COURSE DESCRIPTION CARD - SYLLABUS

Course name
SUSTAINABLE INTERIORS: ARCHITECTURE FOR FUTURE GENERATIONS [S5AIU>ZWAPP]

Course

Proposed by Discipline
–

Year/Semester
2/4

Level of study
Doctoral School

Course offered in
English

Form of study
full-time

Requirements
elective

Number of hours

Lecture
8

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

Knowledge The student has basic knowledge about climate change and contemporary civilizational challenges. They understand the complexity of environmental, social, economic, legal, and other conditions related to urban planning and the tools used to shape urban policy. Skills Communication skills, competencies in critical analysis, and the ability to contribute to scientific discourse. Social Competences The student understands the need for lifelong learning, is aware of the importance of interdisciplinary research, and recognizes the social role of science.

Course objective

The aim of the course “Sustainable Interiors” is to introduce students to the ideas and practices of interior design in the context of sustainable development, which—according to its definition—encompasses environmental, social, and economic aspects. The lecture series develops design awareness related to the responsible shaping of interior spaces that promote user well-being, efficient resource use, and the reduction of negative environmental impacts. Throughout the lecture series, students will learn about: Principles and definitions of sustainable design, including concepts such as sustainability, circular design, and wellbeing. Interior design in relation to environmental, social, and economic goals within the design process. Pro-environmental conditions in intergenerational design—relationships and changing user needs depending on age and abilities. Business and economic aspects of interior design and their environmental implications. Criteria for selecting materials, technologies, and solutions that support sustainable development in interior design, such as biodegradable and natural materials, the use of craftsmanship, and self-made elements. Methods for assessing indoor environmental quality (lighting, acoustics, air quality, microclimate) and tools for project certification and evaluation (LEED, BREEAM, WELL). The role of the interior designer in ecological transformation processes and the importance of the 2030 Agenda (SDGs) in the context of socially responsible interior architecture. The course is interdisciplinary in nature and combines knowledge from architecture, health protection, ecology, material technology, and environmental psychology.

Course-related learning outcomes

Knowledge
A doctoral student who has completed doctoral school knows and understands:
global scientific achievements, including theoretical foundations as well as general and selected specialised issues relevant to the disciplines studied in the doctoral school, to a degree that enables the revision of existing paradigms. [P8S_WG/SzD_W01]
the fundamental dilemmas of contemporary civilisation. [P8S_WK/SzD_W05]
economic, legal, ethical, and other essential conditions related to scientific activity. [P8S_WK/SzD_W06]
Skills
A doctoral student who has completed doctoral studies is able to:
use knowledge from various scientific fields to creatively identify, formulate, and innovatively solve complex problems or carry out research tasks. [P8S_UW/SzD_U01]
transfer the results of scientific activity to the economic and social spheres. [P8S_UW/SzD_U03]
Social Competences
A doctoral student who has completed doctoral studies is prepared to:
critically evaluate achievements within a given scientific discipline. [P8S_KK/SzD_K01]
fulfil the social responsibilities of researchers and creators. [P8S_KO/SzD_K04]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

For a Very Good Grade (5.0):
The student demonstrates a full understanding of the concept of sustainable development in the context of interior design.
They are able to independently analyse and interpret complex relationships between the environment, the user, and the space.
They accurately select materials and design solutions, taking into account ecological, social, and economic aspects.
They present insightful and original reflections supported by examples of best practices.
They demonstrate a high standard of presentation and argumentation.
For a Good Grade (4.0–4.5):
The student knows and understands the basic concepts and tools of sustainable design.
They can apply ecological and social principles in the analysis or description of an interior.
The work contains minor factual inaccuracies but presents logical conclusions.
They demonstrate an understanding of the human–environment–space relationship.
For a Satisfactory Grade (3.0–3.5):
The student has mastered only basic definitional knowledge without deeper understanding of relationships and contexts.
The work contains simplified or incomplete analyses.
There is a lack of connection between theory and design practice.

Participation during classes is limited, and argumentation is not fully convincing.
For an Unsatisfactory Grade (2.0):
The student has not mastered the basic concepts and principles of sustainable interior design.
They are unable to identify relationships between space and environmental or social aspects.
The assignment is missing or not completed independently, or does not meet the requirements.

