Attachment no. 5 to ZW 16/2020

Attachment no. **18** to studies program

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| **FACULTY OF ARCHITECTURE**  **COURSE SYLLABUS**  Course title in Polish: **Projektowanie architektoniczne - Architektura społeczno-usługowa**  Course title in English: **Architectural Design - Social and Service Architecture**  Specialization (if applicable): **Architecture**  Profile (if applicable): **Architecture and Urban Design**  Level and form of studies: **2nd level, full-time**  Semester: **2**  Course type: **optional**  Course code: **AUA117706P**  Group of courses: **NO** |

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|  | **Lecture** | **Tutorial** | **Laboratory** | **Project** | **Seminar** |
| Number of hours of organized classes in University (ZZU) |  |  |  | **105** |  |
| Number of hours of total student workload (CNPS) |  |  |  | **225** |  |
| Form of crediting |  |  |  | **Crediting with grade** |  |
| For group of courses mark (X) final course |  |  |  |  |  |
| Number of ECTS points |  |  |  | **9** |  |
| including number of ECTS points for practical (P) classes |  |  |  | **5** |  |
| including number of ECTS points for direct teacher-student contact classes or other people conducting classes (BU) |  |  |  | **6,75** |  |

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| **PREREQUISITES RELATED TO KNOWLEDGE, COMPETENCES AND SOCIAL SKILLS** |
| **No prerequisites.** |

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| **COURSE OBJECTIVES** |
| **C1** Preparation for creation of architectural concepts based upon own speculative assumptions and for the use of programmatic skills in architecture as an advanced theoretical and technological tool of conscious and insightful social and environmental advocacy.  **C2** Preparation for formulating of *Functional and utility program* in accordance with Polish *Building Code* and *Public Procurement Law,* followed by creation of an architectural concept in fulfilling the requirements of the above mentioned.  **C3** Preparation for the use of substantive evaluation methods in architecture (BPE, checklists).  **C4** Acquisition of the ability to use analytical thinking in order to formulate comprehensive conceptual assumptions.  **C5** Making the students accustomed with the formulation of interdisciplinary programmatic and spatial concepts of buildings with complex functions in an intricate context, in order to prepare them to independently create substantive tools for the master's thesis project. |

