REPORT
OF THE EXPERT PANEL
IN THE PROCEDURE OF INITIAL ACCREDITATION OF THE UNDERGRADUATE UNIVERSITY STUDY PROGRAMME GRAPHIC TECHNOLOGY UNIVERSITY OF ZAGREB FACULTY OF GRAPHIC ARTS

Date of accreditation:
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INTRODUCTION

The Agency for Science and Higher Education (the Agency) is an independent legal entity with public authority, registered in the court register, and a full member of the European Quality Assurance Register for Higher Education (EQAR) and the European Association for Quality Assurance in Higher Education (ENQA).

All study programmes delivered by public and private higher education institutions are subject to the procedure of initial accreditation of study programmes conducted by the Agency in accordance with the Act on Quality Assurance in Higher Education and Science (Official Gazette 151/22) and by following the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and good international practice in quality assurance of science and higher education.

The Agency's Accreditation Council appointed an independent expert panel for the evaluation of the undergraduate university study programme *Graphic Technology*, University of Zagreb, Faculty of Graphic Arts.

Members of the Expert Panel:

- Prof. Domagoj Lanc, PhD, University of Rijeka, Faculty of Engineering, Republic of Croatia,
- Assist. Prof. Petra Bagavac, PhD, University of Split, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture, Republic of Croatia,
- Prof. Ana Maria Neves de Almeida Baptista Figueiredo, PhD, Instituto Superior de Engenharia do Instituto Politécnico do Porto, Portuguese Republic, Panel Chair,
- Prof. Narvika Bovcon, PhD, Faculty of Computer and Information Science, University of Ljubljana, Republic of Slovenia,
- Iva Krezo, student, University of Split, Faculty of Science, Republic of Croatia.

The Expert Panel held meetings with the following groups:

- Management,
- Curriculum Committee,
- Full-time teaching staff that will participate in the delivery of the study programme,
- External stakeholders.

The Expert Panel visited the laboratories, the library, the Student Administration Office, computer classroom, and the classrooms.

The Expert Panel drafted this Report on the initial accreditation of the undergraduate university study programme *Graphic Technology*, University of Zagreb, Faculty of Graphic Arts, based on the Proposal of the undergraduate university study programme *Graphic Technology*, University of Zagreb, Faculty of Graphic Arts, other relevant documents, and the site visit.

The Report contains the following elements:

- Basic information about the study programme,
- Detailed analysis of each quality standard, recommendations for improvement and quality grade for each standard,
- Final recommendation of the Expert Panel,
- Appendices (quality grade summary by each assessment area and standard, and the site visit protocol).

In the analysis of the documents, site visit and the meetings held at the University of Zagreb, Faculty of Graphic Arts, and in the writing of the Report, the Expert Panel was supported by:

- Maja Šegvić, coordinator, ASHE,
- Maja Mrsin, interpreter.
- Marija Omazić, translator of the report.

BASIC INFORMATION ABOUT THE STUDY PROGRAMME

Name, seat and PIN (Personal Identification Number) of higher education institution: University of Zagreb Faculty of Graphic Arts, Getaldićeva 2, Zagreb, PIN: 25564990903

Title and type of study programme: Undergraduate university study programme Graphic technology

CroQF/EQF/QF-EHEA level: 6.sv / 6 / First cycle

Scientific or artistic area and field of study programme: Area: 2. Technical Sciences, Field: 2.06. Graphic Technology

ISCED FoET classification: 071 – Engineering and engineering trades

Programme duration: 6 semesters (3 years)

Number of ECTS credits acquired on completion of study programme: 180

Academic or professional degree / qualification obtained upon the completion of the study programme (if the study programme has several specialisations, the issued degree/qualification cannot be named according to the specialisation, but at the level of the study programme): University Bachelor (baccalaureus/baccalaurea) Engineer in Graphic Technology

Language of delivery: Croatian

Place of delivery of the study programme (at the head office or outside the head office of the higher education institution): Zagreb

Method of delivery of the study programme: Classic

Admissions quota (for full-time and part-time students): 85 full-time students

Academic year in which the study programme delivery is to commence: 2025/2026

In case of joint programmes delivered by Croatian higher education institutions, please include a list co-providers/partners: /

DETAILED ANALYSIS OF EACH STANDARD, RECOMMENDATIONS FOR IMPROVEMENT AND QUALITY GRADE

I. Internal quality assurance

1.1. Clear justification for the introduction of the new study programme has been provided with regard to the mission and strategic goals of the higher education institution, as well as economic and societal needs.

Analysis:

The proposed *University Undergraduate Study Programme in Graphic Technology* at the University of Zagreb, Faculty of Graphic Arts is designed as a modernised successor to the existing undergraduate programme launched in 2005. Significant technological, educational, and industry shifts have prompted the need to update the structure, content, and learning outcomes of the existing programme, rather than launch an entirely new one.

This initiative aligns with the strategic development goals of the Faculty (2023–2028) and the University of Zagreb, and it reflects national and EU-level priorities outlined in documents such as the *National Development Strategy of the Republic of Croatia 2030*, the *European Green Deal*, and the *European Digital Education Strategy*. These policies emphasise innovation, sustainability, digital transformation, and the development of critical thinking and interdisciplinary skills.

