COURSE DESCRIPTION CARD - SYLLABUS

Course name
Fundamentals of Architecture and Civil Engineering [N1IŚrod1>PAiB]

Course

Field of study
Environmental Engineering

Year/Semester
2/4

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
polish

Form of study
part-time

Requirements
elective

Number of hours

Lecture
20

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

dr inż. arch. Mieczysław Kozaczko
mieczyslaw.kozaczko@put.poznan.pl

Lecturers

Prerequisites

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

Course objective

Transfer of basic knowledge in the area of architecture and urban design in universal designing as a context for engineer'sprofession, 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 (in universal framing) together with the meansused to achieve them.
2. Student knows and understands the role of structural solutions, building systems and materials, formal and functional designs in universal holding in the history of building and architecture.
3. Student knows and understands relationships between architecture and urban design, and their

interactions with organisational, technical and economic possibilities.

Skills:
1. Student can collect necessary information to recognize basic styles characterizing buildings in a given historical period.
2. Student can identify most important achievements (in universal framing) in history of architecture and urban design.
3. Student can analyse architecture and urban design (in universal framing) as symptoms of needs and investor.

Social competences:
1. Student understands the need for continuous updating his/her knowledge required in solving theoretical and practical problems, and puting it in its contexts.
2. Students can see the need for continuing to increase the depth and breadth of their knowledge.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Final test: written (approx. 30 - 40 questions),

Programme content

1. Introduction: basic concepts in universal designing architecture, sustainable construction.
2. Built environment space (in universal framing): 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 in universal framing.
10. Low-energy, passive and zero-energy building
11. Energy saving and intelligent building
12. Building vs human needs in universal framing: 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 J.M., Teoria urbanistyki w projektowaniu i planowaniu miast Wyd. PolitechnikiWarszawskiej, 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:
9. Biegański P., U źródeł architektury współczesnej PWN, W-wa 1972
10. Charytonow E., Zarys historii architektury wyd. VII, WSiP, W-wa 1978
11. DiAlfonso E , Samss D., Historia architektury Arkady, W-wa 1997
12. Dobrowolski T., Sztuka polska Wyd. Literackie, Kraków 1974
13. Domański T., Strategiczne planowanie rozwoju gospodarczego gminy Arkady, W-wa 2000

14. Estreicher K., Historia sztuki w zarysie wyd. VII PWN, W-wa 1986
15. Karpowicz M., Barok w Polsce Arkady, W-wa 1988
16. Latour S i Szymski A., Rozwój współczesnej myśli architektonicznej PWN, W-wa 1985
17. Llera R.R., Historia architektury Buchmann, Hamburg 2008
18. Lorentz S., i Rottermund, A Klasycyzm w Polsce Arkady, W-wa 1984
19. Maik W., Podstawy geografii miast Wyd. UMK, Toruń 1992
20. Regulski J., Planowanie miast PWE, W-wa 1986
21. Rutkowski S., Planowanie przestrzenne obszarów wypoczynkowych w strefie dużych miast PWN, W-wa 1975
22. Styrna-Bartkowiczowa K. i Szafer T.P., Ekologia środowiska mieszkaniowego Ossolineum, K-ów 1977
23. Szczygielski K., Zarządzanie przestrzenią Wyd. WSZiA, Opole 2003
24. Świechowski Z., Sztuka romańska w Polsce Arkady, W-wa 1982
25. Fletcher B., A history of architecture 20th ed. Architectural Press, Oxford 1996
26. Kostof S., A history of architecture 2nd ed. Oxford University Press 1995

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	20	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00