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**BACHELOR'S PROGRAM IN "INTEGRATED DESIGN"
AND ITS IMPLEMENTATION IN INTERNATIONAL DESIGN SCHOOL
AT COLOGNE UNIVERSITY OF APPLIED SCIENCES**

ABSTRACT

The paper is aimed at thorough studying and analysis of Bachelor's program in "Integrated Design" in International School of Design (KISD) at Cologne University of Applied Sciences to outline positive features and aspects of the experience that can be borrowed for implementing similar programs in universities of developing countries. It has been defined that KISD Bachelor's program in "Integrated Design" relies on study that goes beyond the traditional framework of design and combines different designer approaches, practice and techniques. It presupposes students' work in at least ten out of twelve KISD branches of knowledge: Image and Motion, Identity and Design, Design for Manufacturing, Design Concepts, Design and Economy, Design Theory and Research, Gender and Design, Interface Design and Interaction Design, Ecology and Design, Production Technology, Service Design, Typography and Layout. Students' professional orientation in KISD is organized in four stages: Discoveries; Connections; International; Focus. Additional requirement is a program-related aptitude test due to which students can demonstrate their aptitude to the program. Bachelor's program in "Integrated Design" specialty offers 2 courses of study to students at the end of the first year of studying: "Integrated Studies in Design" and "European Studies in Design". Study at the program of "Integrated Design" is project-oriented and organized in modules. Successful completion of the study program is verified by module exams throughout the whole study program and Final Exam (Bachelor's thesis and Final Presentation). Exams can be of several types: oral, written, other (home assignments, a Study Journal (portfolio) etc.) and combined. The Defense takes place after the Presentation and is aimed at evaluating students' abilities to present the work orally, independently explain and be aware of the practical application of the results of the Bachelor's thesis; its subject-related and methodical aspects; interdisciplinary contexts; and interdisciplinary prospects. The procedure of calculating the final accumulative grade for the Bachelor's exam has been described in detail.

Keywords: design, bachelor's program, "Integrated Design", modules, International Design School, Cologne, module project, module exam, Bachelor's exam.

АНОТАЦІЯ

Стаття спрямована на вивчення та аналіз особливостей підготовки студентів за бакалаврською програмою «Інтегрований дизайн» в Міжнародній школі дизайну (KISD) при Кельнському університеті прикладних наук, щоб окреслити позитивні риси та аспекти досвіду, які можна запозичити для реалізації подібних програм в університетах країн, що розвиваються. KISD спирається на систему навчання, яка виходить за межі традиційних рамок дизайну та поєднує різні



дизайнерські підходи, практику та техніки. Бакалаврська програма з «Інтегрованого дизайну» передбачає роботу студентів щонайменше у десяти з дванадцяти галузей знань KISD: «Образ та рух», «Ідентичність та дизайн», «Дизайн для виробництва», «Концепції дизайну», «Дизайн та економіка», «Теорія та дослідження дизайну», «Гендер та дизайн», «Дизайн інтерфейсів та інтерактивний дизайн», «Екологія та дизайн», «Технологія виробництва», «Дизайн послуг», «Типографія та макет». Визначено, що професійна орієнтація студентів у KISD формується у чотири етапи: «Відкриття»; «Зв'язки»; «Міжнародний»; «Фокус». Додатковою вимогою є тест на придатність, який безпосередньо пов'язаний із програмою навчання, і за допомогою якого студенти можуть продемонструвати свою придатність до програми. Бакалаврська програма за спеціальністю «Інтегрований дизайн» пропонує студентам на вибір 2 курси навчання наприкінці першого навчального року: «Інтегровані дослідження в галузі дизайну» та «Європейські дослідження в галузі дизайну». Навчання за програмою «Інтегрований дизайн» організоване в модулі та орієнтоване на проекти. Успішне завершення навчальної програми підтверджується модульними іспитами протягом усієї програми навчання та підсумковим іспитом (бакалаврською роботою та заключною презентацією). Іспити можуть бути декількох видів: усні, письмові, інші (домашні завдання, портфоліо тощо) та комбіновані. Захист відбувається після презентації та спрямований на оцінку здатності студентів представляти роботу усно, самостійно пояснювати та усвідомлювати можливості практичного застосування результатів бакалаврської роботи, її предметно-методичні аспекти, міждисциплінарний контекст, міждисциплінарні перспективи. Детально описано процедуру розрахунку остаточної накопичувальної оцінки за бакалаврський іспит.