The Croatian Employment Service expressed concerns regarding the labour market demand for new graduates in Graphic Technology. However, the Faculty maintains that the study programme is not newly introduced but thoroughly modernised to reflect contemporary needs and integrate emerging technologies such as AI, sustainable packaging, and digital printing. Enrolment quotas (85 full-time students) remain unchanged and are consistently filled, indicating strong student interest and societal relevance. In fact, the number of applicants for the Graphic Technology programme is approximately seven times higher than the number of available places, which ensures the admission of high-quality, motivated students.

The programme's structure, learning outcomes, and occupational relevance were shaped by national qualification and occupational standards developed under the Croatian Qualifications Framework (CroQF). At the 11th regular meeting of the Faculty Council held

on 30 September 2024, the proposal for the new Undergraduate university study programme in Graphic Technology was adopted.

Extensive consultation and cooperation with stakeholders, including industry representatives, students, and faculty, were facilitated through structured workshops, project-based collaborations, and alumni engagement. Feedback was collected through surveys and practical industry placements. External stakeholders emphasised the growing difficulty in finding qualified professionals in this field, noting that many employers have resorted to hiring foreign workers to meet the demand. In conversations with external stakeholders, a strong sense of cooperation and mutual readiness for collaboration with Faculty staff was evident. Industry partners such as SRCE, Fortenova Group, and the HEAD project provided continuous input.

Recommendations:
The Faculty should continue formalising cooperation with industry through a structured Industry Advisory Board, with regular annual meetings and documented outcomes. A large portion of current collaboration and company visits takes place through informal agreements and personal connections between academic staff and stakeholders. It is recommended that the Faculty allocate dedicated funding at the beginning of each academic year to support these collaborative activities. Additionally, establishing a formal register or document of available external teaching bases could simplify coordination and promote broader access to practical learning opportunities for students.

Quality standard: fulfilled

1.2. The study programme has undergone an appropriate internal quality assurance process and has been formally approved by the higher education institution.

Analysis:
The development of the new programme followed a transparent and participatory internal quality assurance process. The Faculty of Graphic Arts has a publicly available *Quality Assurance Policy*, aligned with the University of Zagreb's framework, which covers both education and research.

The decision to restructure the existing programme was based on comprehensive data collected through EU-funded projects (*CroQF – Graphic Engineering and Professional Practice*) and employer surveys that assessed required competencies and anticipated future skills.

The internal process included the formation of a Curriculum Committee consisting of academic staff, students, and external stakeholders. This committee led a multi-phase review involving departmental consultations, workshops on learning outcomes, and stakeholder engagement. Courses were presented for external feedback (e.g. to the Faculty of Humanities and Social Sciences), which provided organisational advice. The Faculty Council adopted the final programme at its 11th regular session held on 30 September 2024.

Recommendations:
Keep records of all future stakeholder engagement processes and align internal approval processes with the new *University Study Programme Evaluation Regulations (2024)*.

Quality standard: fulfilled

1.3. The higher education institution will collect, analyse and use relevant data for the effective management and continuous enhancement of the study programme in accordance with the published quality assurance policy.

Analysis:
The management and enhancement of the study programme are governed by the Faculty's Quality Assurance Policy and Development Strategy. Strategic indicators and monitoring mechanisms have been defined, covering:

- **Key performance indicators:** programme duration, graduation and dropout rates, student workload (ECTS), and pass rates (approximately 80% of enrolled students complete the programme),
- **Data collection methods:** student and staff surveys, focus groups, course evaluations, industry feedback, and ECTS workload analyses,
- **Targets and timelines:** annual data reporting and biennial evaluation cycles coordinated by the Quality Assurance Committee,
- **Monitoring of alignment:** between learning outcomes, ECTS distribution, and real student workload,
- **Adaptation mechanisms:** regular reviews of teaching methods, delivery modes, and assessment practices through the Faculty Council and departmental review sessions,
- **Public accountability:** annual quality assurance reports and action plans are presented at Faculty Council and published on the Faculty website.

The Faculty's active use of ISVU and the e-learning platform Merlin enables real-time tracking of academic performance, course delivery, and student engagement. Programme revisions are governed by university regulations, including allowed minor curriculum changes.

Recommendations:
Although recent student surveys consistently show high levels of satisfaction with the teaching staff, the Faculty invites the bottom 10% of performers to a meeting with the Dean. It is recommended that this process be expanded so that, in addition to the meeting, the identified teachers also participate in targeted training or workshops, depending on the area for improvement as determined by Faculty management.

External stakeholders have emphasised that the lifecycle of technologies and software used in the industry is significantly shorter than academic cycles, typically two versus five years, underscoring the need for graduates with strong critical thinking skills, adaptability, and foundational knowledge rather than narrow tool-specific expertise. The Faculty should consider further enhancing the curriculum with components that develop students' agility, independent thinking, and readiness for lifelong learning, rather than focusing primarily on specific software tools.

Additionally, the Expert Panel recommends conducting regular staff satisfaction surveys and incorporating the findings into the annual quality reports. This would enhance staff engagement, strengthen institutional belonging, and support early identification of workflow bottlenecks or relationship gaps between management and staff.

Quality standard: partially fulfilled

1.4. The higher education institution informs the public about the study programmes it offers, as well as plans to offer new programmes, i.e. changes made to existing ones.

Analysis:
The Faculty of Graphic Arts ensures public access to comprehensive, up-to-date, and clearly structured information about all study programmes. The Faculty website (Croatian and English versions) includes:

- Entry requirements and application procedures,
- Intended learning outcomes and qualification titles,

- Course-level teaching and assessment methods,
- Opportunities for continuing education and employability.

