

Name of the subject:

ASSESSMENT OF ECOLOGICAL CHARACTERISTICS

Teacher(s): Associate Professor Ph.D. Nataša D. Ćuković Ignjatović

Status of the subject: elective

Number of ECTS credits: 2

Subject goal

The basic subject goal is the introduction of students to the possibilities and tools for evaluation of environmental characteristics of buildings in different phases of projects and also as an option for evaluation of existing buildings.

Outcome of the subject

The outcome of the subject is the development of critical evaluation of environmental characteristics of buildings, the sustainability of architectural and urban solutions in different phases of the project, and mastering the mechanisms for their evaluation.

The student will have the ability to: Understand environmental strategies and regulatory requirements: Develop a conceptual and critical approach to architectural projects that integrates aesthetic aspects of building and the technical requirements of construction and user needs.

The student will have an understanding of: the needs and aspirations of facility users; the environmental impacts of the facilities and the premise of sustainable design; implementation of buildings in their local contexts; the role of the architect in the design team and the construction industry, recognizing the importance of current methods and trends in shaping the built environment; the potential impact of construction projects on existing and future communities; research, critical appraisal, and selection of alternative structural, construction and materialization solutions in accordance with the architectural design; strategies for building construction and the ability to integrate the knowledge of constructive principles and construction techniques; the physical properties and characteristics of building materials, components, and systems, as well as the environmental impacts of these decisions.

Subject content

Theory

Environmental issues, sustainability, and resilience issues in the context of contemporary architectural theory and practice. Evaluation of environmental characteristics of buildings: basic starting points and principles, criteria, parameters, indicators.

Interactive lectures – evaluation of the environmental characteristics of projects studio design project, case study analyzes (work at home, presentations, and discussions during the lecture period).

Literature

A Green Vitruvius, V. Brophy and J.O. Lewis, Earthscan 2011.

Sustainable and Resilient Building Design - Approaches, Methods and Tools, S. Kosanović, T. Klein, T. Konstantinou, A. Radivojević and L. Hildebrand (Eds.), TU Delft Open 2018.

Energy - Resources and Building Performance, T.Konstantinou, N. Ćuković Ignjatović and M. Zbašnik-Senegačnik (Eds.), TU Delft Open 2018.

Reviews of Sustainability and Resilience of the Built Environment for Education, Research and Design, S. Kosanović, A. Fikfak, N. Novaković and T. Klein (Eds.), TU Delft Open 2018.

Design for Ecological Democracy, R.T. Hester, MIT Press 2006.

Green Building Certification Systems, T. Ebert et al, Detail Green Books, 2011.

A Life Cycle Approach to Buildings, H. Koning et al., Detail Green Books, 2010.

Script (distributed to students during the semester)

Number of active teaching classes

Lectures: 2	Exercises: 0	OFL: 0	SRW: 0	Other: /
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Method of carrying out the teaching

Lectures ex-cathedra, interactive lectures, case study analysis, smaller research projects, presentations, seminar papers.

Evaluation of knowledge (maximum number of points 100)

Pre-exam obligations	points	Final exam	points
Activity during lectures	10	Written exam	
Practical teaching	20	Oral exam	
Colloquium		Seminar paper	50
Seminar(s)	20		