

Detailed course description  
(SUBJECT CARD)

**INTEGRATED MODULES OF ARCHITECTURAL DESIGN SSII/1\*\*R**

**Course title:** ARCHITECTURE DESIGN - MIXED- USE PUBLIC COMPLEXES  
RAR-A-SSII - I-M1-ADMuPC  
MODULE A/1: ARCHITECTURE DESIGN - MIXES-USE PUBLIC COMPLEXES - TYPOLOGICAL PROJECT;  
MODULE B/1: ARCHITECTURE DESIGN - MIXES-USE PUBLIC COMPLEXES - CONCEPTUAL PROJECT

**Course code:** RAR-A-SSII - I-Mo-ADMuPC

**Classification of a course group:** A.1. Architectural and urban design

**Course type:** basic / ~~field-related~~ / general / ~~specialty-related~~\*  
obligatory / ~~elective~~\*

**Field of study:** Architecture

**Level of study:** ~~first-cycle~~ / second-cycle\*

**Profile of study:** general academic / ~~practical~~\*

**Mode of study:** full-time programme / ~~part-time programme~~\*

**Specialty (specialisation):**

**Year of study:** first

**Semester:** 1

**Teaching modes and teaching hours:**  
Lectures – 15;  
classes – 90  
seminar – 5

**Language/s of instruction:** English

**Number of ECTS credits** (according to the study programme): 8

\* – leave the appropriate option

1. Course objectives:

Lecture:

To introduce students to the theory, principles and methodology of designing complex structures of public facility buildings, and familiarize them with the typological and conceptual approaches to design.

To acquaint students with composite structures solutions, as well as technical, formal and legal conditions based on building standards.

During lectures students acquire the knowledge of theories, principles and methodologies for designing complex structures of public facility buildings, including the typological and conceptual approach.

Design:

To introduce students to the methodology of designing complex structures of multifunctional public units on the basis of: initial assumptions, contextual analysis, utility programs, technical conditions, Building Law, formal and legal conditions.

2. Relation of the field-related learning outcomes to modes of teaching and methods of verification as well as to assessment of student's learning outcomes:

| symbol   | assumed learning outcomes<br><i>a student who completed the course:</i>  | teaching modes  | verification methods and learning outcomes assessment      |
|----------|--|-----------------|--|
|          | Knowledge: a student knows and understands   |                 |  |
| E2A_Wo1  | structural, building-related and engineering problems related to the design of buildings   | lecture         | Written exam   |
| E2A_Wo2  | the specific issues of architecture and urban planning in solving complex design problems  | lecture         | Written exam   |
| E2A_Wo3  | advanced issues related to architecture and urban planning useful for designing architectural objects and urban complexes in the context of social, cultural, natural, historical, economic, legal and other non-technical conditions of engineering activities, integrating knowledge acquired during studies   | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| E2A_A.W1 | architectural design of various degrees of complexity, from simple tasks to objects with a complex function in a complex context, in particular: simple objects taking into account the basic needs of users, single and multi-family housing, commercial objects in housing complexes, public buildings and their complexes of various scale and complexity in an open landscape or in an urban environment | lecture         | Written exam   |

|  |  |                 |  |
|--|--|-----------------|--|
| E2A_A.W2                                     | urban design in the field of developing tasks of varying scale and complexity, in particular: building complexes, local spatial development plans, taking into account local conditions and connections  | lecture         | Written exam   |
| E2A_A.W5                                     | the relations between human being and architecture, between architecture and the environment, and necessity of adapting architecture to human needs and scale  | lecture         | Written exam   |
| E2A_A.W6                                     | legal provisions and procedures necessary for the implementation of building projects and the integration of buildings with the overall planning project   | lecture         | Written exam   |
| E2A_A.W8                                     | architectural and urban design as an interdisciplinary skill integrating knowledge from different fields and use the knowledge in practice in cooperation with various experts   | lecture         | Written exam   |
| E2A_A.W8                                     | ways of communicating the ideas of architectural, urban and planning designs and their development   | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| Skills: a student can                        |  |                 |  |
| E2A_A.U1                                     | design a simple and complex architectural object, by creating and transforming space in order to give it new values, in accordance with a given or chosen programme, that takes into account the requirements and needs of all users, the spatial and cultural context, and technical and non-technical aspects                    | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| K2A_A.U4                                     | carry out a critical analysis of the conditions, including the valorization of the land-use and development status; formulate conclusions for design and spatial planning, anticipate the processes of transformation of the settlement structure of towns and villages, and anticipate the social impact of these transformations | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| K2A_A.U5                                     | assess the adequacy of advanced methods and tools to solve simple and complex engineering tasks, characteristic to architectural design, urban and spatial planning, and is able to select and apply appropriate methods and tools in design process   | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| E2A_A.U8                                     | to think creatively and act while taking into account the complex and multi-faceted conditions of design activity, and to express his/her own artistic concepts in architectural and urban design  | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| E2A_A.U9                                     | integrate information obtained from various sources, make 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               | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| E2A_A.U14                                    | to prepare architectural and construction documentation in proper scale, referring to concept design   | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| Social competences: a student is prepared to |  |                 |  |
| E2A_A.S2                                     | make public speeches and presentations   | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |
| E2A_A.S3                                     | taking the role of a coordinator of activities in the design process, team work management and the use of interpersonal skills (conflict resolution, negotiation skills, delegating tasks), compliance with the principles of teamwork and taking responsibility for joint tasks and projects                                      | Design, seminar | Activity during classes<br>Design evaluation<br>Discussion |

