COURSE DESCRIPTION CARD - SYLLABUS

Course name

Fundamentals of Architecture and Civil Engineering

Course

Field of study

Environmental Engineering

Year/Semester

I/1

Area of study (specialization)

Profile of study

general academic

Level of study

First-cycle studies

Course offered in

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

30

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

Number of credit points

Lecturers

Responsible for the course/lecturer:

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Responsible for the course/lecturer:

Prerequisites

Ability to see the context and analyse the engineering problem in its socio-economic, geopolitical and historical environments Awareness of the need for life-long learing to keep the knowledge and skills up-to-date

Course objective

Transfer of basic knowledge in the area of architecture and urban design as a context for engineer's profession, as well as typical tasks/problems appearing in the engineering of the built and natural environments

Course-related learning outcomes

Knowledge

1. Student knows the principal objectives of architecture and urban design together with the means used to achieve them - [K_W02, K_W05, K_W08]

2. Student knows and understands the role of structural solutions, building systems and materials, formal and functional designs in the history of building and architecture - [K_W02, K_W05, K_W07, K_W09]

3. Student knows and understands relationships between architecture and urban design, and their interactions with organisational, technical and economic possibilities - [K_W02, K_W08, K_W09]

Skills

1. Student can collect necessary information to recognise basic styles characterising buildings in a given historical period - [K_U01, K_U05, K_U13]

2. Student can identify most important achievements in history of architecture and urban design - [K_U01, K_U05]

3. Student can analyse architecture and urban design as symptoms of needs and investor - [K_U01, K_U10]

Social competences

1. Student understands the need for continuous updating his/her knowledge required in solving theoretical and practical problems, and puuting it in its contexts - [K_K01, K_K02]

2. Students can see the need for continuing to increase the depth and breadth of their knowledge - [K_K01, K_K02, K_K05, K_K07]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Final test: pisemny (approx. 30 - 40 questions), (W02, W05, W07, W08, W09, U01, U05, U10, U13)

Programme content

1. Introduction: basic concepts, architecture, sustainable construction

2. Built environment space: function, functionality and ergonomics in buildings.

3. The succession of styles as technological and material progress

4. History of towns and urban planning. City - structure, city planning

5. Architectural-construction project, Technical description ,

6. Building as a structural system. Basic elements: from foundation to roof.

7. Building law and other legal regulations. Participants in the construction process

8. Standardization and certification

9. Work tool for architectures, designers and constructions

10. Low-energy, passive and zero-energy building

11. Energy saving and intelligent building

12. Building vs human needs: thermal comfort, light, etc.

13. Technical equipment of the building

14. Eco-construction. Historical buildings

15. Final test

Teaching methods

Information lecture, lecture with multimedia presentation

Bibliography

Basic

Basic bibliography:

1. Broniewski T Historia architektury dla wszystkich wyd. II, Ossolineum, Wrocław 1980

2. Chmielewski JM Teoria urbanistyki w projektowaniu i planowaniu miast Wyd. Politechniki Warszawskiej, W-wa 2001

3. Czarnecki W Planowanie miast i osiedli t.I-VI, PWN, W-wa 1965

4. Dobrowolski T Sztuka polska Wyd. Literackie, Kraków 1974

5. Koch W Style w architekturze Świat Książki, W-wa 1996

6. Watkin D Historia architektury zachodniej Arkady, W-wa 2006

7. Wróbel T Zarys historii budowy miast Ossolineum, Wrocław 1971

Additional

1. Biegański P U źródeł architektury współczesnej PWN, W-wa 1972

2. Charytonow E Zarys historii architektury wyd. VII, WSiP, W-wa 1978

3. D?Alfonso E i Samss D Historia architektury Arkady, W-wa 1997

4. Dobrowolski T Sztuka polska Wyd. Literackie, Kraków 1974

5. Domański T Strategiczne planowanie rozwoju gospodarczego gminy Arkady, W-wa 2000

6. Estreicher K Historia sztuki w zarysie wyd. VII PWN, W-wa 1986

7. Karpowicz M Barok w Polsce Arkady, W-wa 1988

8. Latour S i Szymski A Rozwój współczesnej myśli architektonicznej PWN, W-wa 1985

9. Llera RR Historia architektury Buchmann, Hamburg 2008

10. Lorentz S i Rottermund, A Klasycyzm w Polsce Arkady, W-wa 1984

11. Maik W Podstawy geografii miast Wyd. UMK, Toruń 1992

12. Regulski J Planowanie miast PWE, W-wa 1986

13. Rutkowski S Planowanie przestrzenne obszarów wypoczynkowych w strefie dużych miast PWN, W-wa 1975

14. Styrna-Bartkowiczowa K i Szafer TP Ekologia środowiska mieszkaniowego Ossolineum, K-ów 1977

15. Szczygielski K Zarządzanie przestrzenią Wyd. WSZiA, Opole 2003

16. Świechowski Z Sztuka romańska w Polsce Arkady, W-wa 1982

17. Fletcher, B A history of architecture 20th ed. Architectural Press, Oxford 1996

18. Kostof, S A history of architecture 2nd ed. Oxford University Press 1995

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	20	1,0

[1] delete or add other activities as appropriate