

#### POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

## **COURSE DESCRIPTION CARD - SYLLABUS**

Course name

Study of the Spatial Management of a Commune [S2Arch1>SZG]

Course

Field of study Year/Semester

Architecture 1/2

Area of study (specialization) Profile of study

general academic

Level of study Course offered in

second-cycle polish

Form of study Requirements

full-time elective

Number of hours

Lecture Laboratory classes Other (e.g. online)

0 0

Tutorials Projects/seminars

0 45

Number of credit points

3,00

Coordinators Lecturers

#### **Prerequisites**

- the student has an ordered, theoretically founded general knowledge covering key issues in the field of urban design, - the student has a basic knowledge of development trends in the field of urban design, - the student has basic knowledge necessary to understand the social, economic, legal and non-technical determinants of urban design - the student is able to obtain information from literature, databases and other, properly selected sources, also in English, can integrate information, interpret it, as well as draw conclusions and formulate and justify opinions, - the student is able to make a critical analysis of the way of functioning and evaluate the existing solutions, systems and processes - the student is able to identify problems and formulate a specification of simple practical tasks in the field of urban design, - the student is able - in accordance with the given specification - to design a municipal urban complex with a residential and service character - the student understands the need for lifelong learning, is able to inspire and organize the learning process of other people, - is able to interact and work in a group, assuming various roles in it, - is aware of the social role of an urban planner

#### Course objective

1. Acquiring skills in the field of spatial planning and integrated design on a commune scale. 2. Learning the formal and legal conditions of spatial management and spatial planning in communes as well as contemporary problems and trends in the development of settlement networks. 3. Getting to know the basic instruments and tools of spatial planning, standards and urban norms and their role in spatial development of the commune. 4. Learning the tools and techniques of strategic analysis used in spatial planning (SWOT analysis, multi- criteria analysis) and modern methods of searching for innovative planning solutions (using heuristic methods) in a creative approach to spatial development in communes. 5. Acquiring planning and design skills in interdisciplinary teams. 6. Acquiring the ability to develop and verify alternative concepts of spatial development of a commune in relation to local conditions, and to apply and justify innovative solutions in spatial planning.

# Course-related learning outcomes

## Knowledge:

A.W2. urban design in terms of the development of tasks of various scale and complexity, in particular: building complexes, local spatial development plans, taking into account local conditions and connections:

A.W3. spatial planning and spatial policy tools;

A.W4. records of local spatial development plans to the extent necessary for architectural design;

#### Skills:

A.U2. design a simple and complex urban complex;

A.U3. prepare planning studies concerning spatial development and interpret them to the extent necessary for designing in an urban and architectural scale;

A.U4. formulate a critical analysis of the conditions, including the valorization of the land development and building conditions formulate conclusions for design and spatial planning, forecast the processes of transformations in the settlement structure of towns and villages, and predict social effects of these transformations

A.U5. evaluate the usefulness of advanced methods and tools for solving simple and complex engineering tasks, typical for architecture, urban planning and spatial planning, and select and apply appropriate methods and tools in design;

A.U8. think creatively and act, taking into account the complex and multi-faceted conditions of design activity, as well as expressing own artistic concepts in architectural and urban design;

A.U9. integrate information obtained from various sources, formulate their interpretation and critical, detailed analysis and draw conclusions from them, as well as formulate and justify opinions and demonstrate their relationship with the design process, based on the available scientific achievements in the discipline:

A.U10. communicate with the use of various techniques and tools in a professional and interdisciplinary environment in the scope appropriate for architectural and urban design and spatial planning;

A.U11. work individually and in a team, including with specialists from other industries, and take a leading role in such teams;

A.U12. estimate the time needed to complete a complex project task;

A.U15. implement the principles and guidelines of universal design in architecture, urban planning and spatial planning.

#### Social competences:

A.S2.speak and presentat publicly;

A.S3. take the role of a coordinator of activities in the project process, manage work in a team and use interpersonal skills (resolving conflicts, negotiating skills, delegating tasks), comply with the rules of working in a team and take responsibility for joint tasks and projects;

A.S4. take responsibility for shaping the natural environment and cultural landscape, including the preservation of the heritage of the region, country and Europe.

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

- 1. phased review.
- 2. active participation in 2/3 classes.

Formative assessment:

Assessment of the learning outcomes takes place at each of the 3 stages of the project implementation and consists of the assessment of the teacher conducting the classes and the assessment of the members of the group / project team.

Stage 1 - analysis of the commune"s development conditions and priorities:

- assessment of the ability to work in "expert" teams and responsibility for the entrusted individual tasks:
- assessment of the ability to collect and critically analyze information, formulate conclusions and postulates (form: presentation and discussion in the forum of the group);

Stage 2 - creating alternative concepts for the development of the commune:

- assessment of the ability to work in "multi-sector" teams, presenting and justifying the design decisions agreed with the team;
- assessment of the ability to synthesize data, create system solutions, formulate long-term strategic goals, assess the completeness of studies, holistic approach and optimization of spatial development; Stage 3 creating spatial and temporal models for key areas of the commune:
- assessment of individual work skills, creative creation and application of innovative solutions to present and justify the design decisions agreed with the team;
- assessment of the effects of spatial order and the possibilities of sustainable development in a long-term perspective.

