

INFORMATION OF GRAPHIC AND MEDIA TECHNOLOGY STUDY PROGRAMME

General information

Name	Graphic and media technology
Type	Higher education professional study programme
Level	First level
KLASIUS-SRV	Academic higher education (first Bologna cycle) (16203)
ISCED	• Arts (21)
KLASIUS-P	• Auto-visual techniques and (multi)media production (broad programmes) (2130)
KLASIUS-P-16	• Audio-visual techniques and media production (0211)
Frascati	• Engineering and Technology (2)
Level SQF	Level SQF 7
Level EQF	Level EQF 6
Level QF-EHEA	First level
Fields/moduls/topic	• No articulation (study programme)
University of Ljubljana member	• Faculty of Natural Sciences and Engineering, Aškerčeva cesta 12, 1000 Ljubljana, Slovenia
Duration (year)	3
ECTS credits per year	60
Type of study	Full-time

Basic goals of the programme

Definition of the basic objectives of the programme or general and subject-specific competences

Graphic activity is a typical service activity, since it does not market its own products, but rather services. By using graphics technology, it enables dissemination, sharing and storage information in the form of graphic products. Almost the entire production is dedicated to the familiar buyer, which can be a publishing house, any company, organization or individual. The characteristics of industrial production and organization can be seen from the division of labor, the activity presented here since Gutenberg. Many companies are operating on the market today: publishing, graphic and others that partially or fully participate in the creation of graphic products. The division of labor is thus present not only in printing houses, but also more widely. The use of computer technology has resulted in intense connection with other media, distribution of production of graphic products, organizational changes of the structures, the need for new skills and major changes in existing graphic professions and the emergence of new ones.

The perspectives of the graphic activity are evaluated very differently. The fact is that in the past, the new media did not mean a replacement for the old media, but primarily supplemented and filled new market niches. The same applies to the internet, to which many predict that it will take over the role of all existing media and print media as well. We can expect that the print media will continue to adopt new technologies and to successfully exploited them. These trends are already noticeable and confirmed by growth data of paper production and the successful business of suppliers of equipment for the graphic industry. Graphic activity or the industry has reached a period of maturity, which provides its growth rate for the following few decades and which is comparable to the other "mature" industries. The turning point will come with the introduction of completely new communication technologies that will be based on e.g. on natural language recognition, artificial intelligence and natural interactivity man-machine.

A characteristic of the graphic activity is also the connection with a specific language area, because the texts in the national language are also an integral part of the information carried by the graphic product language. This provides a perspective of graphic activity in national frameworks and at the same time represents an obstacle to the spread of activities outside the national language area.

The basic goal of the higher education professional programme of Graphic and Media Technology is to train an expert of sufficient professional breadth who will be capable of managing, in terms of the technology and execution, diverse and demanding graphic activities and graphics related to media activities.

In accordance with the principles of the Bologna process, the programme, compared to the current ones, presents a deviation from the philosophy of teaching with an otherwise correct arrangement of different technologies placed on selected natural science subjects. In the default learning philosophy, besides the acquired knowledge, the addition of other competencies of graduates, their skills and abilities are also important, in this case with an emphasis on practical orientation. Due to rapid development of the technological procedures in the field of graphic and media technology, the graduate achieves broad initial theoretical and professional knowledge and understanding associated with awareness and the ability of the continuous additional education.

General competences (learning outcomes)

- extensive professional knowledge in the study area of graphic and media technology, augmented by selected knowledge in the areas of natural sciences, management, information and communication technology, aesthetics and graphic design,
- the capacity to link knowledge of natural sciences with knowledge of technological fields;
- demonstrates practical skills and is able to immediately accept practical assignments
- the capacity to identify concrete and abstract practical problems, their theoretical analysis, finding solutions and taking appropriate action,
- developed ability to learn independently in one's professional field,
- the capacity to participate in development and research work and transfer development and research achievements into practice,
- the capacity to understand the interdependency between technology and design
- the capacity to understand artistic notation and its technological transformation into graphic products,
- the ability to communicate with colleagues and experts in related disciplines, which enables his active participation in group work, also in the area of projects based on the connection of professional legalities with design practice,
- well-developed professional ethical and environmental responsibility;

Subject-specific competences (learning outcomes)

