



University of Technology, Katowice
Faculty of Architecture, Civil Construction and Applied Arts
ARCHITECTURE: List of courses 2021/2022 for incoming students

Winter semesters

Subject title <i>Nazwa przedmiotu</i>	Characteristics, objectives of the course	Type / Language	Level and Type of studies	Semester	ECTS
<p>Architecture theory, basies of architectural designing I</p> <p><i>Teoria architektury, podstawy projektowania, teoria projektowania I</i></p>	<p>[Subject matter:] A series of author's lectures on broadly understood issues concerning the theory of architecture, starting from defining the limits of the concept, its understanding over time and place, and the way of practicing architectural activity. Much attention is focused on the psychological aspects of perceiving architecture and on the social role of architecture, but also of the architect, together with a description of his duties, the way he works, the scope of responsibility.</p> <p>[Goals:] Objective 1 - to gain experience in evaluating the environment in terms of urban and architectural aspects, the ability to see the relationship between theory and practice; Objective 2 - to learn to valorize observed examples from the field of urban planning and architecture, leading to the ability to assess the quality or usefulness of specific solutions; Objective 3 - to increase insight into human needs and acquire the ability to translate them into architectural and urban solutions.</p> <p>[Principle Sources (2-4):] Żórawski J., <i>O budowie formy architektonicznej</i> Arkady Warszawa 1973; Włodarczyk J. A., <i>Oblicza architektury</i>, Politechnika białostocka rozprawy naukowe nr 73, Białystok 2000; Alexander Ch., <i>A pattern Language</i>", Oxford University Press, Oxford 1977;</p> <p>[Results and Evaluation:] Written examination, open questions aimed at verifying the understanding of the issues raised in the lectures with a focus on the issues and formulations contained in the basic literature.</p>	<p>30 h lectures</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>1 (winter)</p>	<p>2</p>

<p>Graphic design</p> <p><i>Grafika Komputerowa</i></p>	<p>[Subject matter:] Graphic design is an inseparable element of every design field, including architecture. The subject matter is learning graphic programs and understanding the latest trends that will allow students to acquire the basics of graphic design.</p> <p>[Goals:]</p> <ul style="list-style-type: none"> ● Learning to use adobe illustrator / photoshop ● Getting to know the latest design trends ● Understanding the basics of composition and color ● Designing your own visual identity <p>[Principle Sources (2-4):] David Airey, <i>Logo Design Love</i>, Pearson Peachpit, 2014 Adrian Frutiger, <i>Signs and Symbols: Their Design and Meaning</i>, Watson-Guptill, 1998</p> <p>[Results and Evaluation:] Classes: The student prepares his own visual identity:</p> <ul style="list-style-type: none"> ● Graphic sign ● The basic book of the mark ● Business card ● Design board with all identification <p>At the end of the semester, the student presents the board and discusses it.</p>	<p>30 h classes</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>1 (winter)</p>	<p>3</p>
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<p>Screen printing</p> <p><i>Druk sitowy</i></p>	<p>[Subject matter:] The subject of studies in this studio is broadly understood artistic and technical issues related to the screen-printing technique. The learning of screen-printing techniques takes place in various workshop exercises, from direct pattern making, through the use of photosensitive emulsion, to the use of photographic reproduction.</p> <p>[Goals:] Learning the methods and techniques of screen printing by students - from those based on tradition, through experiment, to new media proposals. Developing the basis of active contact with art, awakening sensitivity and creative ambitions. The first stage is to familiarize students with the technical and technological possibilities of screen printing. The next stage envisages the individual education process of each student.</p> <p>[Principle Sources (2-4):] Grafika. Techniki i materiały. Przewodnik, Beth Grabowski, Bill Fick wyd. Universitas, 2011. „Techniczne podstawy wykonania szablonu sitodrukowego” Andre Peyskensa, wyd. SAATI, 1998. Techniki graficzne, Jordi Clara , Catafal Oliva, wyd. Arkady, 2005. Katalogi i albumy przeglądowych polskich i międzynarodowych wystaw grafik Kraków, Katowice, Wiedeń itd.</p> <p>[Results and Evaluation:] analysis and critical discussion of the works made by the student, evaluation of their artistic and aesthetic quality.</p>	<p>45 h Laboratory</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>1 (winter)</p>	<p>4</p>