Assessment scale: 2.0; 3.0; 3.5; 4.0; 4.5; 5.0

Summative assessment

The final - summary grade consists of:

- the average of partial marks given by the teacher and the evaluation of the involvement and quality of studies issued by the group and project team at the end of each of the three stages of the project;
- assessment of the final effects of the project issued by the teacher during the review at the last classes in the semester. Assessment criteria are announced at the beginning of the semester.

Assessment scale: 2.0; 3.0; 3.5; 4.0; 4.5; 5.0

Obtaining a positive grade for the module depends on the achievement by the student of all the learning outcomes listed in the syllabus.

## Programme content

Developing a vision for the spatial development of the commune, taking into account local and supralocal conditions as well as future forms of spatial development of the commune, aimed at achieving long-term strategic goals related to gaining a competitive advantage, high quality of life and good environmental condition.

Introduction - theoretical part: analysis of historical and contemporary theories of the development of a settlement network. The Athens Card and the New Athens Card - similarities and differences. Analysis of selected design visions of future forms of settlement. Act of March 27, 2003 on spatial planning and development.

Stage 1 - analysis of the commune"s development conditions and priorities: it is a simulation of work in single-branch teams; 3-4-person "expert" teams are responsible for collecting and analyzing supra-local and local spatial, social, environmental and economic conditions in the field of: quality of the natural environment and landscape, social and cultural conditions, demographic trends, functions of areas, types and quality of buildings, technical and communication infrastructure. The stage ends with the selection of strategic goals of the commune"s development from among the priority goals for a given area of analyzes, postulated by "expert" teams (using heuristic methods, including "brainstorming" and SWOT).

Stage 2 - creating alternative concepts for the development of the commune: work in multi-sector teams consisting of 3-4 people, composed of representatives of "expert" teams. Each team develops variant concepts for the development of the commune (scale 1: 25,000, 1: 50,000). The following issues should be included in the project: a. Zoning: division of the area into functional zones, b. Transport: connections with the metropolis and internal connections, c. Features of the natural environment: spatial arrangement and functions of green areas, protected areas, areas of environmental hazards, etc.; d. Buildings: system, spatial layout and functions of built-up areas, determination of basic urban indicators; cultural resources; e. Indication of elements and zones of economic activation. The summary is a multi-criteria analysis (scoring matrix) - a joint assessment (by all group members) of alternative concepts for the development of the commune presented by individual teams in terms of the possibility of achieving the strategic goals of the commune"s development defined in stage 1. The projects are subject to a multi-criteria analysis in order to select the optimal concept for the development of the commune that best serves the achievement of long-term strategic goals.

Stage 3 - creating time-spatial models for key areas of the commune: individual tasks consisting in the selection of elements distinguishing the commune that will determine its attractiveness and the development of a spatial vision of the development of a part of the commune in the time perspective: 2015 - 2035 - 2050, taking into account demographic trends, specificity functional terrain, economic activation, quality of the environment and landscape (scale 1: 1000, 1: 2000, visualizations, working model).

An important criterion for project evaluation is the approach to the following issues:

- a) Linking local conditions with a bold vision of spatial development, taking into account the perspective directions of urbanization.
- b) Preserving the cultural heritage, drawing attention to the cultural specificity and creative connection of the vision of the future with the valuable cultural heritage,
- c) Harmonious combination of settlement activity with the natural environment,
- d) Counteracting the spontaneous dispersion of buildings (Urban sprawl), causing an irrational extension of the network of technical infrastructure and roads serving the fragmented settlement structure,
- e) Variant presentation of spatial concepts in an innovative way relating to: future forms of development, modern means of transport, methods of using renewable energy sources (from the sun, wind, earth),
- f) Create closed loops for energy and material circulation with biological recycling systems. The use of natural self-regenerating systems,
- g) Lack of monotony, diverse environment providing people with the right amount of emotional stimuli,
- h) Creative use of advanced transport technologies (transport of people and goods) combining various types of settlement activity,
- i) Easy accessibility of destinations, alternative choice of means of transport. Integration of the transport system with the urban tissue,
- j) Network structure of public spaces. Use of "green corridors" to connect more important communication goals in the commune. The spatial arrangement of "green corridors" is to encourage walking and cycling, and limit the use of cars by residents.

# **Teaching methods**

- 1. Project.
- 2.eLearningMoodle (a system supporting the teaching process and distance learning).

# **Bibliography**

#### Basic

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# Breakdown of average student's workload

	Hours	ECTS
Total workload	90	3,00
Classes requiring direct contact with the teacher	60	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00