Ключові слова: дизайн, бакалаврська програма, «Інтегрований дизайн», модулі, Міжнародна школа дизайну, Кельн, модульний проект, модульний іспит, бакалаврський іспит.

INTRODUCTION

In today's labor market, qualified professionals are highly valued, especially designers who are demanded and well paid specialists. Being involved in designing is fashionable, prestigious and fascinating, and these are the main reasons of designer specialty popularity among secondary school graduates. Design is the art of layout, style and beauty. The field of design combines a number of areas and defines a multifaceted modern specialty. Professional training of future designers is concentrated on the study of design project activities in the fields of technology and construction of different types of technological goods from various materials. Professional designers can be employed in different branches of design application – industry, entrepreneurship, creative industry – and hold leading posts in public institutions of various levels, in international and non-governmental organizations, commercial structures and research institutions in the relevant spheres. These are the main reasons why “Design” specialty is a highly popular field of post-secondary education.

In modern educational environment “Design” specialty is gaining popularity in post-secondary institutions of the USA, France, Belgium, Germany, China, Canada, United Arab Emirates and others. Studying peculiarities of future designers' training in these institutions allows to implement positive aspects of their experience into developing countries where the first steps in this field are only being made.



THEORETICAL FRAMEWORK AND RESEARCH METHODS

Peculiarities of “Design” specialty and realization of its study program in leading universities of the world have not been thoroughly studied in scientific and research literature yet. General overview of design education study concept and peculiarities of its implementation has been presented by J. Bardzell (2019), C. Boucharenc (2006) and M. Ghajargar (2019). Design research in Germany was studied by Chao Yang (2019), R. Chow, R. Felicidad, J. Wolfgang (2015). Information on design programs, their realization and completion, curricula and syllabi can be found on official websites of leading universities worldwide. For our research, we have analyzed information and official documents (curricula, module catalogues, examination regulations etc.) for design speciality at a number of universities. Among them are: ENSCI Les Ateliers – Paris, France; University of Aveiro – Aveiro, Portugal; Aalto School of Art and Design – Helsinki, Finland; Glasgow School of Art – Glasgow, UK; Politecnico di Milano – Milan, Italy; Konstfack – Stockholm, Sweden (Study Arts & Design in Germany: 47 Universities with 94 English Study Programs, 2020). Thorough study of the training programs and curricula in leading universities with “Design” specialty allows to make a conclusion that special attention should be given to Cologne University of Applied Sciences which has a separate institution – Köln International School of Design (KISD) – established in 1991 and showing high level of future designers’ training.

While carrying out our research we have used a range of general scientific methods (including study, analysis and synthesis of reference, scientific educational print and on-line sources), as well as systematization and generalization. Our research is qualitative (descriptive) and includes observation and narrative inquiry.

THE AIM OF THE STUDY

The aim of our paper is to characterize peculiarities of “Integrated Design” Bachelor’s program in International School of Design at Cologne University of Applied Sciences to outline positive features and aspects of experience that can be borrowed for implementing similar programs in universities of developing countries.

RESULTS

Köln International School of Design (KISD) offers Bachelor’s program in “Integrated Design” providing an active and inspiring education that ensures great opportunities for students’ individual design due to interdisciplinary, project-oriented and international nature of education. Student-centered approach and research environment are aimed at strengthening students’ individual interests. Study combines diverse designer and scientific approaches in different branches of design and related subjects (Boucharenc, 2006). KISD relies on study that goes beyond the traditional framework of design and combines different designer approaches, practice and techniques. Bachelor’s program in “Integrated Design” presupposes students’ work in at least ten out of twelve KISD branches of knowledge:

Image and Motion	Gender and Design
Identity and Design	Interface Design and Interaction Design
Design for Manufacturing	Ecology and Design
Design Concepts	Production Technology
Design and Economy	Service Design
Design Theory and Research	Typography and Layout
(Modulhandbuch BA-Studiengang Integrated Design, 2016).	