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<p>Architectural design - Small public service building</p> <p><i>Projektowanie architektoniczne</i> <i>Mała usługa</i></p>	<p>[Subject matter:]</p> <ul style="list-style-type: none"> • Analysis of urban, functional and compositional conditions. • Analysis of facilities with similar conditions • Design concept, architectural and urban planning concept • Formal solutions • Solutions for facility usability and functionality • Structural solutions • Presentation of the project <p>[Goals:] To familiarise students with practical issues of designing modern public buildings with a small functional and spatial programme. The design takes into account the location conditions. Getting to know the legal, social and technical conditions in designing architecture that meets the needs of the contemporary user. Developing creative and critical thinking through analysis, learning, developing an architectural idea and designing an architectural object. Developing the design workshop by using appropriate tools.</p> <p>[Principle Sources (2-4):] Neufert E.: Podręcznik projektowania architektoniczno-budowlanego Warszawa 2004 Radford A., Morkoc S, Srivastava A.: Elementy nowoczesnej architektury. Zrozumieć współczesne budynki. Warszawa, 2017 Lewis P., Tsurumaki M., Lewis D. J.: Manual of section. Princeton 2016</p> <p>[Results and Evaluation:] Classes: students prepare a semester project with a leading topic on a given area. Students will carry out their individually. There will be an intermediate jury (case studies, analyses, diagnosis and idea) and a final jury with presentation and discussion.</p>	<p>90 h Classes (project)</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time</p>	<p>3 (winter)</p>	<p>5</p>
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<p>Single-family housing</p> <p><i>Mieszkalnictwo jednorodzinne</i></p>	<p>[Subject matter:] The subject of the course is specificity of designing single-family residential buildings.</p> <p>[Goals:] Students will design conceptual a house on a given location. Analyzes of types of residential buildings, models of housing will be conducted. Site analyses (with local plan analyses) will be conducted. Students will design basic material and construction solutions. Students should be acquainted with methodology of analyzing location and formal conditioning, technical requirements and rules of ergonomics. Analysis of examples is to help formulate general conclusions and project assumptions.</p> <p>[Principle Sources (2-4):] Davies C., <i>Key houses of the twentieth century</i>, Laurence King Publishing, Londyn 2006 Pople N., <i>Experimental Houses</i>, Calmann & King Ltd., London 2000 Radford A., Morkoc S., Srivastava A., <i>The Elements of Contemporary Architecture: Understanding Contemporary Buildings</i>, Thames & Hudson Ltd., London 2014 DETAIL - Zeitschrift für Architektur + Baudetail, journal, www.detail.de</p> <p>[Results and Evaluation:] / [Project:] Students will prepare semestral project consists of project of site, layouts, cross-sections, elevations, visualizations and detail. Scales: 1:500; 1:100; 1:50; 1:10. There will be:</p> <ul style="list-style-type: none"> • intermediate jury (analyses and diagnosis, the idea), • final jury with presentation and discussion. 	<p>90 h Classes (project)</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time</p>	<p>3 (winter)</p>	<p>5</p>
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<p>History of Polish architecture I</p> <p><i>Historia architektury polskiej I</i></p>	<p>[Subject matter:]</p> <ol style="list-style-type: none"> 1. Wooden architecture, the wooden architecture route of the Silesian Voivodeship 2. Pre-Roma architecture 3. The beginnings of stone construction in Poland - early Roman architecture 4. Roman and Proto-Gothic - historical background to the rise of Gothic art 5. Architecture of Cistercian monasteries in Poland - foundations, features 6. Gothic in central Poland - municipal architecture, urban residential architecture, public architecture 7. Gothic in Eastern Pomerania, Gothic in Western Pomerania 8. Renaissance in Poland - introduction 9. Renaissance works of Italian artists in Poland 10. Late Renaissance and Mannerism <p>[Goals:]</p> <p>Gaining knowledge on the history of Polish architecture and the historical background in which it was created. Broadening the skills of comparative analysis of architecture. Recognition of architectural style features. Acquiring the ability to present the prepared issue.</p> <p>[Principle Sources (2-4):]</p> <p>T. Broniewski <i>Historia architektury dla wszystkich</i>, Ossolineum 1975; J. Radzewicz – Winnicki, <i>Goty</i>, wyd. Politechniki Śląskiej, 1998</p> <p>[Results and Evaluation:]</p> <p>Two final tests are assumed during the semester - including open written questions (the ability to form an individual statement) and multiple choice as well as drawing questions. Term work that can be an essay or manual work (mock-up), assessed by all course participants</p>	<p>30 h Lectures</p> <p>PL/EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>3 (winter)</p>	<p>2</p>