3. The content of study programme ensuring learning outcomes (*according to the study programme*):

Teaching methodology for the design of complex functional and spatial structures of multifunctional public utilities based on output data, context analysis, functional and functional programs, technical conditions, Construction Law and formal and legal conditions. Developing creativity and an individual approach to design problems based on the principle of typological design understood as the science of analysis, interpretation and understanding of the concept of an architectural idea and the use of appropriate tools to record the idea and architectural concept. Awareness and understanding of contemporary requirements for architects and urban planners as well as responsibility for design decisions made.

**Lecture:**

The lectures present knowledge covering issues related to the theory, principles and methodology of designing complex functional and spatial structures of public utilities including a typological and conceptual approach.

Knowledge concerns the design of complex public facilities and their complexes in an open landscape or in an urban environment.

**Design exercises:**

**Module A:** Preparation of the design concept for a multifunctional public utilities complex, including the design of spatial, functional and formal systems based on criteria depending on the assumed design goals, using the analytical and directive approach. Identification of the design problem in the form of a concept that is the result of a crystallized architectural idea by means of an appropriate graphic record.

**Module B:** Preparation of the design concept for a multifunctional public utility complex. Identification of the design problem in the form of a concept that is the result of a crystallized architectural idea by means of an appropriate graphic record.

Design exercises develop:

- ability to create and transform space by giving it new values, in accordance with the given program, taking into account the requirements and needs of all users, spatial and cultural context, technical and non-technical aspects;
- creative thinking, using complex and multi-faceted conditions of project activities, by integrating information obtained from various sources, making their interpretation and critical, detailed analysis, drawing conclusions, formulating and substantiating opinions, demonstrating their relationship with the design process on the basis of available scientific achievements in discipline;

4. Description of methods of determination of ECTS credits:

| Type of activity                                     | Number of hours / ECTS credits |
|--|--------------------------------|
| Number of course hours regardless of a teaching mode | W 15 + P 90 +S 5 = 110         |
| Student's workload 1* - preparation for the classes  | 20                             |
| Student's workload 2* - preparation the project      | 100                            |
| Student's workload n* - preparation for the exam     | 10                             |
| <b>Total hours:</b>                                  | <b>240</b>                     |
| <b>Number of ECTS credits allocated to a course</b>  | <b>8</b>                       |

Explanation:

\* – student's workload - fill in the types of activities, e.g. *preparation for a course, interpretation of results, making a course report, preparation for an exam, studying sources, making a project, presentation and report, doing written assignment, etc.*

\*\* – the other e.g. *extra course hours*

5. Summary indexes:

- number of course hours and ECTS credits at the course with a direct participation of academic teachers or other persons running the course and supervising students; **110 h/ 3,5 ECTS**
- number of course hours and ECTS credits at the course related to the scientific activity conducted at the Silesian University of Technology in a discipline or in disciplines to which a field of study is assigned - in the case of studies with a general academic profile; **110 h/ 3,5 ECTS**
- number of course hours and ECTS credits at the course developing practical skills- in the case of practical studies;--
- number of course hours conducted by academic teachers employed by the Silesian University of Technology as their primary workplace. **110 h**

6. Persons conducting particular modes of courses (name, surname, academic degree or degree in arts, title of professor, business e-mail address):

Dr inż arch Jakub Czarnecki jakub.czarnecki@polsl.pl

7. Detailed description of teaching modes:

1) lectures:

- detailed programme's content:
- Basic principles for the design of public utilities - introduction
- Methodology of designing public facilities - typological approach - conceptual approach
- Formal and legal basics of designing public facilities
- Designing culture and entertainment facilities - theaters, entertainment halls
- Designing sports and recreation facilities - swimming pools, swimming pools, water parks
- Hotel and gastronomy design
- Business and office design - bank design
- Designing high and high objects
- Designing large-scale complexes and facilities

- Technical and technological conditions in the context of public utilities and facilities.
- New technologies in architecture
- Sustainable design - new methods and design tools
- Energy-saving relationships in the design of multifunctional assemblies and public facilities
- Summary of lecture topics – Discussion

teaching methods, including distance learning:

Transfer of knowledge related to program content in the form of multimedia presentations and oral communication

form and criteria for semester completion, including retake tests, as well as conditions for admission to the examination:

Written exam - Open questions, including those requiring drawing / graphic answers.

