



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Organisation and Economics of Investment Process [S1Arch1E>OiEPI]

### Course

Field of study

Architecture

Year/Semester

3/6

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

English

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

30

Laboratory classes

0

Other

0

Tutorials

30

Projects/seminars

0

### Number of credit points

4,00

### Coordinators

### Lecturers

### Prerequisites

• the student has structured, theoretically based knowledge covering the key issues of organization and economics of the investment process • the student has structured knowledge to understand the social, economic, organizational, and legal conditions of engineering activity • the student has basic knowledge about the life cycle of buildings and sustainable development • the student is able to make a preliminary analysis of the economic effectiveness of the investment and estimate the labor intensity of the undertaken engineering activities • the student is able to use their knowledge skillfully and, at the same time, acquire it from available bibliographic sources • the student has the ability to apply the learned theory to solve practical tasks • the student is able to think and act in an entrepreneurial way • the student is aware of the social and economic aspects of the architect's work • the student is aware of the need to broaden his theoretical knowledge so that he can find justification for its use in the course of his profession. He understands the need for lifelong learning

### Course objective

The aim of the course is to provide knowledge and develop the ability to solve basic problems of management and organization as well as fundamental economic problems in the investment process; gaining awareness of the importance of the architect's place in the entire life cycle of the facility; practical knowledge of the sequence of technological, organizational and economic activities; the effects of design decisions on costs in the building's life cycle.

## Course-related learning outcomes

### Knowledge:

Student knows and understands:

B.W6. investment economics and organization methods as well as the course of the design and investment process; basic principles of design and implementation quality management in the construction process;

### Skills:

Student can:

B.U5. make a preliminary economic analysis of planned engineering activities;

### Social competences:

Student is capable of:

B.S1. formulating opinions on the achievements of architecture and town planning, their determinants and other aspects of the architect's activity, as well as providing information and opinions;

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lectures on the Organization and economics of investment process end with a test, announced at the beginning of the semester.

Exercises consist in estimating costs, elaborating a directive schedule and a network model of a selected investment.

Formative assessment:

Lecture:

- results of the final test
- activity (registered) during classes

Exercises:

Classes are passed on the basis of the final grade consisting of the assessment of design studies and their description.

Adopted grading scale: 2.0; 3.0; 3.5; 4.0; 4.5; 5.0

Summary assessment:

Lecture: summary assessment is the arithmetic average of the grades obtained from the test and activity during classes.

Exercises: summary assessment consists of the evaluation of the work delivered, the defense and colloquium.

Adopted grading scale: 2.0; 3.0; 3.5; 4.0; 4.5; 5.0

Obtaining a positive grade from the module depends on the student's achievement of all learning outcomes listed in the syllabus.

## Programme content

Lectures include:

Cycle and structure of the investment process. Entities of the investment process. Legislative environment. Pre-investment analyses, feasibility studies, environmental impact assessment and reports. Ways of implementing the investment. The architect as a manager: architectural design office as architect's work tool, the architect in the investment process. Integrated design. Management functions, organization rules. Planning and coordinating activities, schedules. Basic knowledge of economics and economics of construction. Investment efficiency, value of money in time, return on investment, break-even analysis, costs in the life cycle of a building, relationship work - efficiency - labor intensity. Economic aspects of energy-saving construction. Estimated value of the investment.

Design exercises include:

- familiarizing students with the principles of costing construction works and databases of standards and prices for costing

- preparation of 3 project exercises in the given order:

1) preparing a cost estimate for the selected investment project based on the current price base (team project),

2) preparation of a directive schedule for a selected investment project based on data obtained from exercise 1 and databases provided by the teacher (team project),

3) preparation of the bill of quantities and cost estimate for the indicated scope of construction works of the selected facility (individual project).

## Course topics

Lecture topics:

1. Introduction: architect as a profession, building licence to design, legal order in construction
2. Spatial planning
3. The investment process in practice, part 1 - implementation of public procurement and formal and legal contexts
4. The investment process in practice, part 2 - implementation of public procurement at the construction site
5. Development investments – legal and economic contexts
6. Private investments – legal aspects on the example of a public utility facility
7. Building permit in practice – legal and administrative aspects
8. Contracts for design work, design valuation, architect's fee, office operation, insurance
9. Bill of quantities, cost estimate, BIM
10. Public procurement, tenders, architectural competitions
11. Building energy performance
12. Building commissioning, post-construction documentation, occupancy permit, replacement design
13. Cultural heritage parks, landscape resolutions
14. Participatory designing
15. Final test

## Teaching methods

1. Lectures covering the problematics from the theoretical foundations to the analysis of practical implementations of the model (and also failed) investments; architecture in the context of economic life.
2. Lectures with multimedia presentation, presentation of investment documentation, examples of investment feasibility studies and environmental reports.
3. Presentation and discussion of schedule boards, network models, documentation of investment cost estimates.
4. eKursy - eLearning Moodle (system supporting the didactic process and distance learning).

## Bibliography

Basic:

1. Werner W. Proces inwestycyjny dla architektów. Oficyna Wydawnicza Politechniki Warszawskiej, 2012.
2. Werner W. Proces inwestycyjny dla architektów. Studium przypadku. Oficyna Wydawnicza Politechniki Warszawskiej, 1996.
3. Stokes E., Akram S. Zarządzanie przedsięwzięciem budowlanym. Ascot, Salford, 2008.
4. Połośki M. (red.). Kierowanie budowlanym procesem inwestycyjnym. Wyd. SGGW, W-wa 2009.
5. Kowalczyk Z., Zabierski J. Kosztorysowanie i normowanie w budownictwie. WSIP, W-wa 2005.
6. E-script of „Organisation and economics of investment process” - eKursy - eLearning Moodle (system supporting the didactic process and distance learning).
7. Code of practice for project management for construction and development. - Fifth edition. The Chartered Institute of Building, 2014.

Additional:

1. Kosecki A. kontraktowanie projektowania obiektów budowlanych. Difin, W-wa 2023.
2. Pastusiak R. Ocena efektywności inwestycji. Wyd. CeDeWu.PL, W-wa 2010.
3. Polskie standardy kosztorysowania robót budowlanych, Wyd.SKB, Warszawa 2011r
4. Leśniak A., Zima K., Kosztorysowanie robót budowlanych z systemem Zuzia 11, Wydawnictwo PK, 2014
5. Price databases in cost estimating of building developments.
6. Polish costing standards
7. Computer software for cost estimation (Norma – Athenasoft or Zuzia – Datacomp) and for preparing investment valuations (SeKo WKI-Plan – Sekocenbud).

## Breakdown of average student's workload

|                                                                                                                                            | Hours | ECTS |
|--------------------------------------------------------------------------------------------------------------------------------------------|-------|------|
| Total workload                                                                                                                             | 100   | 4,00 |
| Classes requiring direct contact with the teacher                                                                                          | 60    | 2,50 |
| Student's own work (literature studies, preparation for laboratory classes/<br>tutorials, preparation for tests/exam, project preparation) | 40    | 1,50 |