Information packages and implementation plans are publicly available. The Faculty regularly updates information through ISVU and maintains an active presence on social media platforms and YouTube (e.g. the promotional video "Faculty of Graphic Arts – Faculty of the Future"). Students are informed through introductory lectures, handbooks, and e-learning portals (Merlin).

Promotion is supported through participation in events such as Zagreb Design Week, University Open Days, and science fairs (e.g. MUZZA). Feedback from employers and industry partners is continuously integrated into the promotional and informational material.

Recommendations:
The Faculty could enhance career transparency and student engagement by posting publicly accessible listings of current job openings, as well as by organising "Career Speed Dating" events that briefly introduce companies to students and facilitate direct connections with potential employers.

Although the Graphic Technology programme has undergone substantial modernisation, this has not yet been widely recognised in the public sphere. The Faculty is encouraged to intensify its promotional efforts by clearly informing prospective students about the types of careers and exciting, innovative projects they may be involved in upon graduation (Ted talks of Alumni, "From Classroom to Career" Poster Campaign, "Career Path of the Month" Blog or Social Media Series, etc.).

Quality standard: fulfilled

II. Study programme

2.1. The proposed study programme is compatible with the qualification standard in the Croatian Qualifications Framework Register. – (Table 1)

Analysis:
The proposed study programme in Graphic Technology is compatible with the appropriate qualification standard in the Croatian Qualifications Framework Register.

Based on the already registered occupational standards for the professions of Packaging Engineer and Printing Engineer, the qualification standard for University Bachelor Engineer in Graphic Technology has been developed. It describes the key learning outcomes that must be included in any programme leading to that qualification. Based on the registration of qualification and occupational standards, the study programme in Graphic Technology that will enable participants to acquire sets of learning outcomes defined by the qualification standard has been prepared. (These occupational standards were developed through activities conducted within the project "Implementation of CroQF in the Field of Graphic Engineering, Multimedia, and Visual Communication, UP.03.1.1.03.0031," which was implemented at the Faculty of Graphic Arts from 22 March 2019 to 22 March 2022, and was funded by the European Union from the European Social Fund in March 2022.)

Recommendations: none

Quality standard: Fulfilled

2.2. The intended learning outcomes at the level of the study programme are aligned with the competences a student should gain by completing the study programme, as well as with the CroQF and EQF level.

Analysis:
The intended learning outcomes of the University Undergraduate Study Programme in Graphic Technology (aligned with the descriptor CroQF/EQF/QF-EHEA: CroQF – Level 6.sv / EQF – Level 6 / First cycle) have been clearly defined and good practice examples were used in their definition (ECTS Users' Guide 2015). They have been developed to reflect the CroQF standards, which were defined on the basis of the findings of the dedicated project "Implementation of CroQF in the Field of Graphic Engineering, Multimedia, and Visual Communication, UP.03.1.1.03.0031". This procedure could also be considered an example of good practice.

The expected learning outcomes of the study programme are aligned with industry requirements and internationally recognised standards, thus ensuring the programme's relevance for contemporary labour market and society's needs, as well as providing the basis for further scientific explorations.

The intended learning outcomes are aligned with the requirements of the profession and internationally recognised professional standards. Table 1 of the Request clearly shows the alignment between the learning outcomes from the qualification standards and the learning outcomes of the study programme.

From the list of expected learning outcomes it is evident that they foster the development of both generic and profession-specific competencies, thus connecting the general and fundamental theoretical knowledge with practical skills that students acquire, such as: necessary theoretical knowledge of mathematics and chemistry that is used in solving engineering problems within graphic technology; statistics and computer programming that enable the students to understand and interpret data, which is crucial for decision-making and optimisation processes in graphic engineering; laboratory skills and the ability to conduct experiments; competencies related to communication and information presentation, which are the basis for visual communication and meaning-making; the ability to analyse and select appropriate materials and recommend suitable printing forms, which is obtained by acquiring knowledge of printing processes, machine maintenance, and finishing processes. The learning outcomes ensure that the programme is contemporary, addressing wider societal needs and the sustainability of materials and processes, especially in smart, biodegradable packaging and environmentally friendly technology. The Proposal of the new study programme aims at modernising the existing study programme in Graphic Technology by introducing contemporary requirements of knowledge and skills, based on contemporary technological and communicative processes in the industry and the market.

The intended learning outcomes clearly reflect the competencies required to participate in the labour market, continue one's education or meet other needs of individuals/society or the scientific discipline. This is reflected especially in the ability to assess the economic aspects of graphic technology and become familiar with legal regulations related to environmental sustainability. The importance of personal development and the use of resources for lifelong learning is addressed as students are encouraged to recognise their own needs for further training and to adapt to the dynamic labour market.

The intended learning outcomes of the proposed study programme in Graphic Technology are not comparable with the intended learning outcomes of other university programmes in the Republic of Croatia, since there are no directly matching university study programmes, and are only partially comparable with professional study programmes at the University North and Algebra University College. On the other hand, the intended learning outcomes of the proposed study programme are comparable with similar study programmes in EU member states, such as the University of Ljubljana, Stuttgart Media University, and the University of Applied Sciences in Vienna. The presence of equivalent courses that can be mutually recognised within the framework of Learning Agreement documents are welcome since they facilitate the implementation of vertical mobility.