- knowledge and understanding of the foundations, development and importance of communication and communication technologies, understanding visual, audio and combined communication, input process, processing and rendering of information and features of interactive communication,
- the capacity of general and specific sensitivity in observation, analysis and valuation, natural, civilizational, design and artistic visuals systems,
- the capacity to connect natural science knowledge with knowledge from other (technological) areas,
- the capacity to use and know technological procedures for making reproductions for all types of printing and computer image design with various software,
- knowledge and understanding of conventional and digital printing techniques,
- knowledge and understanding of color metrics,
- knowledge and understanding of the meaning of individual elements of typography, capacity of generating new ideas (creativity) in the use and arrangement of typographic elements for various graphic products and in various media
- knowledge and understanding of graphic materials, mastering the technological characteristics of analog-digital conversion of originals for printed media,
- the ability to use theoretical knowledge in evaluating and in solving concrete ecological problems in the graphic industry,
- knowledge and understanding of the basics of graphic finishing,
- knowledge and understanding of testing methods in graphic,
- knowledge of the specifics of technological processes in the production of a book, magazine, newspaper, promotional literature and other publications for print media,
- mastery of fundamental theoretical interdisciplinary skills in design, use and evaluation of user interfaces,
- knowledge and understanding of packaging materials manufacturing processes,
- knowledge and understanding of the basics and development of printing plates and production technologies for the printing forms of various printing techniques,
- mastering the basic terms and fundamental concepts of data structures and data transfer,
- the capacity to solve concrete work problems of graphic technology with the use of scientific methods; analysis of the value of graphic products and services, systematization and evaluation of the complexity of work in individual graphic departments and companies,
- the capacity to understand modern concepts of quality management systems and the concept of quality,

- knowledge and understanding of the legality of the graphic products and services market,
- the capacity to functionally use the techniques of interpersonal communication, negotiation, teamwork, leadership and creative thinking,
- mastering the methodology of preparing a business plan, - knowledge of the structure, content and possibilities of using bibliographic and factual databases for the contents of the study field.

Enrollment conditions

Enrollment in the programme shall be possible for any person who has completed the final examination in any four-year secondary school programme., vocational matura or general matura

The criteria for selection in case of limited enrollment

If the number of candidates applying for the programme exceeds the number of enrolment spaces, candidates shall be selected according to the following criteria:

- overall performance on the final examination, vocational matura or general matura (60%);
- overall performance in the 3rd and 4th years of secondary school (40%).

Criteria for Crediting Knowledge and Skills obtained before Enrollment

Students may be awarded for knowledge which corresponds to the content of the study course of Graphic and Media Technology study programme and which has been achieved in various forms of education. The FNSE's Studies Committee is charged with crediting knowledge and skills obtained before enrolment; it does this on the basis of the student's written application and the provided certificates or other documents proving the type of knowledge successfully acquired.

When crediting knowledge obtained before enrolment, the Studies Committee will take into account the following criteria:

- whether conditions for enrolling into a specific educational course are adequate (required prior education for starting the study programme);
- whether the scope of the completed educational course (the number of hours of prior education as compared to the scope of the subject in question) adequately compares with the credited requirements,
- whether the areas covered by the prior education programme, which the applicant would like to have credited, adequately compare with the subjects dealt with in the Faculty course.

Acquired knowledge and skills may be credited as a completed study activity if the conditions for taking part in the educational programme were a minimally attained secondary school education, if the prior educational programme encompassed at least 75% of the scope of the subject and if at least 75% of its contents cover the same areas as the subject which the applicant would like to have credited. In the event the Committee finds that the acquired knowledge can be credited, it is granted the same number of ECTS points as awarded for the subject in question. A specific example of recognition of knowledge and skills acquired before the enrolment is the recognition of Practical training if the student has had full-time employment during their studies in a graphic arts (or related) organisation for a continuous period of at least 15 weeks. In this case, the employment must be proven by an appropriate document showing the duration of the employment and the activity of the organisation. Nevertheless, during the semester of the course, the student is required to prepare a report (final seminar) related to the student's work tasks in the organisation, under the guidance of a work and faculty mentor.

Grading method

Assessment methods are in accordance with the Statut UL of the University of Ljubljana and are specified in the curricula.

Student obligations

For entry into a higher class, a student must have confirmed attendance in all courses, complete all practical classes and obtain the following number of ECTS credit points for entry into each individual class:

- a minimum of 54 ECTS credit points for entry into the 2nd year;
- 60 credit points from the first year and a minimum of 54 ECTS credit points from the second year for entry into the 3rd year.