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<p>Public building design</p> <p><i>Projektowanie obiektów użyteczności publicznej</i></p>	<p>[Subject matter:] Prior designing of public service buildings. There will be given a list of specific objects to choose by a student. the location will depend on student's choice but some locations in the neighborhood will be available.</p> <p>[Goals:] The main goal - improving the skills of independent design - defining and then solving design problems and predicting the consequences of the adopted solutions on a fragment of the city with particular emphasis on the role of public space; Complementary goal 1 - learning how to record the proposed architectural solutions in the form of flat and space-replicating drawings; Complementary goal 2 - learning to value the observed architecture and to use valuable patterns and reject messy ones, creating the basis of one's own design "workshop", i.e. an individual method of reaching the right design solutions. Complementary goal 3 - to increase insight into human needs connected with shaping the surrounding space.</p> <p>[Principle Sources (2-4):] Czarnecki B., Siemiński W., <i>Kształtowanie bezpiecznej przestrzeni publicznej</i>, Difin, Warszawa 2004; Jankowska J., Uniejewski A., Uniejewski T., <i>Budownictwo szkół i przedszkoli</i>, Arkady, Warszawa Neufert P., <i>Podręcznik projektowania architektoniczno-budowlanego</i>, Arkady, Warszawa 2000</p> <p>[Results and Evaluation:] Students lead their own projects. The course is based on individual and group consultations. Students deliver their solutions as well as working documentation in order to verify and correct the designing process. Consultation give chance to point mistakes either in solution merit or designing method but also to search better solutions of the project according to its form, functionality or structure. Finally, the presentation of the design is the subject of evaluation.</p>	<p>90 h Classes (project) PL/ EN</p>	<p>1st (bachelor) full time, part time</p>	<p>5 (winter)</p>	<p>5</p>
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<p>Design in historical buildings</p> <p><i>Projektowanie w obiektach zabytkowych</i></p>	<p>[Subject matter:] Students create modern design solutions in existing historical buildings. A diverse functional and spatial program is added into a historical structure taking into account diverse conditions.</p> <p>[Goals:] Getting to know the legal, social and technical conditions in designing architecture that meets the needs of the contemporary user, while maintaining historical structures. Developing creative and critical thinking by performing analyses, learning, developing an architectural idea and designing an architectural object. Developing one's design workshop by using appropriate tools.</p> <p>[Principle Sources (2-4):] Neufert P., <i>Podręcznik projektowania architektoniczno-budowlanego</i>, Arkady, Warszawa 2000 Radford A., Morkoc S, Srivastava A.: <i>Elementy nowoczesnej architektury. Zrozumieć współczesne budynki</i>. Warszawa, 2017</p> <p>[Results and Evaluation:] Classes: students prepare a semester project with a leading topic on a given area. Students will carry out their individually. There will be an intermediate jury (case studies, analyses, diagnosis and idea) and a final jury with presentation and discussion.</p>	<p>90 h Classes (project)</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time</p>	<p>5 (winter)</p>	<p>5</p>
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Interior architecture design	<p>[Subject matter:] Classes on the subject of Interior Design are held in the form of exercises on a given topic. The exercise lasts the entire semester. The exercises consist in solving the given project topic in a creative way by the student while working in the classroom and during the homework. During the classes, individual corrections and conversations are conducted on the material prepared by the student, indicating the further course of action. The aim of the course is to introduce the issues related to the principles of the office interior design.</p> <p>[Goals:] Students should acquire basic knowledge and skills in the field of designing the office interior.</p> <p>[Principle Sources (2-4):] Zumthor, P., <i>Myślenie architekturą</i> Neufert, E., <i>Podręcznik projektowania architektonicznego.</i> Arkady, Warszawa 1995 Niezabitowska E., <i>Projekowanie obiektów biurowych,</i> wyd. Politechniki Śląskiej, Gliwice 1977 Rozporządzenie ministra gospodarki przestrzennej i budownictwa z dnia 14 grudnia 1994 r. wraz z późniejszymi zmianami - „Warunki Techniczne, jakim powinny odpowiadać budynki i ich usytuowanie”</p> <p>[Results and Evaluation:] During the semester, students prepare a conceptual <u>design of the office interior.</u></p>	45 h Classes (project) PL/ EN	1 st (bachelor) full time, part time	5 (winter)	4
