



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Industrial Design _1

Course

Field of study

Architecture

Area of study (specialization)

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Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

I/1

Profile of study

general academic

Course offered in

polish/english

Requirements

compulsory

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

45

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

prof. dr hab. inż. arch. Wojciech Bonenberg

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Wydział Architektury

ul. Jacka Rychlewskiego 2, 61-131 Poznań

Responsible for the course/lecturer:

dr hab. inż. arch. Magdalena Gyurkovich

dr inż. arch. Marcin Giedrowicz

mgr inż. arch. Ewa Angoneze-Grela

dr inż. arch. Joanna Kołata

dr inż. arch. Marzena Banach-Ziaja

mgr inż. arch. Agnieszka Kasińska-Andruszkiewicz

Prerequisites

- the student has an orderly, theoretically founded general knowledge covering key issues in the field of design, composition and ergonomics

- the student has a basic knowledge of development trends in the field of design

- the student knows the basic methods, techniques, tools and materials used in solving simple engineering tasks in the field of designing utility objects



- the student is able to plan and carry out experiments, including measurements and computer simulations, interpret the obtained results and draw conclusions
- the student is able to make a critical analysis of the way of functioning and evaluate the existing technical solutions, devices, systems, processes and services related to the design of objects
- the student is able to design a simple device and object using appropriate methods, techniques and tools
- the student is aware of and understands the non-technical aspects and effects of engineering activities, including its impact on the environment and the related responsibility for decisions
- is able to properly define priorities for the implementation of tasks set by himself or others
- correctly identifies and resolves dilemmas related to the design of objects and utility items

Course objective

- Getting to know contemporary issues of industrial design,
- Learning formal and ergonomic conditions in the design of utility items,
- Getting to know the specificity of industrially manufactured items,
- Getting to know the basic instruments and tools, standards and design norms,
- Learning about modern methods of searching for innovative planning solutions (using heuristic methods) in a creative approach to the development of municipal space,
- Acquiring skills in the field of industrial design,
- Acquiring the ability to develop a model concept of a utility object,

Acquiring the ability to creatively look at existing solutions and apply innovative solutions.

Course-related learning outcomes

Knowledge

A.W6. advanced analysis methods, tools, techniques and materials necessary to prepare design concepts in an interdisciplinary environment, with particular emphasis on inter-branch cooperation;

A.W8. the interdisciplinary nature of architectural and urban design and the need to integrate knowledge from other fields, as well as its application in the design process in cooperation with specialists in these fields.

Skills

A.U5. evaluate the usefulness of advanced methods and tools for solving simple and complex engineering tasks, typical for architecture, urban planning and spatial planning, and select and apply appropriate methods and tools in design;



A.U8. think creatively and act, taking into account the complex and multi-faceted conditions of design activity, as well as expressing own artistic concepts in architectural and urban design;

A.U9. integrate information obtained from various sources, formulate their interpretation and critical, detailed analysis and draw conclusions from them, as well as formulate and justify opinions and demonstrate their relationship with the design process, based on the available scientific achievements in the discipline;

A.U10. communicate with the use of various techniques and tools in a professional and interdisciplinary environment in the scope appropriate for architectural and urban design and spatial planning;

A.U11. work individually and in a team, including with specialists from other industries, and take a leading role in such teams;

A.U12. estimate the time needed to complete a complex project task;

A.U13. formulate new ideas and hypotheses, analyze and test novelties related to engineering and research problems in the field of architectural and urban design and spatial planning;

A.U15. implement the principles and guidelines of universal design in architecture, urban planning and spatial planning.

Social competences

A.S1. effectively use imagination, intuition, creative attitude and independent thinking in order to solve complex design problems;

A.S2. speak and presentat publicly;

A.S3. take the role of a coordinator of activities in the project process, manage work in a team and use interpersonal skills (resolving conflicts, negotiating skills, delegating tasks), comply with the rules of working in a team and take responsibility for joint tasks and projects;

A.S4. take responsibility for shaping the natural environment and cultural landscape, including the preservation of the heritage of the region, country and Europe.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Assessment criteria and project evaluation method. An important criterion for project evaluation will be the approach to the following issues:

a) critical analysis of existing solutions in the selected field of industrial design,

b) selection of methods, concepts and design trends,

c) variant presentation of design concepts in an innovative way relating to:

the latest trends, modern technologies, ecology, ergonomics and safety of use.



Summative assessment:

1. The subject of evaluation is the work consisting of a poster presenting the final effect of work on a selected project topic and a portfolio which is a graphic and text report on the market analysis in the design area.
2. Final review at the last class - exhibition of designs and voting for the 3 best works, the authors of which present the adopted design solutions in the forum of the group.

Assessment scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0

Obtaining a positive grade for the module depends on the student achieving all the learning outcomes listed in the syllabus.

Programme content

Development of a design solution for an item in the field of industrial design in relation to market analysis.

Analytical part:

- market analysis within the selected topic (searching in the Internet, newspapers, books, etc.)
- searching for innovative technologies,
- presenting the conclusions of the analysis in the form of a graphical presentation

Concept part:

- individual work on design concepts in the field of a selected issue,
- creating variants of the concept in relation to future trends, modern technologies and other issues related to the subject of the project.

Design part:

- work on the development of a selected design concept:
 - a. selection of appropriate shapes of the designed object, specification of dimensions,
 - b. selection of complementary elements, shape and arrangement of parts enabling the device operation,
 - c. adjusting the item to the requirements of industrial production.

Teaching methods



1. Project.
2. eLearning Moodle (a system supporting the teaching process and distance learning).

Bibliography

Basic

Bancroft A. Fashion and Psychoanalysis: Styling the Self. Tauris, New York, 2012.

Bahaskaran L. Design XX wieku. ABE Marketing, Warszawa 2006.

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Bonenberg W., Wei X. Green BIM in Sustainable Infrastructure. Procedia manufacturing, 2015, Vol.3, pp.1654-1659.

Botton A. The Architecture of Happiness. Penguin, London 2007.

Fiell C., Fiell P. Design Now!. Taschen 2007.

Griffiths, J.S. Savage Beauty: A Futurist Legacy in Fashion and Self-Design. Design and Culture, Volume 12, Issue 2, 3 May 2020, Pp. 185-202.

Liu W., Cui H. Perceptual design method research in product design. E3S Web of Conferences, Volume 179. 2020.

Snack L. Czym jest wzornictwo? Podręcznik projektowania. ABE Marketing, Warszawa 2007. Phidon Design Classics, 2006.

E-skrypt dla przedmiotu "Wzornictwo przemysłowe 1" (in development).

Additional

1. kwartalnik, 2+3D
2. kwartalnik, Design Alive
3. miesięcznik, ELLE Decoration

Breakdown of average student's workload

	Hours	ECTS
Total workload	90	3,0
Classes requiring direct contact with the teacher	45	1,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	45	1,5

¹ delete or add other activities as appropriate