The condition of admission is passing the project exercises and seminar

- course organisation and rules of participation in the course, with an indication whether a student's attendance is obligatory

2 hours. lecture 7 times a semester and 1 hour lecture as a summary and discussion. 15 hours in total

Optional presence.

2) description of other teaching modes:

.Subject of the design task to choose from. Urban and architectural concept of a multifunctional service complex defined on the basis of own analyzes and decisions including: location context, thematic block, functional and spatial solution, etc.

Thematic blocks to choose from:

A - culture and entertainment: multi-screen cinema, concert hall, music theater, concert hall, exhibition rooms, cultural and service complex

B- sport and recreation: sports swimming pool, Aquapark, multifunctional recreational park, outdoor sports facilities.

Location: Gliwice

3) Seminar

Preparation of seminar work on the topic given by the teacher regarding the attempt to increase the environmental efficiency of the solutions adopted during the design exercises.

5 hours of the seminar divided into two sessions: 3 hours - introduction and consultation of the problem and 2 hours - presentation of the student's work and discussion. Mandatory presence

8. Description of the method for determining the final grade (rules and criteria for evaluation, as well as the final grade calculation method in the case of a course comprising more than one teaching mode, taking into account all teaching modes and all exam dates and credit tests including retake exams and tests):

Mark - correct answer to 50% of questions - sufficient, 75% - good, 90% - very good.

Design classes - average of marks from the design concept and seminar

9. Method and procedure for making up for

- student's absence from the course,

individual consultations

- differences in study programmes for students changing their field of study, changing university or resuming studies at the Silesian University of Technology,

In agreement with the Vice-Dean for Student Affairs

10. Prerequisites and additional requirements, taking into account the course sequence:

completion of first degree architectural studies

11. Recommended sources and teaching aids:

1. Celadyn W., Kuc S. – Problemy projektowe w kontekście nowych technologii budowlanych, Czasopismo Techniczne PK, zeszyt 18, 8-A/2010, Kraków 2010 r.
2. Czarnecki J. - "Projektowanie obiektów bankowych", Gliwice 2005.
3. Foqué R. – Building Knowledge in Architecture, UPA, Brussels 2010.
4. Jackiewicz W. - "Architektura nie tylko teatru", Ossolineum 1984 r.
5. Koolhaas R., Mau B., Werlemann H. - S M L XL, Monacelli Press, 1995
6. Kwok A.G., Grondzik W.T. – The Green Studio Handbook. Environmental Strategies for Schematic Design. Architectural Press, Oxford 2011.

7. Leupen B., Grafe C., Kornig N., Lampe M. - Projektowanie architektury w ujęciu analitycznym
8. Majerska-Pałubicka B.- Rozwiązania energooszczędne w architektonicznym projektowaniu obiektów handlowych, Wyd. Pol. Śl, Gliwice 2001 r.
9. Majerska-Pałubicka B. – Zintegrowane projektowanie architektoniczne w kontekście zrównoważonego rozwoju. Doskonalenie procesu, Wyd. Pol. Śl, Gliwice 2014 r.
10. Misiągiewicz M. – O prezentacji idei architektonicznej. Monografia, Wyd. PK, Kraków 1999 r.
11. Neufert E. - "Podręcznik projektowania architektoniczno-budowlanego". Arkady 1980 r.
12. Norbert-Schulz Ch. - Bycie, przestrzeń, architektura, Wyd. Murator, Warszawa 2000 r.
13. Pawłowski Z., Cała I. - Budynki wysokie, Oficyna Wydawnicza Politechniki Warszawskiej 2006
14. Sadowski I. - Akustyka w urbanistyce, architekturze i budownictwie, Arkady, Warszawa 1971 r. .
15. Seonwook K. - Architectural and Program Diagrams 1 (Construction and Design Manual) 2012
16. Seonwook K. - Architectural and Program Diagrams 2 (Construction and Design Manual) 2013
17. Wejchert K. - Elementy kompozycji urbanistycznej, Arkady, Warszawa
18. Wines J. – Zielona Architektura, Taschen Verlag GmbH, Kolonia 2008 R.
19. Prawo budowlane
20. Rozporządzenie w sprawie warunków technicznych jakim powinny odpowiadać budynki i ich usytuowanie.
21. Rozporządzenie w sprawie obiektów hotelarskich i innych obiektów, w których są świadczone usługi hotelarskie

12. Description of teachers' competences ( e.g. publications, professional experience, certificates, trainings etc. related to the programme contents implemented as a part of the course):

Person with significant contributions to the development of the scientific discipline - architecture and urban planning or design rights in an architectural specialty without restrictions or professional experience acquired in design practice. With the participation of people with professional experience adequate to the issues of the classes.

13. Other information:

none