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<p>Smart downtown quarter - design for the community</p> <p><i>Inteligentny kwartał śródmiejski – projektowanie dla społeczności</i></p>	<p>[Subject matter:] The leading idea involves the city, street and housing with services focused on the needs of local community in urban and architectural scale. The subject matter is the transformation of the city's quarter / district. It aims to meet the needs and aspirations of users with different talents and disabilities as well as with different health and social conditions. The above involves the universal architectural and urban design.</p> <p>[Goals:] The goals are:</p> <ul style="list-style-type: none"> • to understand social needs of a community, family and particular human and their influence on architectural and urban structure / solutions, • to design architectural-urban structure of intelligent downtown quarter / district or its transformation from existing one with lack of social bonds - which reflects the needs and aspirations of the community. • To create modern environment for living in the city with energy efficient, environment friendly solutions • To improve the quality of life through urban and architectural solutions. <p>[Principle Sources (2-4):] Alexander Ch., Ishikawa S., Silverstein M. Fiksdahl-King M., Angel S., <i>A pattern Language: Towns, Buildings, Construction.</i> Oxford University Press, 1977 Gehl J. <i>Life Between Buildings.</i> Using Public Space, Island Press, Washington DC, 2011 Neufert P., <i>Podręcznik projektowania architektoniczno-budowlanego,</i> Arkady, Warszawa 2000 Weber R. i Crane R. (red.) <i>The Oxford Handbook of Urban Planning.</i> Oxford University Press, New York 2012</p> <p>[Results and Evaluation:] Classes: students will prepare semester project with a leading topic on a given area (also outside of Poland, e.g. in other European countries). Individual design work will be carried out in 2 people teams. There will be:</p> <ul style="list-style-type: none"> • 2 intermediate jury (1st: urban brief, analyses and diagnosis, 2nd: the idea, transport, communication, walkability and overall diagnosis), • final jury with presentation and discussion. 	<p>45 h Classes (project) PL/ EN</p>	<p>1st (bachelor) full time</p>	<p>7 (winter)</p>	<p>8</p>
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<p>Integrated architectural and urban conservation project</p> <p>Zintegrowany projekt konserwatorski architektoniczno-urbanistyczny</p>	<p>[Subject matter:] The subject matter concerns contemporary XL city with great cultural and historic potential growth. It also concerns regeneration of degraded urban landscapes under the principles of:</p> <ul style="list-style-type: none"> • respect, care for and develop historical urban structures, • age friendly city of United Nations World Health Organization (WHO). <p>The topic concerns the strong relationship between urban historic centers and city technical infrastructure on chosen case. E.g. to transform, cover the railroad tracks near to railway station and to connect it with the central city pattern. Important element is the communication solutions: public transportation- cars-bicycles-pedestrians.</p> <p>[Goals:] The goal of the project is to recognize the problems, ambitions, strategic and operational goals, and needs of a big city. Students should to consider the age friendly city approach especially for the Third Age (Young-Old). This is a question that students should answer by their urban proposals. The whole work should be considered as an urban strategy of intervention and transformation. The general program for the intervention will comprise the creation of solutions to a XL problem in the city that will link infrastructural, housing and landscape. We will example in this course the barriers that commonly means main train stations in large scale cities with an historic background, and propose a further solution than the private development interest. This must be a hybrid program of uses as the city itself and we will include a deep research to work with an age-friendly neighborhood for a “young-old” community. Students will decide the detailed program, the density, typology and character of that neighborhood</p> <p>[Principle Sources (2-4):] Gehl J. <i>Life Between Buildings</i>. Using Public Space, Island Press, Washington DC, 2011 Gzell S., <i>Urbanistyka XXI wieku</i>, Wydawnictwo Naukowe PWN, Warszawa 2020 Lynch K., <i>The Image of The City</i>, The Massachusetts Institute of Technology, Cambridge, 1960 Deane, S., <i>Young-Old. Urban Utopias of an Aging Society</i>. Lars Müller Publishers, Zürich, 2015</p> <p>[Results and Evaluation:] Lectures: students will take a written or oral exam or prepare and present a presentation on a selected topic. Classes: students will prepare semester project with a leading topic on a given area (also outside of Poland, e.g. in other European countries). Individual design work will be carried out in 2 people teams. There will be:</p> <ul style="list-style-type: none"> • 2 intermediate jury (1st: urban brief, analyses and diagnosis, 2nd: the idea, transport, communication, walkability and overall diagnosis), • final jury with presentation and discussion. 	<p>12 h Lectures + 24 h Classes</p> <p>PL/ EN</p>	<p>2nd (master) part time</p>	<p>1 (9) (winter)</p>	<p>3</p>
