1. Course number and name

RB-S1-19-W19-2C,
Selected Engineering Problems - Fundamentals of Urban Planning and Architecture

2. Credits and contact hours*

2 ECTS, lectures: 15 hours**, project: 15 hours**

3. Instructor's or course coordinator's name

Ewa TERCZYŃSKA, PhD Eng. Arch.

4. Text book, title, author, and year

1. Deitsch D. K.: Architecture For Dummies" Willey & Sons, 2002
2. Neufert E., Neufert P.: "Neufert Architects' Data" John Willey & Sons, 2012
3. Yin J.: "Urban Planning for Dummies" John Willey & Sons,201

a. other supplemental materials

Interactive and animated drawing teaching tools realized in the Erasmus+ project No 2017- 1-LT01- KA202-035177 - https://liggd.lt/diad-tools/gb/training-material

5. Specific course information

a. brief description of the content of the course (catalog description)

Lectures:

(1) Introduction to urban design issues
(2) Formation of basic elements of the human life space
(3) Introduction to issues of architectural design
(4) Principles of architectural design
(5) Fundamentals of composition and architectural form.

Project:

There are three project to perform:
Project No 1 – Inventory of own flat (freehand sketch plan and section)
Project No 2 – Design concept for a small residential complex on a scale of 1:500
Project No 3 – Design concept for a small public building - projection, elevations

b. prerequisites or co-requisites

Student should has basic knowledge of drafting geometry and technical drawing concerning the writing and reading of architectural and construction drawings and has the ability to draw by hand, to prepare technical drawings

c. indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program

Required.

6. Specific goals for the course

a. specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic

The student can:

- draw and dimension the basic structural and construction elements in an architectural concept and in the building plans and designs
- use selected computer programs supporting design decisions,, can design selected components of complex engineering structures

b. explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.

K1A_W02, K1A_U07, K1A_K03

7. Brief list of topics to be covered

1. Introduction to urban design issues. Basic notions, definitions and design conditions. Presentation of design process, including basic tools of engineer work and the main issues related to designing the architectural and urban planning form.
2. Formation of basic elements of human living space - private space, semi-private space, common space. Spatial environment. Issues of location of objects on a plot, land use design. Guidelines for the conscious perception and shaping of urban space. The development of the basic elements of human life space - private space, semi-private space, common space.
3. Introduction to issues of architectural design. Basic notions, definitions and design conditions. Presentation of the design concept. Legal basis, design guidelines.
4. Principles of architectural design - functional programme of the object, scale of the object, human scale. Basic human needs - biological, social, psychological.
5. Fundamentals of architectural composition. Architectural form. The issues of relations between form and function in architectural objects. Legal basis, design guidelines and standards in designing service facilities. Services accompanying residential buildings. Construction and shaping the form of an object.

*- Consultations were not included in the contact hours

**-per semester