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| **COURSE LEARNING OUTCOMES** |
| **Relating to knowledge:**  1.1.1) The graduate knows and understands structural, constructional and engineering problems associated with designing buildings.  1.1.2) The graduate knows and understands detailed issues in the field of architecture and urban planning related to solving complex design problem.  1.1.3) The graduate knows and understands advanced issues related to architecture and urban planning useful for designing structures in the context of social, natural, economic, legal and other non-technical conditions of engineering activities.  1.1.4) The graduate knows and understands issues related to the physics, technology and functions of buildings to the extent that ensures the comfort of their utilization and protection against atmospheric agents.  1.1.5) The graduate knows and understands relations between man and architecture and between architecture and the surrounding environment, and the necessity to adapt architecture to human needs and scale.  1.1.6) The graduate knows and understands regulations and procedures that are necessary to implement building projects and integrate buildings with the overall urban planning project.  1.1.7) The graduate knows and understands methods and measures for the implementation of ecologically responsible and sustainable design and the protection and conservation of the surrounding environment.  1.1.9) The graduate knows and understands principles, solutions, structures and building materials used in complex engineering tasks related to architectural design.  1.1.10) The graduate knows and understands issues related to architecture and urban planning in the context of the interdisciplinary nature of architectural and urban design as well as the need to cooperate with other specialists.  1.1.11) The graduate knows and understands principles of collecting information and interpreting it when developing a design concept.  1.1.12) The graduate knows and understands principles of professional presentation of architectural concepts.  1.1.13) The graduate knows and understands the nature of the architectural profession and its role in society.  A.W1. The graduate knows and understands architectural design in a complex context, public use buildings in an urban environment.  A.W4. The graduate knows and understands provisions of local land-use plans to the extent that is necessary for architectural design.  A.W5. The graduate knows and understands the principles of universal design, including the concept of designing spaces and buildings accessible to all users, and the principles of ergonomics, necessary to provide full functionality of the space and structures under design.  A.W6. The graduate knows and understands advanced methods of analysis, tools, techniques and materials necessary to develop design concepts in an interdisciplinary environment, with particular emphasis on cross-industry collaboration.  A.W8. The graduate knows and understands the interdisciplinary nature of architectural and urban design and the need to integrate knowledge from other disciplines and to apply it in the designing process in cooperation with specialists in these disciplines.  **Relating to competences:**  1.2.1) The graduate is able to use the experience acquired during studies to critically analyze the conditions and formulate conclusions for designing in a complex, interdisciplinary context.  1.2.2) The graduate is able to use interdisciplinary knowledge and skills acquired during studies to design a sophisticated architectural structure or urban complex that meets the aesthetic and technical requirements, creating and transforming space and giving it new values.  1.2.3) The graduate is able to prepare an advanced graphic, written and oral presentation of his or her original design concepts in the field of architecture.  1.2.4) The graduate is able to apply analytical methods in formulating and solving design tasks, present the theoretical background and the justification for the presented solutions in the form of a scientific study.  1.2.5) The graduate is able to organize the work including all phases of design concept development.  A.U1. The graduate is able to design a complex architectural structure, creating and transforming space so as to give it new values – in accordance with the assigned or adopted program which takes into account the requirements and needs of all users, the spatial context, and the technical and non-technical aspects.  A.U4. The graduate is able to perform a critical analysis of conditions, including the assessment of land use and development, forecast the processes of transformation of cities and predict the effects of these transformations.  A.U5. The graduate is able to evaluate the usefulness of advanced methods and tools for solving simple and complex engineering tasks that are typical in architecture, urban planning and spatial planning, and choose and apply appropriate methods and tools in designing.  A.U7. The graduate is able to perform a critical analysis and assessment of a project and its implementation with respect to the modernization and reconstruction of architectural and urban structures that have cultural values.  A.U8. The graduate is able to think and act creatively, with an understanding that designing is a complex and multi-faceted endeavor, and express his or her own artistic concepts in architectural and urban design.  A.U9. The graduate is able to integrate information obtained from various sources, interpret and critically analyze it in detail and use it to draw conclusions, as well as formulate and justify opinions and demonstrate their relationship with the designing process on the basis of available scientific achievements in the discipline.  A.U10. The graduate is able to communicate by means of various techniques and tools in a professional and interdisciplinary environment to the extent that is appropriate for architectural and urban design.  A.U11. The graduate is able to work individually and in a team, including collaborating with specialists from other industries.  A.U12. The graduate is able to estimate the time needed to complete a complex design task.  A.U13. The graduate is able to formulate new ideas and hypotheses, analyze and test novelties related to engineering and research problems in the field of architectural and urban design.  A.U14. The graduate is able to prepare architectural and construction documentation using appropriate scales and in relation to the conceptual architectural design.  A.U15. The graduate is able to implement the principles and guidelines of universal design in architecture.  **Relating to social skills:**  1.3.2) The graduate is ready to respect the diversity of views and cultures and demonstrate sensitivity to the social aspects of the profession.  1.3.3) The graduate is ready to take responsibility for social, architectural and urban planning values in the protection of the environment.  A.S1. The graduate is ready to effectively use imagination, intuition, creative attitude and independent thinking to solve complicated design problems.  A.S2. The graduate is ready to speak and make presentations in public.  A.S3. The graduate is ready to follow teamwork principles and take responsibility for joint tasks and projects.  A.S4. The graduate is ready to take responsibility for shaping the natural environment. |