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<p>Interior architecture design</p> <p><i>Projektowanie wnętrz</i></p>	<p>[Subject matter:] Classes on the subject of Interior Design are held in the form of exercises on a given topic. The exercise lasts the entire semester. The exercises consist in solving the given project topic in a creative way by the student while working in the classroom and during the homework. During the classes, individual corrections and conversations are conducted on the material prepared by the student, indicating the further course of action.</p> <p>The aim of the course is to introduce the subject related to the principles of designing public utility interiors intended for about a hundred people, taking into account the appropriate functional and spatial layout, evacuation routes, compositional layout, and the use of means of artistic expression adequate to the function.</p> <p>[Goals:] Students should acquire basic knowledge and skills in the field of designing the public utility interiors..</p> <p>[Principle Sources (2-4):] Zumthor, P., <i>Myślenie architekturą</i> Neufert, E., <i>Podręcznik projektowania architektonicznego.</i> Arkady, Warszawa 1995 Rozporządzenie ministra gospodarki przestrzennej i budownictwa z dnia 14 grudnia 1994 r. wraz z późniejszymi zmianami - „Warunki Techniczne, jakim powinny odpowiadać budynki i ich usytuowanie”</p> <p>[Results and Evaluation:] During the semester, students prepare a conceptual <u>design of the public utility interior.</u></p>	<p>40 h Classes (project)</p> <p>PL/ EN</p>	<p>2nd (master) part time</p>	<p>1 (9) (winter)</p>	<p>5</p>
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<p>Designing objects with complex structures</p> <p><i>Projektowanie obiektów o złożonych strukturach</i></p>	<p>[Subject matter:] The subject of the course is specificity of designing big utility objects in highly urbanized areas or on suburban building lots. The design takes into account functionally complex structures of various height, construction and technology. Examples: molecular lab with offices and auditoriums, architecture and civil engineering laboratory with office spaces and classrooms.</p> <p>[Goals:] Students will be presented with methodology of analyzing complex utility program, formal and location conditions, conditioning resulting from local plans of spatial development, as well as methods of communication service and implementing complex and sophisticated technical and structural solutions. Having formulated project assumptions student creates a few varying conceptions, then further develops one of choice.</p> <p>[Principle Sources (2-4):] Neufert, E., <i>Podręcznik projektowania architektonicznego</i>. Arkady, Warszawa 2000 Hawkes D., Forster W., <i>Energy Efficient Buildings</i>, W.W.Norton & Company, Inc., New York 2002 Radford A., Morkoc S., Srivastava A., <i>The Elements of Contemporary Architecture: Understanding Contemporary Buildings</i>, Thames & Hudson Ltd., London 2014</p> <p>[Results and Evaluation:] / [Project:] Based on a given utility program, student creates a model solution of the object. Presentation consists of a project of the terrain, projections, cross-sections, elevations and visualizations. Scales: 1:500; 1:200, 1:100, 1:50.</p>	<p>12 h Lectures + 36 h Classes (project) PL/ EN</p>	<p>2nd (master) part time</p>	<p>3 (11) (winter)</p>	<p>3</p>
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Summer semesters

Subject title <i>Nazwa przedmiotu</i>	Characteristics, objectives of the course	Type / Language	Level and Type of studies	Semester	ECTS
Graphic design <i>Grafika Komputerowa</i>	<p>[Subject matter:] Graphic design is an inseparable element of any design, including architecture. The subject matter is to develop the ability to use graphic programs and understand the latest trends that will allow students to develop graphic design skills.</p> <p>[Goals:]</p> <ul style="list-style-type: none"> ● Develop ability to use adobe illustrator / photoshop ● Learning to use adobe inDesign ● Getting to know the latest design trends ● Creating a visual identity for a cultural event. <p>[Principle Sources (2-4):] Susan Weinschenk, <i>100 Things Every Designer Needs to Know About People</i>, New Riders, 2011 Sarah Hyndman, <i>Why Fonts Matter</i>, Transworld Publ. Ltd UK, 2016</p> <p>[Results and Evaluation:] Classes: The student prepares a visual identity for a cultural event:</p> <ul style="list-style-type: none"> ● Poster ● Ticket/card ● Folded Brochure ● Design board with all identification <p>At the end of the semester, the student presents the board and discusses it.</p>	45 h Classes PL/ EN	1 st (bachelor) full time, part time	2 (spring)	4