Programme content

1. Introduction to Sustainable Interior Design
Discussion of fundamental concepts, principles, and conditions of sustainable development in the context of architecture and interior design. Presentation of key ideas such as sustainability, circular design, wellbeing, and resilience. Analysis of the interior as an integral part of the ecological system, in which relationships between people, space, and the environment are interdependent. Introduction to the 2030 Agenda and the Sustainable Development Goals (SDGs) in design practice. Discussion of ethics and the social responsibility of designers. Overview of criteria for assessing indoor environmental quality—daylight, acoustics, microclimate, and air quality—as well as the phenomenon of Sick Building Syndrome.
2. The Environmental Dimension of Interior Design in an Intergenerational Context
Analysis of ergonomics, accessibility, and inclusivity as essential elements of socially responsible design. Designing with future generations in mind, incorporating pro-ecological and regenerative strategies, including solutions friendly to older adults. Discussion of innovative technologies supporting sustainability—intelligent systems for energy, lighting, and climate management. Presentation of principles for selecting materials and technologies aligned with sustainable development, with particular emphasis on renewable, local, low-emission, and recycled resources. Introduction to building and interior assessment and certification systems.
3. Social and Psychological Context of Sustainable Interiors
Analysis of user wellbeing as a key aspect of sustainable design. Discussion of the principles of biophilic interior design and the role of nature in improving health, comfort, focus, and creativity in workspaces and everyday living environments. Introduction to environmental psychology—studying perception, behaviour, and emotional responses to space. Discussion on the importance of design that supports social integration and emotional balance among users.
4. Business and Interior Design – Economic Aspects of Sustainability
Discussion of the relationship between interior design and economic and energy efficiency across the interior's life cycle. Analysis of the interior as a product and part of a marketing strategy. Presentation of sustainable development as added value in investment and promotional processes. Application of principles of design for disassembly, reuse, and spatial adaptability within the circular economy. Case studies of certified interiors across various building typologies. Discussion of the future of sustainable interior design—including new technologies, trends, and directions in education for environmentally and socially responsible design.

Course topics

1. Introduction to Sustainable Interior Design
• Definitions and fundamental principles of sustainable development in the context of architecture and interior design.
• Key concepts: sustainability, circular design, wellbeing, resilience.
• The sustainable interior as part of an ecological system – interdependencies between people, space, and the environment.
• The 2030 Agenda and the Sustainable Development Goals (SDGs) in design practice.
• Ethics and social responsibility of the interior designer. Criteria for assessing indoor environmental quality: daylight, acoustics, microclimate, air quality, Sick Building Syndrome.

2. Social and Psychological Context of Sustainable Interiors
• User wellbeing as a key dimension of sustainable design.
• Biophilic interior design – the role of nature in improving health and comfort, enhancing concentration and creative thinking in workspaces.
• Environmental psychology – perception, behaviour, and emotional responses to space, place attachment.

3. Environmental Dimension of Interior Design in an Intergenerational Context
• Ergonomics, accessibility, and inclusivity as elements of socially responsible design.
• Designing with future generations in mind – pro-ecological and regenerative strategies in designing for

older adults.
• Innovative technologies supporting sustainability: intelligent systems for managing energy, lighting, and indoor climate.
• Selection of materials and technologies compliant with sustainable development principles: renewable, local, low-emission, and recycled resources.
• Building and interior assessment and certification systems.

4. Business and Interior Design – Economic Aspects of Sustainable Interiors
• The interior as a product and a marketing asset.
• Economic and energy efficiency across the interior's life cycle.
• Sustainable development as added value in investment and marketing processes.
• Principles of design for disassembly, reuse, and spatial adaptability; the role of craftsmanship and self-made solutions.
• Circular economy models in interior design.
• Case studies: examples of certified interiors in various building typologies.
• The future of sustainable interior design – development directions, technologies, education.

Teaching methods

- lecture
- discussion

Bibliography

Liu I, Wong J., Eco Design: Furniture, Promopress, 2020
Dennis L, Porter C., Green Interior Design: The Guide to Sustainable High Style, ALLWORTH PR, 2021
A Review of Mycelium-Based Composites in Architectural and Design Applications / Anna Lewandowska (WA), Maciej Sydor (WIZ), Agata Bonenberg (WA) // Sustainability - 2025, vol. 17, iss. 24, s. 11350-1-11350-26
Fungi in Mycelium-Based Composites: Usage and Recommendations / Maciej Sydor, Beata Doczekalska, Grzegorz Cofta, Agata Bonenberg (WA) // Materials - 2022, vol. 15, iss. 18, s. 6283-1-6283-34
Modulating Perception in Interior Architecture Through Décor: An Eye-Tracking Study of a Living Room Scene / Weronika Wlazły (WA), Agata Bonenberg (WA) // Buildings - 2025, vol. 15, iss. 1, s. 48-1-48-12

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	8	0,00
Doctoral student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation)	42	2,00