The FNSE's Studies Committee may exceptionally grant the entry into a higher class for a student who has achieved at least 42 ECTS credit points in the previous year, if he is eligible for this justifiable reasons. The justifiable reasons are listed in the Statute of the University of Ljubljana.

To repeat a class, students must have:

- all practical classes and a minimum of 28 ECTS credit points for the 1st year;
- all practical classes and a minimum of 28 ECTS credit points for the 2nd year.

During the course of studies, a student can repeat a class once or change the study programme once for having failed to meet his or her obligations in the former study programme.

Transfer between programmes

Transition is possible between the study programmes:

- that guarantee the acquisition of comparable competences or learning outcomes at the end of the studies;
- among which, in line with the criteria for acknowledging the knowledge and skills acquired before enrolling into the first-level higher education study programme Graphic and Media Technology, at least half of the obligations according to the European Credit Transfer and Accumulation System (ECTS) can be acknowledged from the first study programme, which relate to compulsory subjects of the first-level higher education study programme Graphic and Media Technology.

An individual exam passed in the original study programme is acknowledged as passed in the first-level higher education study programme Graphic and Media Technology if the contents of both courses are at least 75% compatible. The acknowledged exam is evaluated with credit points in the original study programme, not exceeding the earmarked credit points in the first-level higher education study programme Graphic and Media Technology.

A candidate can enrol into the 2nd or 3rd year of the first-level higher education study programme Graphic and Media Technology with transfer if:

- they meet the conditions for enrolment into the study programme,
- there are vacancies.

The Study Committee of the Faculty of Natural Sciences and Engineering determines for each candidate separately the extent to which it acknowledges the already completed study obligations, determines other obligations and decides which year the candidate can transfer to.

Conditions for completing studies

In order to complete the studies, the student must complete all the obligations in all the courses he has enrolled and prepare a thesis and orally defend it.

Conditions for completing individual parts of the programme, if the programme contains them

The programme does not contain individual parts of the programme.

Professional or scientific or artistic title (and abbreviation)

Bachelor of Science (B.Sc)

STUDY PROGRAMME CURRICULUM

GRAPHIC AND MEDIA TECHNOLOGY

2024/2025

Name of study programme	Graphic and media technology
Programme characteristics	
Type	higher professional
Cycle	bachelor
University of Ljubljana members	<ul style="list-style-type: none"> Faculty of Natural Sciences and Engineering, Aškerčeva cesta 12, 1000 Ljubljana, Slovenija

Year 1, obvezni

1st semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective
1.	0148191	Photography and video	Marica Starešinič	30	0	30	0	0	60	120	4	no
2.	0068070	Information technologies	Aleš Hladnik	30	15	30	0	15	90	180	6	no
3.	0068071	Basics of artistic expression	Marica Starešinič	30	30	0	0	0	60	120	4	no
4.	0068072	English for specific purposes	Barbara Luštek Preskar, prof. angl. in nem.	0	60	0	0	0	60	120	4	no
5.	0068076	Introduction to graphic media	Raša Urbas	30	15	30	0	15	90	180	6	no
6.	0068073	Teoretical basics of printing processes	Andreja Drobnič Vidic, Daniel Svenšek, Gregor Skačej, Janez Cerkovnik, Pavle Saksida	90	0	0	0	0	90	180	6	no
Total				210	120	90	0	30	450	900	30	

2nd semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective

1.	0068066	Colour metrics	Sabina Bračko	30	30	30	0	0	90	180	6	no
2.	0148198	Graphic prepress	Raša Urbas	30	15	30	0	15	90	180	6	no
3.	0068069	Graphic materials	Diana Gregor Svetec, Sabina Bračko	30	15	30	0	15	90	180	6	no
4.	0068074	Typographic elements	Klementina Možina	45	0	45	0	0	90	180	6	no
5.	0068075	Printing 1	Deja Muck	30	15	30	0	15	90	180	6	no
Total				165	75	165	0	45	450	900	30	