<p>Multi-family housing</p> <p><i>Mieszkalnictwo wielorodzinne</i></p>	<p>[Subject matter:] The subject of the course is specificity of designing multi-family residential buildings.</p> <p>[Goals:] Students will be presented with types of residential buildings, models of apartments, methods of communication service and linking of housing with areas of other purposes. Students should be acquainted with methodology of analyzing location and formal conditioning, technical requirements and rules of ergonomics. Analysis of examples is to help formulate general conclusions and project assumptions.</p> <p>[Principle Sources (2-4):] Pople N., <i>Experimental Houses</i>, Calmann & King Ltd., London 2000 Radford A., Morkoc S., Srivastava A., <i>The Elements of Contemporary Architecture: Understanding Contemporary Buildings</i>, Thames & Hudson Ltd., London 2014</p> <p>[Results and Evaluation:] / [Project:] Student creates a model of housing development on a chosen lot and designs one building in detail with model apartments. Presentation consists of project of the terrain, projections, cross-sections, elevations and elevation detail. Scales: 1:500; 1:100; 1:50; 1:10.</p>	<p>90 h Classes (project)</p> <p>PL/ EN/ DE</p>	<p>1st (bachelor)</p> <p>full time</p>	<p>4 (spring)</p>	<p>5</p>
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<p>Interior architecture design</p> <p><i>Projektowanie wnętrz</i></p>	<p>[Subject matter:] Classes on the subject of Interior Design are held in the form of exercises on a given topic. The exercise lasts the entire semester. The exercises consist in solving the given project topic in a creative way by the student while working in the classroom and during the homework. During the classes, individual corrections and conversations are conducted on the material prepared by the student, indicating the further course of action.</p> <p>The aim of the course is to introduce the issues related to the principles of the commercial and gastronomy interior design.</p> <p>[Goals:] Students should acquire basic knowledge and skills in the field of designing the commercial or gastronomy interior in the shopping center.</p> <p>[Principle Sources (2-4):] Zumthor, P., <i>Myślenie architekturą</i> Neufert, E., <i>Podręcznik projektowania architektonicznego.</i> Arkady, Warszawa 1995 Rozporządzenie ministra gospodarki przestrzennej i budownictwa z dnia 14 grudnia 1994 r. wraz z późniejszymi zmianami - „Warunki Techniczne, jakim powinny odpowiadać budynki i ich usytuowanie”</p> <p>[Results and Evaluation:] During the semester, students prepare a conceptual <u>design of the small shop, boutique or a cafe, bar interior in the shopping center</u></p>	<p>45 h Classes (project)</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>4 (spring)</p>	<p>3</p>
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<p>History of Polish architecture II</p> <p><i>Historia architektury polskiej II</i></p>	<p>[Subject matter:]</p> <ol style="list-style-type: none"> 1. Baroque as a dynamic appeal to the senses - an introduction to the problems 2. Polish Baroque architecture against the backdrop of world achievements 3. Architecture of the Jesuit and other assemblies related to the Reformation 4. Classic vs. the emotional trend in the Polish Baroque 5. Baroque architecture in Silesia 6. Classic architecture - introduction to the issue, examples 7. The greatest creators of Polish classicism - Efraim Schröeger and Szymon Bogumił Zug 8 - 10. Student presentations - Polish architects from the end of the 18th to the 20th century <p>[Goals:]</p> <p>Gaining knowledge on the history of Polish architecture and the historical background in which it was created. Broadening the skills of comparative analysis of architecture. Recognition of architectural style features. Acquiring the ability to present the prepared issue.</p> <p>[Principle Sources (2-4):]</p> <p>T. Broniewski, <i>Historia architektury dla wszystkich</i>, Ossolineum 1975</p> <p>J. Radzewicz – Winnicki, <i>Barok</i>, wyd. Politechniki Śląskiej, 2003</p> <p>J. Radzewicz – Winnicki, <i>Klasycyzm</i>, wyd. Politechniki Śląskiej, 2009</p> <p>[Results and Evaluation:]</p> <p>The student prepares a 10-minute presentation (presented to the whole group and assessed by the whole group), after passing it, he / she takes the written or oral exam.</p>	<p>30 h Lectures</p> <p>PL/EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>4 (spring)</p>	<p>2</p>
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<p>Public utility</p> <p>Użyteczność publiczna</p>	<p>[Subject matter:] The subject of the course is specificity of designing big utility objects in highly urbanized areas or on suburban building lots. Examples: office buildings, schools, universities.</p> <p>[Goals:] Students will be presented with methodology of analyzing utility program, formal and location conditions, conditioning resulting from local plans of spatial development, as well as methods of communication service and implementing technical and structural solutions. Having formulated project assumptions student creates a few varying conceptions, then further develops one of choice.</p> <p>[Principle Sources (2-4):] Hawkes D., Forster W., <i>Energy Efficient Buildings</i>, W.W.Norton & Company, Inc., New York 2002 Purchla J., Sepioł J., (red.), <i>Form Follows Freedom Architektura dla kultury w Polsce 2000+</i>, Międzynarodowe Centrum Kultury, Kraków 2015</p> <p>[Results and Evaluation:] / [Project:] Based on a given utility program, student creates a model solution of the object. Presentation consists of a project of the terrain, projections, cross-sections, elevations and visualizations. Scales: 1:500; 1:200.</p>	<p>90 h Classes – project</p> <p>PL/ EN/ DE</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>6 (spring)</p>	<p>5</p>
