administration
	4.3. Encouraging male employees to take maternity and parental leave	Continu- ously	Announcements	Administration
5. PREVENTION OF GENDER-BASED VIOLENCE AND DISCRIMINA- TION	5.1 Reviewing effectiveness of the existing implemented and legally regulated protocols	Once a year	Revised procedures	Administration
	5.2 Informing employees and students about relevant protocols and their implemen- tation	Continu- ously	Website, an- nouncements	Administration

Terms contained in this document that could be construed to refer to a particular gender only are in fact used neutrally and apply equally to men and women.

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The Faculty Council of the University of Zagreb Faculty of Civil Engineering, has adopted the **Gender Equality Plan** of the University of Zagreb Faculty of Civil Engineering 2022 - 2026 at the 228th regular session held on February 8 - 10, 2022.

Zagreb, February 15, 2022

Dean,

Prof. Stjepan Lakušić