Recommendations: none

Quality standard: fulfilled

2.3. The intended course outcomes are aligned with the intended learning outcomes at the level of the study programme. – (Table 2)

Analysis:
The Faculty has clearly defined the learning outcomes of the study programme, which are aligned with the mission and goals of the institution and take into account the Dublin Descriptors for undergraduate and graduate levels.

The Faculty has clearly defined the intended learning outcomes for all elements of the study programme in Graphic Technology, i.e. the courses (mandatory and elective), student practice, and the final project.

The learning outcomes for each course are listed in the course description in section 1.3 Expected learning outcomes, and each course has four to six learning outcomes. The list in section 1.3 includes everything the student needs to master upon successful completion of the course, and both the generic and profession-specific competences are mentioned.

The higher education institution checks and ensures that course outcomes are aligned with programme level outcomes, as they are presented in Table 2. Each of the 20 learning outcomes are covered in several courses, varying from 5 to 21. Each course contributes to the programme's learning outcomes with at least two outcomes.

Various types of teaching methods, such as lectures, exercises, independent tasks, seminars and workshops, fieldwork, etc. facilitate the achievement of the expected learning outcomes and are defined for each course in section 1.5 Types of teaching methods. Each course defines the methods of knowledge assessment and student obligations that are explained to students at the beginning of each course and defined clearly in the course description in section 1.6 Student obligations, section 1.7 Student work monitoring, and section 1.8 Assessment and evaluation of student work during classes and at the final exam, both qualitatively and quantitatively. The grading methods, requirements, reading list (mandatory literature is available in the library, supplementary literature is mentioned in classes), course objectives, and learning outcomes are published on the Faculty website. Exam registration and withdrawal are done through the ISVU system. The synthesis of learning outcomes is evaluated through final theses. Section 1.11 also specifies the methods for monitoring the quality of acquired knowledge, skills, and competencies for each course. The list of approved thesis topics, submission deadlines, and defence dates are publicly available on the Faculty website.

Recommendations: none

Quality standard: fulfilled

2.4. The study programme content allows students to achieve all the intended learning outcomes.

Analysis:
The study programme in Graphic Technology, in addition to profession-specific knowledge, anticipates the acquisition of generic competences, which is evident from the proposed study programme and descriptions of courses. Also, the stakeholders at the meeting stressed the importance of general and fundamental skills and the ability of critical thinking, which should be provided by the study programme, since these are the basis for understanding, versatility, and adaptability of an expert in the changing professional environment. The technology changes every two years, and the specifics of technological processes can be learned in three months in an internship or at the beginning of employment.

The study programme content is explicated in course descriptions in section 1.4 Course content. The analyses of comparable study programmes in Croatia and EU member states have shown that the contents of the proposed study programme ensure horizontal (within the University of Zagreb) and vertical mobility in the national and European education area. The mobility is based on ECTS credits attributed to the courses.

Each course description provides clearly defined lists in sections 1.3 Expected learning outcomes and 1.4 Course content, which can be compared and show that the content of each course is aligned with the intended course outcomes.

The Faculty ensures that the courses are offered in an appropriate sequence. This is evident from the table List of Courses in the Study Programme Proposal, which specifies in which semester each course takes place. The prerequisites for enrolment in each course are clearly defined in the course description in section 1.2 Enrolment conditions.

The list of courses and course descriptions show that the core disciplines for the acquisition of all professional competences are well-represented in the proposed study programme, which is contemporary, labour-market-oriented, and connects generic and profession-specific competences, spanning from graphic technologies and digital technologies mastering skills to artistic expression and communication.

Recommendations: none

Quality standard: fulfilled

2.5. ECTS distribution is aligned with the anticipated actual student workload.

Analysis:
ECTS credits are allocated in accordance with the rules and recommendations applicable in the European Higher Education Area. The Study Regulations of the University of Zagreb, Faculty of Graphic Arts comply with the provisions of the Statute of the University of Zagreb regarding ECTS credits (60 ECTS credits per year; at least 15% of ECTS credits is covered by elective courses; weekly commitment of students in classes in undergraduate studies is 26 hours) and have been considered in the proposed study programme.

The list of courses shows the number of ECTS credits and the number of hours and exercises for each course (mandatory and elective). The total sum of ECTS credits for elective courses in some semesters can be a little higher than needed (by one or two credits), resulting in more than 30 ECTS credits for that semester.

ECTS credits are allocated to each element of the study programme (list of courses shows the number of ECTS credits and the number of hours and exercises for each course, mandatory or elective) based on the total student workload, which includes all planned activities (such as attending classes, seminar papers, projects, practical work,

experimental work, and similar activities, as specified in section 1.7 Student work monitoring).

For each student obligation, an appropriate number of ECTS credits is allocated in accordance with the actual student workload. The number of ECTS credits has been calculated for each course (considering the learning outcomes, assessment methods, and activities, 1 ECTS credit represents 30 hours of total average student work) and is determined by the student's work required to fulfil all the prescribed obligations, including taking exams.

The Faculty has appropriate mechanisms to ensure ECTS allocation is aligned with the actual student workload (e.g. ECTS calculator). The compliance of the distribution of ECTS credits with the actual student workload will be verified after two years of the study programme. This verification will be conducted by the Quality Assurance Committee, based on student surveys and an analysis of exam pass rates.

Recommendations: none

Quality standard: fulfilled

2.6. Student/professional practice is an integral part of the study programme (if applicable).

Analysis:
Student practice is an integral part of the study programme and is organised outside the Faculty, in cooperation with the labour market.