Besides, students acquire special designer analytical and conceptual knowledge in flexible structure of education during 7 semesters. Thus, they systematically learn to



understand and apply diversity of design solutions. Apart from their qualification, they also get intercultural experience and language competence. The program allows students to search for different designer solutions, perform projects flexibly and independently in social, cultural and international contexts. As a result, designer training is systematically integrated into a holistic understanding of theory and practice. Students study scientific and designer academic subjects. Doing projects, they discover design theory and methods and learn how to integrate them effectively in their work (Ghajargar et al., 2019). KISD offers numerous opportunities of collaboration with international and regional companies, institutions and associations. Many research and development projects are performed in close cooperation with business providing students with opportunities to get deeper understanding of doing business. KISD has an active strategy of international orientation. Numerous projects are carried out in collaboration with international universities and companies. Cross-cultural phenomena and processes are presented in projects with international partners every semester. What is more, due to a big number of international students KISD develops students' cross-cultural competences. That is why the majority of courses are taught in English. The study is project-oriented, presupposes cooperation of students during all the semesters and is organized in lectures, seminars, courses, work groups, tutorials, and extracurricular mentoring programs. The studying is partly linear (Chow et al., 2015). Every semester students choose elective courses starting with the first semester and this practice of individual learning path increases independence of students. Students' professional orientation in KISD is organized in four stages (Table 1):

Table 1

Stages of students' professional orientation in "Integrated Design" program

Discoveries (Semesters 1–2)	Students are concentrated on knowledge obtaining and understanding design as an area of thinking and action that intertwines with reality and requires specific designer way of thinking. Students learn to apply typical designer working methods and techniques, collaborate with other students and lecturers, get familiar with changing roles of a designer while performing their own designer project
Connections (Semesters 3–4)	Students study "Integrated Design" as a branch of theory, action and drafting which is dominated by connections with different branches of design, designing process itself and other sciences. They learn how to establish contacts with one another and draft their own pivotal practical orientations
International (Semester 5)	The semester is dedicated to international and cross-cultural experience. Due to studying in one of 45 partner institutions in Europe and beyond and due to international orientation of their study in Cologne, students get new insight into their personal and professional development
Focus (Semesters 6-7)	Selecting elective courses, project work and Bachelor's thesis, students set their own pivotal orientations and develop their profile. Due to this, students are ready to begin their career via relevant work offers

Bachelor's program is full-time, lasts for 7 semesters and contains 210 ECTS credits. The study presupposes internship lasting for 6 months. Additional requirement is a



program-related aptitude test through which students can demonstrate their aptitude to the program. The test is conducted by Applications Committee of KISD and includes 3 components:

1. Home assignment/term paper. Considering the grade for this task, the Committee will choose the most promising applicants. Home assignment/term paper contains a task that is related to the program of study and can be completed visually, verbally, as a 2D or 3D project or with the use of modern media.

2. Exam (solving a program-related task). The exam can last for 2-4 hours depending on a task. The results of the exam are presented as a 2D or 3D object or in a written form.

3. Oral exam (presentation of the written exam and discussion with an expert).

The committee assesses applicants according to the following criteria:

– ability to perceive and present complicated designer issues;

– ability and motivation to creative work;

– general aptitude to the program (Integrated Design (Bachelor's program) – Study Concept and Program Content, 2021).

Bachelor's program in "Integrated Design" offers 2 courses of study to students at the end of the first year of studying:

Integrated Studies in Design – students work in multi-semester projects and seminars on complicated designer processes and get profound knowledge in content, practice and methodology of design, developing their analytical, conceptual and design specific competences which they combine with cross-cultural and international experience. Teaching and research projects allow them to develop their own interests and set individual pivotal orientations. With the help of mentoring program students learn to improve themselves and to develop as professional designers. At the university there is Student Advisory Service, which provides support and help with admission, meeting the requirements to study in KISD, with rejected home assignments and explanations of the reasons of rejection. This service is organized in the form of consulting.

European Studies in Design – the other course of study according to which first 4 semesters students study at KISD. Then they study at two partner-universities of KISD to borrow the experience of innovative and international design. In general, there are six KISD partner-universities for this course: ENSCI Les Ateliers – Paris, France; University of Aveiro – Aveiro, Portugal; Aalto School of Art and Design – Helsinki, Finland; Glasgow School of Art –Glasgow, UK; Politecnico di Milano – Milan, Italy; Konstfack – Stockholm, Sweden (Undergraduate Studies in Design Studies in Germany, 2021).