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| **PROGRAMME CONTENT** | | |
| **Form of classes - project** | | **Number of hours** |
| Proj 1 | Introduction: defining the topic, purpose and scope of the project task and the requirements for completing the course.  Publication of proposed project themes, presentation of locations and formation of project groups.  Division of classes’ schedule into three phases:   * analytical - concerning the social, natural and cultural context (carrying out a feasibility analysis and establishing program assumptions) - Pr 1 - Pr 4, * programming (simplified functional and utility program with an initial program and spatial concept) - Pr 5 - Pr 8, * conceptual (architectural concept) - Pr 9 - Pr 15.   Site visit: location analysis.  Preparation of photographic and inventory drawings’ documentation.  Performing analyses: the social, physiographic, cultural, functional context of the environment (sketches, diagrams, structured interviews), SWOT, ecophysiography, cultural, traffic, and absorbency of the plot (to determine the maximum usable areas).  Graphic representation of analyses and documentation, (at least three locations for each of the project groups). | 7 |
| Proj 2 | Workshops, group work.  Getting acquainted with the legal conditions of the plot development, presenting the spatial and functional potential of the plot. Verification of the preliminary analysis of the plot's absorbency in the light of the requirements of local development plan, multi-aspect analysis of the feasibility of the project task (feasibility study). Summary of the observation of the building and natural context as well as the observed socio-cultural aspects of the location.  Discussion in groups, summarized by text and graphics.  Knowledge:  Preliminary programming of buildings - ideological content, technical standard, description of the needs of various user groups. The functional program of the building constructed on the basis of the description of the functioning of an institution and its image. | 7 |
| Proj 3 | Workshops, group work.  Preparation of graphical presentation of analyses concerning the context - conclusions for the feasibility study. Presentations of typological analyses constituting the result of literature studies prepared by groups and a thematic discussion.  Knowledge:  Evolution of utility programs for public buildings - usefulness of research on the typology of these buildings. The durability of the institution and it’s function, and the building's life cycle - hybridization and flexibility. The civic presence (of a public institution) as a tool for urban revitalization - land development design and building access zoning. | 7 |
| Proj 4 | Review 1.  Summary of the analytical phase.  Presentation of feasibility studies for selected plots. Handover of initial program and spatial assumptions for further development of topics. Exchange among the groups.  Scope:  • spatial program and requirements for architectural concept accompanied by diagrams and location analyses,  • initial urban models (scale 1: 500),  • textual part:  • description of the functioning of the institution,  • description of its spatial requirements,  • matrix of function relations,  • definition of the profile and number of users. | 7 |
| Proj 5 | Design task:  Analysis of key project assumptions (e.g. building with a low carbon footprint, building friendly to children and seniors).  Determining the links with the immediate surroundings and the wider urban context, taking into account environmental requirements.  Development of an initial functional and spatial program for the selected location and context. Analysis of the requirements resulting from the number of users of the building, creating utility scenarios, programming space requirements for individual user teams and functions performed in the building.  Techniques used: diagrams in the form of drawings in various scales, creating program tables, working with working mock-ups, function and connection diagrams.  Work in groups.  Knowledge:  Constructing a functional and spatial program for a public building. Basic principles, legal requirements. General and detailed functional properties, area and volume indicators, determining the requirements for building characteristics (technical, spatial, other). | 7 |
| Proj 6 | Design task:  Continuation of tasks specified in class 5.  Analysis of case studies, creating a surface program based on the literature on the subject and own checklists.  Work in groups.  Student presentations on case studies, thematic discussion to objectify the program criteria.  Knowledge:  The building program as a result of analyses - chamber and in-situ studies of existing buildings. Using social science tools in building programming - environmental psychology and sociology as counterparts of architecture. Selected literature examples - design approach based on the analysis of the functioning of existing buildings with an analogous function - BPE, creating checklists. Spatial requirements for different types of functions. | 7 |