Mechanisms are ensured to allow student practice to be carried out in a systematic and responsible manner, which will ensure the achievement of intended learning outcomes connected with student practice. The digital web platform GRF Practice is designed for the registration and management of student professional practice in the undergraduate programme, featuring profiles of employers and students. The management of professional practice involves selecting an employer, describing the tasks of the internship, submitting a work log detailing the completed practice, and evaluating the participants in the internship. The application is managed by the Career Management Centre and the Professional Practice Administrator at the Faculty.

The opportunity to learn and acquire practical skills is planned in several courses that include invited lectures, visits to print shops, newly equipped laboratories, and

workshops conducted in collaboration with potential employers. Furthermore, students work on projects that involve all steps in the production of printed materials and packaging, and they also participate in competitions for design solutions that are implemented in real life.

Recommendations:
At the meeting, many stakeholders expressed their willingness and capacity to offer more internship placements for students, since there is a serious lack of skilled labour force in the area of graphic engineering. Currently there are 217 employers in the field of graphic technology. Therefore, the Panel suggests considering the inclusion of professional practice in the students' schedule in a way that would allow greater student participation, without intervening with their other study obligations.

Professional Practice has an adequate course description; however, it is allocated only 2 ECTS credits. The Panel suggests increasing this number.

Although the opportunity to learn and acquire practical skills is planned, the Panel still suggests revising the schedule for both students and teachers so as to distribute work better and to enhance their participation in several practical workshops organised by the stakeholders, without intervening in their other obligations in the study programme or their spare time.

Quality standard: partially fulfilled

2.7. If the completion of the study programme allows students access to a regulated profession, the programme is aligned with national and European regulations and the recommendations of national and international professional associations.

Not applicable.

III. Teaching process and student support

3.1. Admission requirements and criteria as well as the admissions procedure are clearly defined and transparent, and guarantee that students will possess the necessary prior knowledge.

Analysis:
There are clear and transparent admission requirements and procedures that ensure all enrolled students have the necessary prior knowledge to succeed in the undergraduate programme in Graphic Technology.

The admission criteria are explicitly published on the Faculty website, based on the guidelines issued by the University of Zagreb regarding quotas and eligibility. These criteria are established considering an analysis of past enrolment trends, teaching capacity, and market needs.

Admission is conducted through a public competition initiated annually by the University. Applicants submit their applications via the national NISpVU system (www.postani-student.hr), which standardises the procedure for all higher education institutions in Croatia. This ensures equal opportunity and clarity for all candidates nationwide.

Eligibility requires completion of a four-year secondary school education, establishing a baseline academic qualification. The specific selection elements, including academic performance in secondary school, results of state matriculation exams, and achievements in academic competitions, are defined. These criteria ensure that only students with appropriate prior knowledge and demonstrated competence are admitted.

Admission requirements for transfer students, as well as for enrolment in the second and third year of studies, are also published in advance, clearly defined, and include recognition of prior learning through ECTS credit evaluation and course equivalency checks.

Recommendations: none

Quality standard: fulfilled

3.2. The planned teaching methods guarantee student-centred teaching and the achievement of all intended learning outcomes.

Analysis:
The planned teaching methods are mainly student-centred and directed to support the achievement of all intended learning outcomes.

The programme uses a variety of teaching forms adequate for course specifics, including lectures, seminars, laboratory and auditorium exercises, e-learning, fieldwork, mentoring, workshops, and independent tasks. Courses are also supported with team-based seminar presentations and discussions, encouraging peer learning and collaborative thinking.

The inclusion of professional practice course as a mandatory component of the curriculum is a strong example of experiential learning. Students gain hands-on experience in real work environments. There are small-scale projects in which industry representatives present minor activities, such as rebranding of products or new packaging, which are implemented by students under the mentorship of teachers within the course.

There is also practical training through real-world fieldwork and professional internships with several industry partners. It is worth noting that this good practice is welcomed by the stakeholders; they have also expressed a strong interest in extending the duration of internships.

This practice of project-based learning integrates professional practice and fieldwork, offering real-world experience and skill development, mainly through the development of projects in the form of collaborative teamwork with other faculties. They greatly improve critical thinking, communication, and teamwork skills. Teachers' testimonials reveal an improvement not only in students' motivation but also in their own motivation, although that is a more demanding job in terms of workload and time commitment.

All courses are available on the Merlin platform (Moodle), providing a permanent access to course materials, tools to track individual student progress, and features that allow for interactive content and personalised adaptive learning paths.

Although the Faculty has not yet adopted any regulations on AI tools, the teaching staff was very open-minded when asked about their introduction. In fact, one teacher shared his own experience which aligns with good, recommended practices. Also, final theses are reviewed with the Turnitin software.

A special mention should be made of the adaptation of teaching methods for students with disabilities. There is a dedicated coordinator for students with disabilities. Each student is considered individually and receives personalised support, taking into account adapted teaching methods.

All courses are described in detail in the "Course Description" form, which specifies learning outcomes, teaching methods, and assessment criteria, promoting the alignment between learning outcomes and teaching/assessment strategies. This information is available on the Faculty website.

The effectiveness of teaching methods in achieving the intended learning outcomes is evaluated through questionnaires. The Quality Assurance Committee gives the teachers self-assessment questionnaires, and the teachers also provide students with forms in which they can make suggestions on how to improve teaching, teaching materials, and teaching methods. Students also estimate how much time they spent on a course with regard to the workload.