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<p>Regional design</p> <p><i>Projektowanie regionalne</i></p>	<p>[Subject matter:] In this subject, students undertake the matter of design and planning in regional scale. We consider spatial, communicational, cultural heritage, recreational and environmental issues and problem which are not solvable on local level. They require a broader view which allows to coordinate local transformations. That means they engage more than one community, inside functional areas or city and between them.</p> <p>[Goals:] The goals are:</p> <ul style="list-style-type: none"> • to understand spatial supralocal relations, • bounding spatial structure and solutions with development strategy and sustainable Development Goals (SDG) • to design urban/ rural regional relationships, solutions • to solve conflicts of interests with spatial design tools and strategies. <p>[Principle Sources (2-4):] Chmielewski J.M., <i>Teoria i praktyka planowania przestrzennego, Urbanistyka Europy</i>. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2016 Jacobs J., <i>Death and life of great american cities</i>, New York 1992 Lores P. (red.), <i>Large scale urban developments</i>, Wydawnictwo Politechniki Gdańskiej, Gdańsk 1999 Weber R. i Crane R. (red.) <i>The Oxford Handbook of Urban Planning</i>. Oxford University Press, New York 2012</p> <p>[Results and Evaluation:] Lectures: presence and participation in the discussion required. Activity in the discussion will be taken into account. Classes: students will prepare semester project with a leading topic on a given area (also outside of Poland, e.g. in other European countries). Individual design work will be carried out in 2 persons teams. There will be:</p> <ul style="list-style-type: none"> • 1 intermediate jury (urban brief, analyses and diagnosis, idea), • final jury with presentation and discussion. 	<p>10 h Lectures + 20 h Classes (project)</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>6 (spring)</p>	<p>2</p>
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<p>Technical infrastructure of the city</p> <p><i>Infrastruktura techniczna miasta</i></p>	<p>[Subject matter:] The subject of the course is a wide range technical equipment and infrastructure of the city: from water and electricity supply through transport systems and communication solution, to green and blue city infrastructure.</p> <p>[Goals:] Students should acquire basic knowledge about systems and solutions of urban infrastructure and get to know how the city infrastructure works, how to coordinate urban space / public space with a city infrastructure. Students will solve conceptually infrastructural problems and design urban-architectural solutions with particular emphasis on the technical aspects.</p> <p>[Principle Sources (2-4):] Davis D.E., Altshuler A. (red.) <i>Transforming Urban Transport</i>, Oxford University Press, New York 2019 Neufert P., <i>Podręcznik projektowania architektoniczno-budowlanego</i>, Arkady, Warszawa 2000</p> <p>[Results and Evaluation:] Lectures: students will take a written or oral exam or prepare and present a presentation on a selected topic. Classes: students will prepare semester project with a leading topic on a given area. Students will carry out their individual work in 2 people teams. There will be an intermediate jury (case studies, analyses, diagnosis and the idea) and a final jury with presentation and discussion.</p>	<p>15 h Lectures + 15 h Classes (project)</p> <p>PL/ EN</p>	<p>1st (bachelor)</p> <p>full time, part time</p>	<p>6 (spring)</p>	<p>2</p>
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<p>Sustainable development in architecture</p> <p><i>Optymalizacja rozwiązań i procesów w zawodzie architekta</i></p>	<p>[Subject matter:] Introduction to the subject matter (contemporary requirements for architects). Creating a brief and responding to it. Building Information Modeling (BIM) technology - discussion of the issue. Integrated design systems. Presentation of the Wayman system. Presentation of the arCADia system. Presentation of the ARCHLINE and ARCHLINE systems for interior design. Student work using the possibilities of integrated project management. (selected presentations may be changed or postponed depending on the availability of guest lecturers.)