Study at the program of "Integrated Design" is project-oriented and organized in modules. Projects and seminars play substantial role within modules. At the beginning of each semester students choose projects and seminars from the suggested list, thus extending and forming their individual course of study. As the majority of projects and seminars are accessible to students of all semesters, the classical structure of semesters was cancelled and students have possibilities to exchange experience, learn together and work throughout the semesters (Chao Yang, 2019). Individual modules can be chosen by students of different courses from the scope of 12 branches of knowledge. Students have to get familiar with the content of modules to make sure that they suit their course of study. This system of modules allows students to make up their own profile that is supported and accompanied with intensive mentoring program by lecturers who regularly (every two years) are appointed as responsible for organization of students' study process. The system of modules is presented in Table 2.



Table 2

System of modules in “Integrated Design” Bachelor’s program

Modules	Semesters	ECTS credits
Design Discoveries	1-2	32
Skills Discoveries		16
Community Discoveries		4
Reflection Discoveries		8
Design Connections 1	3-4	20
Design Connections 2		22
Skills Connections		6
Community Connections		4
Reflection Connections	5	8
Design International		26
Reflection International		4
Design Focus		6-7
Individual Focus	16	
Reflection Focus	8	
Final Thesis	12	
Final Presentation		6

Before choosing a module students have an opportunity to get familiar with its brief content and general information. The information can be found in the catalogue of modules and includes the following data:

- Semesters;
- Credits;
- Workload (class workload and individual workload);
- Prerequisites;
- Duration;
- Languages of teaching;
- Group capacity;
- Short description of the content and goals;
- Competences to be formed;
- The focal point of the module (project etc.);
- Methods of teaching;
- Requirements to students to get credit points (regular attendance of classes, allowed number of missed classes, individual contribution to the course, successful passing of the exam etc.);
- Form of exam (presentation of the project, written work as a home assignment or term paper etc.);
- The value of the module grade for the final grade (in percentage). As a rule common subjects count for 1–3 % of the final grade whereas Final Thesis or Presentation can count for 20–30 % of the final grade (Modulhandbuch BA-Studiengang Integrated Design, 2016).

Successful completion of the study program is verified by module exams throughout the whole study program and Final Exam (Bachelor’s thesis and Final Presentation). Module exams are held at the end of each module according to the module catalogue.



All module exams have to be taken by the end of semester 7. The content of the module can be studied within one course or several courses with different teaching methods and last for maximum 2 semesters. Module exams can also be divided into some individual exams. Requirements to the exam must correspond to the learning outcomes for each individual module and are outlined in the module catalogue. Students may be required to demonstrate content knowledge of previous relevant modules. Exams can be of several types: oral, written, other (home assignments, a Study Journal (portfolio) etc.) and combined. A written paper (e.g. research, case study etc.) or a Study Journal (portfolio) are aimed at assessing students' ability to solve some subject-related problem independently by means of oral or written presentation for a definite period of time using scientific and subject-related methods. The goal and the volume of home assignments or a Study Journal (portfolio) are to be defined by the examiner at the beginning of the semester. An interesting fact is that the grade is not announced immediately or during the same day. It may take from 1 to 5 weeks for examiner to announce the results of the exam depending on its type (Examination regulations for the Bachelor's program in Integrated Design, 2014).

Oral exams (presentation, negotiation, moderation etc.) determine whether students are able to solve and professionally present practice-oriented task independently by means of oral communication during the allocated time using scientific and subject-related methods. Minutes of the exams contain facts necessary for assessment of the oral exam. The grade is announced in a week. Home assignments and oral examinations can be performed as a joint team project if the contribution of a student can be assessed clearly during the exam. To prove the contribution of students such aspects of their work can be evaluated: passages, fields of work, numbers of pages in written papers and other objective criteria that allow to outline the work of students clearly and objectively.