| Proj 7 | Workshops, group work.  A functional program including:  • ecophysiography conditions analysis,  • cultural context (location, identification) analysis,  • commuting solutions (public and individual transport) analysis,  • development of the plot - programming on the scale of an urban complex, investment phases proposal(if applicable),  • environmental protection, pro-ecological solutions (institution as a model for a responsible stakeholder),  • legal requirements,  • energy standards,  • functional program - modern functional and spatial solutions (hybridization and flexibility of functions),  • ergonomics, safety, workplace comfort,  • criteria for the selection of structural technologies (process and waste management),  • technological standards (acceptability of experimental solutions),  • criteria for selecting solutions in the field of equipment and infrastructure.  Discussion on the program assumptions, presentation of texts prepared by students and a group discussion. Making drawings in various scales, creating program tables, working with working mock-ups. Graphical preparation of the programming stage.  Knowledge, skills:  Individual distinguishing features of social and service architecture with a complex function and significant ideological content. Review of design issues based on case studies. | 7 |
| Proj 8 | Review 2.  Summary and evaluation of the scope of the functional and operational programming stage.  Presentation of studies by individual groups.  Handover to other project groups, for further development, topics in the form of a simplified functional and utility program, containing a text part (program guidelines, object characteristics and functional program surface tables) and a graphic part - a variant spatial concept (block diagram, working model, projections and cross-sections - scale 1: 200).  Design task:  Analysis of the received functional and utility programs.  Group discussion.  Session of questions and explanations regarding the program part.  Additions and author's explanations in the form of text and drawings.  Formulating quality criteria for a functional and utility program. Evaluation of functional and utility programs.  Work in groups. | 7 |
| Proj 9 | Design task:  Continuation of the task in class 8.  Corrections, thematic discussions within the group.  Presentation of the state of play and critical discussion.  Work in groups.  Knowledge:  Use in the conceptual design the use of eco-physiography (expert's visit), urban and land development conditions, use of building code regulations. Land development design, implementation of public space and the accessibility zone. Immersion into the context and the question of representation. | 7 |
| Proj 10 | Design task:  Continuation of the task specified in class 8.  Thematic discussions within the group.  Consultations.  Work in groups.  Knowledge:  Zoning of the building and its surroundings - mutual connections between the functional blocks of the building. Access zoning (safety measures), universal design and spatial readability wayfinding. Synergic and mutually conflicting functions, functional flexibility. | 7 |
| Proj 11 | Design task:  Presentations on case studies, thematic discussion, aimed at specifying the criteria for assessing architectural solutions and developing argumentation skills deploying these criteria.  Work in groups.  Knowledge:  Continuation of the topics presented in class 10. | 7 |
| Proj 12 | Workshops, group work  Evaluation of the security level of building solutions in the following areas:  • safety of use,  • fire safety,  • security provided to people with disabilities,  • work safety and comfort,  • physical security (defensible space rules), etc.  Presentation and evaluation of design solutions, a joint checklist for checking the correctness of these solutions created by project groups.  Knowledge:  Various aspects of building security. | 7 |
| Proj 13 | Design task:  Reviews, group discussions.  Expert consultations in the field of project optimization and energy-saving solutions, technical and installation equipment.  Work in groups.  Knowledge, skills:  Technological concept of the building. Scheme of operation - utility technology, technical equipment - standard of structural and installation solutions (including RES solutions, their levels of technical complexity, selection of construction technology). | 7 |
| Proj 14 | Review 3.  Overview of the architectural concepts with a critical evaluation of the functional and utility programs, they were based upon. Concept analysis in terms of compliance with the program. Analysis of the fulfilment of the preconditions in the subsequent phases of the concept. Evaluation of the concept based on a previously built hierarchy of objectivized architectural criteria.  Discussion between groups.  Knowledge:  Assessment criteria for architectural designs. Methodological approach, examples of applications - case studies of existing buildings. | 7 |
| Proj 15 | Final review.  Presentation of projects.  Scope:  • initial design assumptions with analyses,  • simplified functional and utility program - text and graphics part,  • site development plan and model (scale 1: 500),  • architectural concept of the building – floor plans, sections and elevations (scale 1: 100, 1: 200),  • architectural model (scale 1: 100, 1: 200),  • sketches and visualizations,  • description of ideas, solutions to concepts and an analytical essay, developed on the basis of case studies investigated during the programming phase.  Discussion, teachers evaluation of project o and determination of necessary corrections and supplementary tasks. Establishing the final date for projects delivery. | 7 |
|  | **Total hours** | **105** |