Year 2, obvezni

1st semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective
1.	0148202	Studio Photography	Jure Ahtik	15	15	30	0	0	60	120	4	no
2.	0068080	Artistic analysis of graphic products	Marica Starešinič	30	15	0	0	15	60	120	4	no
3.	0068081	Basics of interactivity and animation	Helena Gabrijelčič Tomc	30	15	45	0	0	90	180	6	no
4.	0068082	Standardisation of graphic processes	Deja Muck	30	15	30	0	15	90	180	6	no
5.	0068083	Statistics	Stanislav Praček	30	0	30	0	0	60	120	4	no
6.	0068084	Typographic design	Klementina Možina	30	15	45	0	0	90	180	6	no
Total				165	75	180	0	30	450	900	30	

2nd semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective
1.	0068077	Finishing graphic products	Urška Vrabič Brodnjak	30	15	15	0	0	60	120	4	no

2.	0068078	Environmental protection in graphic arts	Maja Klančnik	45	15	30	0	0	90	180	6	no
3.	0111856	Izbirni		120	60	90	0	30	300	600	20	no
		Total		195	90	135	0	30	450	900	30	

Year 2, izbirni

2nd semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective
1.	0068043	Packaging 1	Diana Gregor Svetec	30	15	15	0	0	60	120	4	yes
2.	0148212	Video	Helena Gabrijelčič Tomc	30	15	30	0	15	90	180	6	yes
3.	0068045	Testing of graphic materials	Diana Gregor Svetec	30	15	30	0	15	90	180	6	yes
4.	0068046	Interactive media 1	Aleš Hladnik	30	15	30	0	15	90	180	6	yes
5.	0068048	Printing 2	Deja Muck	30	15	30	0	15	90	180	6	yes
6.	0068049	Printing plates	Maja Klančnik	30	15	15	0	0	60	120	4	yes
7.	0075638	User interface planning	Jože Guna	30	15	15	0	0	60	120	4	yes
8.	0068060	Basics of 3D modelling	Helena Gabrijelčič Tomc	30	15	45	0	0	90	180	6	yes
		Total		240	120	210	0	60	630	1260	42	

Year 3, obvezni

1st semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective
1.	0068086	Practical training	Habilitiran učitelj	0	0	0	0	0	900	900	30	no
		Total		0	0	0	0	0	900	900	30	

2nd semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective
1.	0111857	Izbirni		157	110	76	0	17	360	720	24	no
2.	0070322	Diploma work						90	90	180	6	no
		Total		157	110	76	0	107	450	900	30	

Year 3, izbirni

2nd semester

				Contact hours								
	University Course Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other forms of study	Individual student work	Total hours	ECTS	Elective
1.	0068052	3D technologies	Deja Muck	30	15	15	0	0	60	120	4	yes
2.	0068053	Packaging 2	Diana Gregor Svetec	30	15	15	0	0	60	120	4	yes
3.	0148212	Video	Helena Gabrijelčič Tomc	30	15	30	0	15	90	180	6	yes
4.	0068045	Testing of graphic materials	Diana Gregor Svetec	30	15	30	0	15	90	180	6	yes
5.	0068056	Information sources	Danica Dolničar	30	15	15	0	0	60	120	4	yes
6.	0068057	Interactive systems	Aleš Hladnik	30	15	30	0	15	90	180	6	yes
7.	0068058	Planning graphic production	Andrej Demšar, Urška Stanković Elesini	45	30	15	0	0	90	180	6	yes
8.	0068059	Media design	Klementina Možina	15	15	30	0	0	60	120	4	yes
9.	0068061	Entrepreneurship	Blaž Zupan	30	0	30	0	0	60	120	4	yes
10.	0068062	Business information systems	Raša Urbas, Urška Stanković Elesini	45	45	0	0	0	90	180	6	yes
11.	0068048	Printing 2	Deja Muck	30	15	30	0	15	90	180	6	yes
12.	0068064	Quality management	Andrej Demšar, Marica Starešinič	30	60	0	0	0	90	180	6	yes
13.	0068047	Media visualisation	Jure Ahtik	30	15	15	0	0	60	120	4	yes
14.	0642807	User interface Technologies	Jože Guna	30		30			60	120	4	yes

15.	0642806	Basics of 3D animation and simulation	Helena Gabrijelčič Tomc	15	15	30			60	120	4	yes
16.	0643469	Holistic thinking and acting	Andrej Demšar	30	30				60	120	4	yes
17.	0643470	Business communication	Andreja Jaklič	30	30				60	120	4	yes
		Total		510	345	315	0	60	1230	2460	82	