Recommendations:
Stakeholders offer certain full-time internships, but they report that it is very difficult for a student to both attend classes and work at the organisation because their schedules overlap. It would be useful to organise a semester with reduced class hours to allow the students to spend more time in a professional environment.

Regarding teacher training and development, there are several workshops available at the Faculty, which is a very good practice. However, there is no formal plan for the teachers to attend these workshops. They attend them out of their own interest in improving their preparedness. It would be useful to make a formal training plan for every teacher according to their interests and/or needs.

There are also some workshops organised by stakeholders, but they reported that teachers only attend them during their vacation.
It would be useful to consider allocating a certain number of hours in teachers' schedules so they can attend these workshops more often.

Quality standard: Partially fulfilled

3.3. The higher education institution has provided evidence that adequate support will be ensured for future students.

Analysis:

All students can benefit from weekly teachers' office hours and access to personal mentors, ensuring they are provided with academic support with their doubts and difficulties.

Students with disabilities benefit from a dedicated coordinator, as previously mentioned, as well as from tailored accommodations for teaching and examination aligned with university guidelines. The most difficult issue to deal with is the building architecture, where classrooms and labs are spread across several floors. However, there is a lift to facilitate access.

The Career and Student Support Centre offers structured academic, personal, and career counselling. Professional practice is integrated into the curriculum, with 217 partner employers, and Career Day events provide direct connections to the job market. The Faculty also organises a wide range of workshops for skill development and personal growth.

Support for international mobility is provided by the Office for International Cooperation and ECTS Coordinator, who guide students through exchange programmes and credit recognition. Students are also encouraged to engage in lifelong learning and extracurricular activities.

The administrative staff provides continuous support to students by email when services, namely the office, are closed.

There is a well-stocked library, with a librarian who assists students in researching books physically and/or scientific papers virtually. The Faculty library closes at 8 p.m., but students have access to the National and University Library in Zagreb which is also open in the evenings, from 9 p.m. to midnight, but advance notice is required.

Regarding Faculty staff, another technician may be needed to support the labs. The labs are open to students whenever they need them.

In conclusion, overall, there is evidence that adequate support will be ensured for future students enrolled in the undergraduate programme in Graphic Technology.

Recommendations:

It was observed that there is a lack of formal protocols with industry partners. Although the relationship between the industry and the Faculty is good, it is recommended to establish formal protocols with industry partners. The protocols should regulate certain conditions, such as the nature of cooperation between both parties, as well as their obligations and rights.

Quality standard: fulfilled

3.4. Objective and consistent evaluation and assessment of student achievements are planned so as to ensure the achievement of all intended learning outcomes.

Analysis:
Assessment methods are defined to match specific learning outcomes in each course syllabus, including clear links between teaching methods, learning outcomes, and grading criteria.

All assessment procedures are regulated, with defined exam schedules, timely result publication, and formal appeal mechanisms.

Student performance is evaluated through a combination of quizzes, project tasks, seminar papers, practical assignments, and class participation, allowing for continuous and diverse assessment during the semester. Some assessments also include presentations of seminar or practical work, promoting applied learning. Final exams are used to consolidate the evaluation, with clearly defined criteria and formats.

Examination sessions are scheduled consistently across winter, summer, and autumn periods. The exam schedule is published in advance on the Faculty website, ensuring equal access to information for all students. Students are given access to their results via the ISVU system. They are informed of oral exam results immediately and of written exam results within two working days, in compliance with data protection rules.

Students have the right to review their exam results and appeal their grades within 24 hours of the publication of results. Appeals are handled by a formal examination committee appointed by the Dean to ensure a fair and impartial review process.

The grading scale is standardised and based on achievement levels, ensuring fairness and consistency. Regular training is provided to teachers in outcome-based assessment and inclusive practices.

To conclude, the University of Zagreb, Faculty of Graphic Arts implemented certain mechanisms to ensure objective and consistent evaluation of student achievement in the Graphic Technology programme.

Recommendations: none

Quality standard: fulfilled

IV. Teaching resources and infrastructure

4.1. The higher education institution has ensured adequate teaching capacities to deliver the study programme and achieve the intended learning outcomes. – (Table 3, Table 4, Table 5)

Analysis:
As at the time of the application, the Faculty of Graphic Arts employed full-time teachers who perform more than 50% of all forms of direct teaching in the existing studies. There are 60 teachers available, and this number is considered adequate. Among them, 44 teachers hold scientific-teaching positions, two hold teaching positions and 11 hold associate positions, along with three visiting teachers.

Considering the current number of 884 students at the University of Zagreb, Faculty of Graphic Arts, and the projected number of 85 students scheduled to enrol in the first year of the newly proposed study programme in Graphic Technology, with the existing number of teachers, the teacher–student ratio would be approximately 1:15, which more than meets the requirement of 1:30.

From Tables 4 and 5 of the Request, it is evident that the total annual workload of all teachers at the higher education institution does not exceed 20% of the total annual teaching workload.

The teachers involved in the implementation of the new study programme are qualified to teach the courses because they already teach similar courses in the existing study programmes at the same Faculty.

It can be concluded that the number and qualifications of the teachers fully meet the needs for the implementation of the proposed study programme.

The Faculty has clearly expressed its support for the scientific, teaching, and professional development of university teachers through participation in scientific and professional conferences and various mobility programmes (Erasmus, etc.).