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| **TEACHING TOOLS** |
| **N1** – Multimedia presentations.  **N2** – Case study analysis.  **N3** – Literature study.  **N4** – Conceptual work.  **N5** – Analytical work.  **N6** – Specialist consultations.  **N7** – Individual corrections.  **N8** – Problem discussions.  **N9** – Individual corrections by experts.  **N10** – Group work.  **N11** – Design workshops.  **N12** – Project presentations. |

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| **ASSESSMENT OF ACHIEVEMENT OF LEARNING OUTCOMES** | | |
| **Evaluation** (F – forming (during semester), C – concluding (at semester end) | Number of learning outcome | Method of assessing the achievement of learning outcome |
| F1 | 1.1.1)  1.1.2)  1.1.3)  1.1.4)  1.1.5)  1.1.6)  1.1.7)  1.1.9)  1.1.10)  1.1.11)  1.1.12)  1.1.13)  A.W1.  A.W4.  A.W5.  A.W6.  A.W8.  1.2.1)  1.2.2)  1.2.3)  1.2.4)  1.2.5)  A.U1.  A.U4.  A.U5.  A.U7.  A.U8.  A.U9.  A.U10.  A.U11.  A.U12.  A.U13.  A.U14.  A.U15.  1.3.2)  1.3.3)  A.S1.  A.S2  A.S3.  A.S4. | Assessment of the analytical phase. |
| F2 | Assessment of the programming phase. |
| F3 | Assessment of the concept design phase. |
| **C = 30%F1 + 30%F2 + 40%F3** | | |

