

# INFORMATION ON GRAPHIC AND MEDIA TECHNOLOGY STUDY PROGRAMME

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## Basic information

Name	<b>Graphic and media technology</b>
Type	Higher education professional study programme
Level	First level
KLASIUS-SRV	Academic higher education (first Bologna cycle) (16203)
ISCED	Arts (21)
KLASIUS-P	Audio-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
Areas/modules/field of study	No subdivision (study programme)
Member of the University of Ljubljana	Faculty of Natural Sciences and Engineering, Aškerčeva cesta 12, 1000 Ljubljana, Slovenia
Duration (years)	3
ECTS credits per year	60
Type of study	Full-time and part-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 graphic technology, it enables dissemination, sharing and storing information in the form of graphic products. Almost the entire production is dedicated to a familiar customer, i.e. a publishing house, a company, organisation or individual. The characteristics of the industrial production and organisation can be seen from the division of labour in the activity present here since Gutenberg. There are many companies on the market today in publishing, graphic etc. activities that partially or fully participate in the creation of graphic products. The division of labour 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, organisational changes of the structures, the need for new skills and major changes in the 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 represent a replacement for the old media, but primarily a supplement to it, filling new market niches. The same applies to the Internet, for 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 successfully exploit them. These trends are already noticeable and confirmed by the growth of paper production and successful business of equipment suppliers for the graphic industry. The graphic industry has reached the period of maturity, which provides its growth rate for the following few decades and which is comparable to other "mature" industries. The turning point will come with the introduction of completely new communication technologies that will be based on e.g. natural language recognition, artificial intelligence and natural man-machine interaction.

A characteristic of the graphic activity is also the connection with a specific language area, since texts in the national language are also an integral part of the information carried by the graphic product language. This provides a perspective of the 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 study programme Graphic and Media Technology is to train an expert of sufficient professional breadth who will be capable of managing, in terms of technology and execution, diverse and demanding graphic activities, and media activities related to graphic arts.

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

### General competences (learning outcomes)

- extensive professional knowledge in the field of graphic and media technology, augmented by selected knowledge in the areas of natural sciences, management, information and communication technology, aesthetics and graphic design;
- capacity to link knowledge of natural sciences with knowledge of technological fields;
- ability to demonstrate practical skills and immediately accept practical assignments;
- capacity to identify concrete and abstract practical problems, their theoretical analysis, finding solutions and taking appropriate action;
- developed ability to learn independently in the professional field;
- capacity to participate in development and research work, and transfer development and research achievements into practice;
- capacity to understand the interdependency between technology and design;
- capacity to understand artistic notation and its technological transformation into graphic products;
- ability to communicate with colleagues and experts in related disciplines, which enables active participation in group work, also in 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 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;
- capacity of general and specific sensitivity in observation, analysis and valuation, natural, civilisational, design and artistic visuals systems;
- capacity to connect natural sciences knowledge with knowledge from other (technological) fields;
- 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 technologies;
- knowledge and understanding of colour 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 analogue-digital conversion of originals for printed media;
- ability to use theoretical knowledge in evaluating and solving concrete ecological problems in the graphic industry;
- knowledge and understanding of the basics of postpress;
- knowledge and understanding of testing methods in graphic arts;
- 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 formes of various printing technologies;
- mastering basic terms and fundamental concepts of data structures and data transfer;
- capacity to solve concrete work problems of graphic technology with the use of scientific methods; analysis of the value of graphic products and services, systematisation and evaluation of the complexity of work in individual graphic departments and companies;
- capacity to understand modern concepts of quality management systems and the concept of quality;
- knowledge and understanding of the workings of the graphic products and services market;

- 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.

## Enrolment conditions

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

## Criteria for selection in case of limited enrolment

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

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

## Criteria for crediting knowledge and skills obtained before enrolment

Students may be credited for knowledge which corresponds to the contents of the study programme Graphic and Media Technology and which has been achieved in various forms of prior education. The department Study Committee is in charge of crediting knowledge and skills obtained before the enrolment, which is done on the basis of the student's written application and provided certificates or other documents proving the type of knowledge successfully acquired.

When crediting knowledge acquired before the enrolment, the department Study Committee will take into account the following criteria:

- whether conditions for enrolling into a specific educational programme are adequate (required prior education for starting the study programme);
- whether the scope of the completed educational programme (the number of hours of prior education as compared to the scope of the course 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, are comparable to the courses dealt with in the faculty study programme.

The acquired knowledge and skills may be credited as a completed study activity if the conditions for taking part in the educational programme were at least finished secondary school education, if the prior educational programme encompassed at least 75% of the scope of the course and if at least 75% of its contents cover the same areas as the course the applicant would like to have credited. If the Committee finds that the acquired knowledge can be credited, it is granted the same number of ECTS points as awarded at the faculty for the course 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.

## Assessment methods

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

## Student obligations

To enrol in the higher year, a student must complete all practical classes and obtain the following number of ECTS credit points for enrolment in each individual year:

- minimum of 54 ECTS credit points for enrolment in the 2nd year;
- 60 ECTS credit points from the 1st year and minimum of 54 ECTS credit points from the 2nd year for enrolment in the 3rd year.

The department Study Committee may exceptionally grant progression to a higher year for a student who has achieved at least 42 ECTS credit points in the previous year if there are justified reasons for exception. Justified reasons are listed in the Statute of the University of Ljubljana.

To re-enrol in the same year of the study (repetition of the same year), students must have:

- minimum of 28 ECTS credit points for the 1st year;
- 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 their obligations in the former study programme.

## Transfer between programmes

Transfer is possible between two study programmes:

- that ensure the acquisition of comparable competences or learning outcomes at the end of the studies;
- among which, in line with the criteria for recognising the knowledge and skills acquired before enrolling in 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 recognised from the first study programme, referring to compulsory courses of the first-level higher education study programme Graphic and Media Technology.

An individual exam passed in the original study programme is recognised 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 recognised 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 through transfer if:

- they meet the conditions for enrolment in the study programme,
- vacant places are available.

The department Study Committee determines for each candidate separately the extent to which it recognises the already completed study obligations, determines other obligations and decides which year the candidate can transfer to.

## Requirements for completing studies

In order to complete their studies, students must complete all obligations in all enrolled courses, prepare a thesis and orally defend it.

## Requirements for completing individual parts of the programme, if contained in the programme

The programme does not contain individual parts of the programme.

## Professional or scientific or artistic title (and abbreviation)

Bachelor of Applied Science (B.A.Sc.)

STUDY PROGRAMME CURRICULUM GRAPHIC AND MEDIA TECHNOLOGY	
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Name of study programme	<b>Graphic and media technology</b>
Programme characteristics	
Type	higher professional
Cycle	bachelor
University of Ljubljana members	<ul style="list-style-type: none"> <li>Faculty of Natural Sciences and Engineering, Aškerčeva cesta 12, 1000 Ljubljana, Slovenija</li> </ul>

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, Klemen Možina	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
9.	0644018	Packaging materials and technology	Diana Gregor Svetec	30	15	45	0	0	90	180	6	yes
		Total		270	135	255	0	60	720	1440	48	

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	Klemen Možina	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
18.	0644019	Trends in packaging development	Diana Gregor Svetec	30	15	30	0	15	90	180	6	yes
19.	0643981	Information competences	Danica Dolničar	30	15	15	0	0	60	120	4	yes
Total				570	375	360	0	75	1380	2760	92	