</p> <p>[Goals:] Architectural interview - ability to construct a brief. Gaining knowledge in the field of solutions and processes in the profession of an architect. Introduction with BIM technology - getting acquainted with the possibilities of the Polish ArCADia multi-sector project management system. Getting to know the capabilities of the Wayman system (for managing and optimizing multi-sector projects). Getting to know the possibilities of the ARCHLINE and ARCHLINE systems for interior design in BIM technology. Introduction with the possibilities of the archicad program - student work with the use of acquired skills.</p> <p>[Principle Sources (2-4):] A. Tomana, <i>BIM innovative technology in construction, basics, standards, tools</i>, Builder, 2016 Ch. Jones, <i>Metody Projektowania</i>, WNT, 1977 Birna Kjartansdóttir ,S. Mordue, P. Nowak, D. Philp, J. Thór Snæbjörnsson, <i>BUILDING INFORMATION MODELLING BIM</i>; Civil Engineering Faculty of Warsaw University of Technology, Warsaw 2017 J. K. Waters, <i>Blobitecture</i>, Rockport Publishers Ins, 2003.</p> <p>[Results and Evaluation:] The ability to create an architectural brief for a given design topic in the field of public utility and single-family architecture. Both the brief itself and the ability to respond are assessed. Student presentation on a given issue, speech with a multimedia presentation or presentation of the effects of work with a selected system optimizing the work of an architect.</p>	<p>20 h Lectures + Exercises; small project PL/ EN</p>	<p>2nd (master) part time</p>	<p>2 (10) (spring)</p>	<p>4</p>
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<p>Virtual reality and augmented reality in the architect's profession</p> <p><i>Rzeczywistość wirtualna i rozszerzona rzeczywistość w zawodzie architekta</i></p>	<p>[Subject matter:] The theoretical introduction discusses the use of tools using virtual and augmented reality in the architecture. The design task allows for practical application of knowledge. It consists in mapping an existing building in a digital environment and designing a walk through it. Work in teams. The developed model will be used in subsequent projects and possibly fairs and exhibitions.</p> <p>[Goals:] The aim of this course is to develop skills related to digital design support by creating a computer model of the existing and analyzed building. Additionally, design skills are practised by introducing original spatial solutions to the computer model. The computer model is prepared in a form that allows people who are not familiar with CAD software to virtually walk around the building.</p> <p>[Principle Sources (2-4):] Styk J.: Źródła Architektury Informacyjnej. Wyd. Politechniki Warszawskiej, 2012 Styk J.: Modele architektoniczne. Wyd. Politechniki Warszawskiej, 2018 Burry J., Burry M.: The New Mathematics of Architecture. Thames & Hudson Ltd, 2012</p> <p>[Results and Evaluation:] Classes: students prepare a virtual 3D model, work in teams. There will be an intermediate jury (case studies, analyses, diagnosis and idea) and a final jury with presentation and discussion.</p>	<p>30 h Laboratory</p> <p>PL/ EN</p>	<p>2nd (master)</p> <p>part time</p>	<p>2 (10) (spring)</p>	<p>1</p>
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<p>Futuristic solutions in the design of the human environment</p> <p><i>Rozwiązania futurystyczne w projektowaniu środowiska człowieka</i></p>	<p>[Subject matter:] The aim of the course is to provide an introduction to the use of new digital technologies to explore methods borrowed from sciences and industry. The tools and projects developed are critically analysed. Subject matters consist of:</p> <ul style="list-style-type: none"> • Introduction to computational design - examples of using natural sciences in architecture • Fundamentals of digital fabrication • Fundamentals of using DYNAMO software • Defining geometric relationships - exercises • Defining structures whose geometry is based on plane bending - exercises • Using mathematical and geometrical methods in defining an architectural form • Working out in subgroups designs and mock-ups using parametric tools • Creation of a digital model, embedded in the context of a digital model <p>[Goals:] The aim is realised through:</p> <ul style="list-style-type: none"> - exercises with the parametric software DYNAMO - learning the basics of digital fabrication - producing a term paper <p>[Principle Sources (2-4):] Słyk J.: <i>Źródła Architektury Informacyjnej</i>. Wyd. Politechniki Warszawskiej, 2012 Słyk J.: <i>Modele architektoniczne</i>. Wyd. Politechniki Warszawskiej, 2018 Burry J., Burry M.: <i>The New Mathematics of Architecture</i>. Thames & Hudson Ltd, 2012 Dunn N.: <i>Digital Fabrication in Architecture</i>. Laurance King Publishing Ltd, 2012</p> <p>[Results and Evaluation:] Correctness and complexity of the developed definitions in the Dynamo software Presentation of the Dynamo project and definitions on boards and in the digital environment 3D physical model.</p>	30 h Laboratory PL/ EN	2 nd (master) part time	4 (12) (spring)	4
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