Recommendations: none

Quality standard: fulfilled

4.2. The qualifications and professional experience of external associates are appropriate for the delivery of the study programme and the achievement of the intended learning outcomes. – (Table 5)

Analysis:
The Faculty's own teaching capacities would almost completely cover the needs of the study programme in Graphic Technology.

As can be seen in Tables 4 and 5 of the Request, only one external associate is planned to participate in the delivery of the programme. Out of the total of 6,993 contact hours planned for the proposed study programme, the external associate teacher will deliver 43 contact hours.

It can be determined that the external associate contributes to the completeness of the proposed study programme with their relevant expertise.

The external associate may be a final thesis supervisor.

In addition to the associate being the only external course coordinator in the study programme, the higher education institution maintains constant cooperation with many external partner companies that are partially involved in the teaching process as well as in providing professional internships. Employees of external companies enrich the study programme with their experience and expertise.

Recommendations:
Consider including more external associates from the business sector as course coordinators.

Quality standard: fulfilled

4.3. The premises, equipment and entire infrastructure (classrooms, laboratories, library, etc.) are appropriate for the delivery of the study programme and ensure the achievement of the intended learning outcomes. – (Table 6)

Analysis:
As stated in the Request, the Faculty of Graphic Arts has sufficient space at its disposal, providing 1.61 m^2 per student (more than the minimum requirement of 1 m^2).

It has four lecture rooms (total area of 383 m^2), 17 laboratories/practicums (589 m^2), 47 teachers' offices (455 m^2) and five IT classrooms (221 m^2). The Faculty also has special spaces for exhibiting student work (an aula and a walk-through gallery), which encourages creativity and the development of artistic skills.

With such space and equipment, lectures and practical classes can be efficiently organised for the planned number of students in order to achieve the expected learning outcomes and conduct research. During the visit, the Panel found that the premises, equipment, and infrastructure are adequate.

The Faculty ensures a computer-to-student ratio of 1:4 and provides wireless internet access in all rooms where students stay. The Faculty updates computer labs with new computers regularly, in five-year cycles.

Recommendations: none

Quality standard: fulfilled

4.4. The library premises and resources, as well as access to additional services ensure the availability of literature and library services for the delivery of the study programme. – (Table 7)

Analysis:
The Library of the Faculty of Graphic Arts supports the scientific, research, and educational activities of the Faculty. It covers an area of 95 m^2 and houses a reading room of 42 m^2.

The library collection includes 10,950 volumes of books, 90 printed foreign journals, 70 printed domestic journals, and electronic access to the full texts of eight journals (https://baze.nsk.hr/), to which it is subscribed thanks to its own or university funds. The collection is continuously updated and expanded, and the majority of materials can be classified under engineering science. The collection is available to teachers and students and is adapted to the Faculty study programmes.

The use of library materials and the overall operations of the Library are regulated by the Ordinance on the operation of the Library of the Faculty of Graphic Arts.

The Library is responsible for the publication of final, graduate, and doctoral theses in open access in the DABAR repository.

It also provides bibliometric services to the scientific and teaching staff of the Faculty.

According to the Request for the new study programme, the Faculty meets the requirements set out in the Standard for Higher Education, University and Scientific Libraries (Official Gazette 81/22).

Recommendations: none

Quality standard: fulfilled

4.5. The higher education institution ensures the availability of the necessary financial resources to organise the activities and quality delivery of the proposed study programme. – (Table 8)

Analysis:
From Table 8 of the Request, it is evident that total operating income is higher than total operating expenses both for 2024 and in the projection for the next two years, which ensures business operating stability and financial sustainability.

The Faculty generates revenues from various sources, including tuition fees, funds from the state budget, and its own activities, such as scientific and professional projects, tuition fees for postgraduate studies, the organisation of seminars and conferences, publishing activities, and similar activities.

According to the projected expenses, these sources of revenue will be sufficient to finance the costs of the proposed study programme.

Recommendations: none

Quality standard: fulfilled

☐ **AMEND THE STUDY PROGRAMME**

Rationale:

a. ☒ ISSUE A LICENSE to the University Undergraduate Study Programme in Graphic Technology

This conclusion has been drawn upon a thorough critical analysis previously detailed and carried out based on the documents provided and other sources, as mentioned in the first chapter, namely the information obtained during the site visit.

During the visit, the Panel observed a clear institutional commitment to quality education and to supporting the development of study programmes in Graphic Technology and Multimedia and Visual Communication.

The teaching staff is dedicated, student engagement appears to be strong, and the Panel could observe that there were meaningful efforts to align the programmes with industry and societal needs.

The stakeholders highlighted their relationship with the Faculty, mainly with its staff, and above all, they strongly emphasised the market demand for professionals graduating in both programmes. The Panel truly believes that the greatest strength of the HEI lies in its people and their personal connections with the expert community.

The Panel has noted some areas that deserve further attention. These may include ensuring stronger mechanisms for curriculum revision and innovation; enhancing the integration of feedback from external stakeholders; and providing the teachers with opportunities to visit other organisations and acquire actual, up-to-date information about the clients of the students they are training. It is also important to facilitate class attendance for students undertaking internships because their schedules are not compatible. For these reasons, there are three sub-items considered partially fulfilled. These include sub-item 1.3, related to collecting, analysing and using relevant data for the effective management and continuous enhancement of the study programme in accordance with the published quality assurance policy; sub-item 2.6, related to student/professional practice as an integral part of the study programme; and sub-item 3.2, related to planned teaching methods guaranteeing student-centred teaching and the achievement of all intended learning outcomes.