Academic subjects eligible for module projects are: Identity and Design; Audiovisual Media; Gender and Design; Design for Manufacturing; Production Technology; Design and Economy; Design Concepts; Service Design; Interface Design; Design Theory and Research; Typography and Layout; Ecology and Design; Identity and Design and others. Students are to carry out a project in at least 10 subjects that are on offer in "Integrated Design" program. Projects can be short-termed (3 credits), medium-termed (6 credits) and long-termed (12 credits). Within the course of one semester students can take on one long-termed and one short-termed project or two medium-termed or up to 6 consecutive short-termed projects (Bachelor "Integrated Design" KISD Köln International School of Design, 2019).

Bachelor's exam consists of Bachelor's thesis and Final Presentation and defines whether students acquired good specialized knowledge necessary for doing their job independently taking into account scientific findings and methods. Having passed the exam students complete the program of scientific degree and acquire academic degree of Bachelor of Arts. The grade for the Bachelor's thesis is announced no later than 8 weeks after the defense.

Writing Bachelor's thesis students have to demonstrate interdisciplinary cooperation. Bachelor's thesis theme can be chosen from the following subjects: Audiovisual Media; Gender and Design; Design for Manufacturing; Production Technology; Design and Economy; Design Concepts; Service Design; Interface Design; Design Theory and Research; Typography and Layout; Ecology and Design. Students are given 12 weeks to complete the thesis. For completed Bachelor's thesis students are granted 12 ECTS credits (Examination regulations for the Bachelor's program in Integrated Design, 2014).



Final Exam consists of the Final Presentation, Defense and Publication. In Final Presentation students present the results of their work in the form of a presentation to examiners within one week after submission of the Thesis.

The Defense takes place after the Presentation and is aimed at evaluating students' abilities to present the work orally, independently explain and be aware of practical application of the following aspects:

- results of the Bachelor's thesis;
- its subject-related and methodical aspects;
- interdisciplinary contexts;
- interdisciplinary prospects.

The duration of the Defense is approximately 30 minutes. If a student has not passed the Presentation and Defense, he/she can do it again. Students that have passed Presentation and Defense get 2 ECTS credits for both. Publication related to the Bachelor's thesis gives 2 more credits. Grade for the Final Exam consists of the grade for the Presentation (50 %), grade for the Defense (50 %) and "passed/not passed" for the Publication. Bachelor's exam in "Integrated Design" is passed if students obtained 210 ECTS credits and successfully completed 10 academic subjects. Graduates get a certificate testifying to the passed Bachelor's exam within 4 weeks after the Final Exam. The certificate contains grades and credits for all module exams, theme of the Bachelor's thesis, grades and credits for Bachelor's thesis and Defense, final accumulative grade for the Bachelor's exam and transferred grades or recognized assessment from other universities, if any (Examination regulations for the Bachelor's program in Integrated Design, 2014).

Final accumulative grade for the Bachelor's exam is calculated as:

1. Arithmetic mean of the grades (individual ECTS credits) for module examinations – 30 %.
2. Module "Design Connections 1" – 10 %.
3. Module "Design Focus" – 20 %.
4. Module "Final Thesis" – 25 %.
5. Module "Final Presentation" – 15 %.

Having completed the Bachelor's program successfully and having acquired the first professional qualification students can continue studying in Master's program.

CONCLUSIONS

Due to providing design training that goes beyond traditional limits of design as a construction of objects, the Bachelor's program in "Integrated Design" at KISD offers highly valued course of study and presupposes different career prospects. Future designers work in a team, they use their drafting abilities as a set of flexible strategic decisions that can be applied for different problems and subjects. Graduates demonstrate high level of competences and skills in new projects very quickly. Due to intensive and interdisciplinary form of study they are perfectly prepared to ever changing professional environment. KISD "Integrated Design" program presupposes training students in such a way that they rely on their own abilities which makes them perfectly suitable for different jobs – in an individual design studio, in companies, designer consulting agencies, advertisement agencies etc. Further work can take place in associations, public institutions as well as other establishments not related to design but requiring skills of working in a team, improvisation, empathy, internationality, communication skills, oriented at decision making. A great advantage of the program is its cross-cultural and international orientation.



In our future research, we have an intention to study peculiarities of Master's program in "Integrated Design" at KISD, as it ensures consecutive nature of design education in Germany.

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