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| **BASIC AND ADDITIONAL LITERATURE** |
| **basic LITERATURE:**   1. [Barr](https://primo.bg.pwr.edu.pl/primo_library/libweb/action/search.do?vl(freeText0)=Vilma+Barr&vl(2235027UI0)=creator&vl(17794083UI1)=all_items&vl(1UI0)=exact&fn=search&tab=default_tab&mode=Basic&vid=48TUR_VIEW&scp.scps=scope%3a(48TUR_TUR01)&ct=lateralLinking), V., Kliment, S. A., Jerde Partnership International, *Building Type Basics for Retail and Mixed-Use Facilities*, Hoboken, 2004. 2. Bielefeld, B., *Spaces in Architecture. Areas, Distances, Dimensions*, Basle 2018. 3. *Research and Technology Buildings. A Design Manual*, Braun, H., Groemling, D. (ed.), Basle 2005. 4. Englisch, G., Remmers, B., *Planning guide for conference and communication environments*, Bad Muender 2008. 5. *This is Hybrid: an Analysis of Mixed-Use Buildings by a+t*, Vitoria-Gasteiz 2011. 6. Fernandez Per, A., Mozas, J., Arpa, J., *HYBRIDS III. Residential Mixed-Use Buildings*, Vitoria-Gasteiz 2009. 7. *Celebrating the Courthouse. A Guide for Architects, Their Clients, and the Public*, Flanders, S. (ed.), New York, London 2006. 8. Fischer, J., Meuser, P., *Accessible Architecture Construction and Design Manual*, Berlin 2012. 9. Hoeger, K., Christiaanse, K, *Campus and the City. Urban Design for the Knowledge Society*, Zurich 2007. 10. Jormakka, K. et al., *Design Methods. Basics*, Basle 2014. 11. *New Laboratories. Historical and Critical Perspectives on Contemporary Developments*, Klonk, Ch. (ed.), Berlin, Boston 2016. 12. *Libraries. A design manual*, Lushington, N. i in. (ed.), Bazylea 2018. 13. Mückenheim, M., Demel, J., *Inspiration: Contemporary Design Methods in Architecture*, Amsterdam 2012. 14. Oswald, A., *Offices. Construction and Design Manual*, Berlin 2014. 15. Pålsson, K., *Public Spaces and Urbanity. How to Design Humane Cities*, Berlin 2017. 16. Pevsner, N., *A History of Building Types*, Princeton 1976. 17. *Library Design for the 21st Century,* Schmidt, J. et al. (ed.), Berlin, Boston 2019.   **additional LITERATURE:**   1. Bergmann, Ch., *Designing Processes. A Strategy for the Future of Construction*, Basle 2019. 2. Boys, J., *Doing Disability Differently: an Alternative Handbook on Architecture, Disability and Designing for Everday Life*, London, New York 2014. 3. *Density & Atmosphere. On Factors Relating to Building Density in the European City*, Eberle, D. (ed.), Basle 2015. 4. Fowler, K. M., Rauch, E. M., *Assessing Green Building Performance: A Post Occupancy Evaluation of 12 GSA Buildings Prepared for the U.S. General Services Administration*; Richland, Washington 2008. http://www.pnl.gov/main/publications/external/technical\_reports/PNNL-19369.pdf 5. Fross, K., *Badania jakościowe w projektowaniu architektonicznym na wybranych przykładach*, Gliwice 2012. 6. *Design as Research. Positions, Arguments, Perspectives*, Gesche, J. et al. (ed.), Bazylea, 2016. 7. Groat, L., Wang, D., *Architectural Research Methods*, Hoboken 2013. 8. Hertzberger, H., *Space and the Architect Lessons in Architecture 2*, Rotterdam 2007. 9. Kuwayama, M., Kaeppeler, J., *The Process of Making. Five Parameters to Shape Buildings*, Bazylea 2019. 10. Lasiewicz-Sych, A., *Uwagi na temat kombinacji metod logicznych i jakościowych w diagnozie środowiska architektonicznego*, „Architectus”, N.1, 2017 p. 97-113. 11. Niezabitowska, E., *Metody i techniki badawcze w architekturze*, Gliwice 2014. 12. Popławski, B., *Projektowanie szkół wyższych*, Warszawa 1982. 13. Pszczółkowski, M., *Architektura użyteczności publicznej II Rzeczypospolitej 1918-1939. Funkcja,* Łódź 2015. 14. Pszczółkowski, M., *Architektura użyteczności publicznej II Rzeczypospolitej 1918-1939. Forma i styl*, Łódź 2014. 15. [Roberts](https://primo.bg.pwr.edu.pl/primo_library/libweb/action/search.do?vl(freeText0)=Nicholas+W+Roberts&vl(2235027UI0)=creator&vl(17794083UI1)=all_items&vl(1UI0)=exact&fn=search&tab=default_tab&mode=Basic&vid=48TUR_VIEW&scp.scps=scope%3a(48TUR_TUR01)&ct=lateralLinking), N. W., *Building Type Basics for Places of Worship*, Hoboken 2004. 16. Taczewski, T., *Architektura szkoły wyższej*, Gliwice 2009. 17. *Rozporządzenie Ministra Infrastruktury z dnia 2 września 2004 r. w sprawie szczegółowego zakresu i formy dokumentacji projektowej, specyfikacji technicznych wykonania i odbioru robót budowlanych oraz programu funkcjonalno-użytkowego*, (Dz.U. 2004 nr 202 poz. 2072 ze zm.). 18. Architectural magazines: „Architektura - Murator”, „Architektura i Biznes”, „DETAIL”, „AD”, „JA”, „El Croquis”, etc. 19. Internet resources: [www.archdaily.com](http://www.archdaily.com), divisare.com, [www.dezeen.com](http://www.dezeen.com), [www.ronet.pl](http://www.ronet.pl)*,* sztuka-architektury.pl, etc*.* |

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| **COURSE SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)** |
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