The Expert Panel advises to pay particular attention to these items so they could be fulfilled in the next evaluation procedure.

A particular mention should be made of the positive atmosphere among students, faculty, and stakeholders.

b. ☐ **DENY THE REQUEST FOR ISSUING A LICENSE, rationale:**

ANNEXES

1. Quality grade summary - tables

Quality grade by assessment area			
Assessment area	Not fulfilled	Partially fulfilled	Fulfilled
I. Internal quality assurance			X
II. Study programme			X
III. Teaching process and student support			X
IV. Teaching resources and infrastructure			X

Quality grade by standard			
I. Internal quality assurance	Not fulfilled	Partially fulfilled	Fulfilled
1.1. Clear justification for the introduction of the new study programme has been provided with regard to the mission and strategic goals of the higher education institution, as well as economic and societal needs.			X
1.2. The study programme has undergone an appropriate internal quality assurance process and has been formally approved by the higher education institution.			X
1.3. The higher education institution will collect, analyse and use relevant data for the effective management and continuous enhancement of the study programme in accordance with the published quality assurance policy.		X	
1.4. The higher education institution informs the public about the study programmes it offers, as well as plans to offer new programmes, i.e. changes made to existing ones.			X

Quality grade by standard			
II. Study programme	Not fulfilled	Partially fulfilled	Fulfilled
2.1. The proposed study programme is compatible with the qualification standard in the Croatian Qualifications Framework Register.			X
2.2. The intended learning outcomes at the level of the study programme are aligned with the competences a student should gain by completing the study programme, as well as with the CroQF and EQF level.			X
2.3. The intended course outcomes are aligned with the intended learning outcomes at the level of the study programme.			X
2.4. The study programme content allows students to achieve all the intended learning outcomes.			X
2.5. ECTS distribution is aligned with the anticipated actual student workload.			X
2.6. Student/professional practice is an integral part of the study programme (if applicable).		X	
2.7. If the completion of the study programme allows students access to a regulated profession, the programme is aligned with national and European regulations and the recommendations of national and international professional associations.			n/a

Quality grade by standard			
III. Teaching process and student support	Not fulfilled	Partially fulfilled	Fulfilled
3.1. Admission requirements and criteria as well as the admissions procedure are clearly defined and transparent, and guarantee that students will possess the necessary prior knowledge.			X
3.2. The planned teaching methods guarantee student-centred teaching and the achievement of all intended learning outcomes.		X	
3.3. The higher education institution has provided evidence that adequate support will be ensured for future students.			X
3.4. Objective and consistent evaluation and assessment of student achievements are planned so as to ensure the achievement of all intended learning outcomes.			X

Quality grade by standard			
IV. Teaching resources and infrastructure	Not fulfilled	Partially fulfilled	Fulfilled
4.1. The higher education institution has ensured adequate teaching capacities to deliver the study programme and achieve the intended learning outcomes.			X
4.2. The qualifications and professional experience of external associates are appropriate for the delivery of the study programme and the achievement of the intended learning outcomes.			X
4.3. The premises, equipment and entire infrastructure (classrooms, laboratories, library, etc.) are appropriate for the delivery of the study programme and ensure the achievement of the intended learning outcomes.			X
4.4. The library premises and resources, as well as access to additional services ensure the availability of literature and library services for the delivery of the study programme.			X
4.5. The higher education institution ensures the availability of the necessary financial resources to organise the activities and quality delivery of the proposed study programme.			X

2. Site-visit Protocol

	Utorak, 13. svibnja 2025.	Tuesday, 13 May 2025
09:00 – 09:45	Sastanak s Upravom visokog učilišta	Meeting with the Management of HEI
09:45 – 10:00	*Pauza*	*Break*
10:00 – 11:00	Sastanak s Povjerenstvom za nastavni plan i program	Meeting with the Curriculum Committee
11:00 – 11:10	*Pauza i interni sastanak članova Stručnog povjerenstva*	*Break and internal meeting of the Expert Panel members*
11:10– 12:10	Sastanak s nastavnicima i vanjskim suradnicima koji će biti angažirani na predloženim studijima ***Grafička tehnologija i Multimedija i vizualne komunikacije*** *(bez prisustva uprave)*	Meeting with full-time teachers and external associates who will be engaged in the new study programmes ***Graphic Technology and Multimedia and Visual Communications*** *(without the management of HEI)*
12:10 – 13:40	*Radni ručak*	*Working lunch*
13:40– 14:40	Obilazak visokog učilišta *(knjižnica, nastavni kabineti, informatička učionica, ured za studente, predavaonice)*	Tour of the HEI *(library, teaching offices, computer classroom, Student Administration Office, classrooms)*
14:40– 15:30	Sastanak s vanjskim dionicima (*predstavnicima strukovnih i profesionalnih udruženja, poslovna zajednica, poslodavci, stručnjaci iz prakse*)	Meeting with external stakeholders (*representatives of professional organisations, business sector/industry sector, professional experts*)
15:30 – 15:45	*Organizacija dodatnog sastanka o otvorenim pitanjima, prema potrebi*	*Organisation of additional meeting on open questions, if needed*
15:45 – 16:00	*Interni sastanak članova Stručnog povjerenstva*	*Internal meeting of the Expert Panel members*

16:00 – 16:15	Završni sastanak s Upravom visokog učilišta	Exit meeting with the Management of HEI