COURSE DESCRIPTION CARD - SYLLABUS

Course name
Fundamentals of Civil Engineering [N1IŚrod2>PB]

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
10

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

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Lecturers

Prerequisites

The ability to perceive external conditions and analyze an engineering problem in its socio-economic, geopolitical and historical background. Awareness of the need to constantly update and supplement knowledge and skills

Course objective

Providing basic knowledge about the universal design of an artificial environment, constituting a context for practicing the profession of an engineer in construction, as well as for typical tasks/problems occurring in environmental engineering

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 the relationship between the structure of the artificial

environment in a universal sense and organizational, technical and economic possibilities

Skills:
1. Student is able to obtain the necessary information and recognize the basic features of the building
2. The student is able to identify the most important problems in designing an artificial environment and appreciate their universal nature
3. Student is able to analyze the elements of the technical structure of the building as an expression of the investor's needs and capabilities

Social competences:
1. Student understands the need to constantly update knowledge to the extent necessary to solve theoretical and practical problems and their context
2. Students sees the need to systematically deepen and expand his/her competences

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Written final tests (approx. 30 to 40 issues),

Programme content

1. Introduction: basic concepts in universal design, space. anthropomorphic and its elements, sustainable construction..
2. Space in a universal approach: technical structure and function of building elements.
4. History of towns and urban planning. City - structure, city planning.
5. Construction project, Technical description.
6. Designer's work tools in a universal approach.
7. Low-energy, passive and zero-energy construction.
8. Energy-saving and intelligent structures.
9. Ecological construction.

Course topics

none

Teaching methods

Information lecture, lecture with multimedia presentation

Bibliography

Basic:
Basic bibliography:
1. Chmielewski J.M., Teoria urbanistyki w projektowaniu i planowaniu miast, Wyd. Politechniki Warszawskiej, W-wa 2001.
2. Czarnecki W., Planowanie miast i osiedli t.I-VI, PWN, W-wa 1965.
3. Jędrzejewski S., Proces budowlany, Wyd. Branta, Bydgoszcz 1995.
4. Kozaczko M., Energochłonność struktury urbanistycznej, Poznań 2018.
5. Wróbel T., Zarys historii budowy miast Ossolineum, Wrocław 1971.
6. Additional
1. Biegański P., U źródeł architektury współczesnej PWN, W-wa 1972.
2. Domański T., Strategiczne planowanie rozwoju gospodarczego gminy Arkady, W-wa 2000.
3. Maik W., Podstawy geografii miast Wyd. UMK, Toruń 1992.
4. Regulski J., Planowanie miast PWE, W-wa 1986.
5. Styrna-Bartkowiczowa K. i Szafer T.P., Ekologia środowiska mieszkaniowego Ossolineum, K-ów 1977.
6. Szczygielski K., Zarządzanie przestrzenią Wyd. WSZiA, Opole 2003.

Additional:
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Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	10	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	15	0,50