

		<ul style="list-style-type: none"> ▪ can come up with interpretations and draw conclusions, student can carry out critical analysis of the manner of operation and assess the existing solutions, systems and processes related to design of single family residential building, ▪ student can identify a design problem and on the basis thereof, can draw up specification of practical tasks in the scope of conceptual project of middle single family house,
3	Social competences:	<ul style="list-style-type: none"> ▪ understanding of the need to broaden the competences, readiness to work together in a group, ▪ student understands the need for lifelong learning; can inspire and organize process of learning other people, ▪ student is aware of the importance of non-technical aspects and effects of engineering activities, in this impact upon the environment and liability for environment affecting decisions, ▪ student can work and cooperate in the group, assuming a number of different roles therein, ▪ student correctly identifies and resolves dilemmas related to the correct application of existing legislation and administrative procedures, ▪ student can think and act in entrepreneurial, creative and innovative manner in the scope of seeking the means of expression during preparation the architectural concept and acquiring the materials useful to realization of them.

Objective of the course – LECTURES:

- presentation of issues related to designing human residential environment of low or medium intensity,
- presentation of types of single family housing,
- development of the ability to analyze of place in the urban planning and architectural scale,
- presentation of typology of detached house,
- application of known functional schemes in different configurations,
- development of the ability to simultaneous designing the views and block of building,
- development of the ability to graphic presentation of architectural conception (views, sections and facades),
- development of the ability to manual drawing giving facilities for solutions differentiation,
- development of the ability to building models (working and target models),
- improving the knowledge and ability to preparation of conceptual drawings (views, sections and facades) based on building knowledge.

Objective of the course – DESIGN CLASSES:

- presentation of issues related to designing human residential environment of low or medium intensity,
- presentation of types of single family housing,
- development of the ability to analyze of place in the urban planning and architectural scale,
- presentation of typology of detached house,
- application of known functional schemes in different configurations,
- development of the ability to simultaneous designing the views and block of building,
- development of the ability to graphic presentation of architectural conception (views, sections and facades),
- development of the ability to manual drawing giving facilities for solutions differentiation,
- development of the ability to building models (working and target models),
- improving the knowledge and ability to preparation of conceptual drawings (views, sections and facades) based on building knowledge.

Learning outcomes

Knowledge:

W01	student has explicit, theoretically based knowledge including the key issues and has detailed knowledge of selected issues of the theory of architectural designing	AU1_W01
W02	student has knowledge in the scope of housing, knows the principles of designing residential architecture	AU1_W15

Skills:

U01	student can prepare and present oral presentations as well as a well-documented elaborations on issues related to architecture and urban planning	AU1_U03
U02	student can make spatial models (mock-ups) allowing for carrying out simulation and experiments with the use of a variety of materials, in this can perceive on their basis, non-technical aspects such as perception processes among others	AU1_U08
U03	student can use various technical and material means for the presentation of an architectural idea	AU1_U27

Social competences:

K01	student understands the need of continuous self-education - improvement of professional, personal and social competences	AU1_K03
K02	student is aware of the social and humanistic aspects of the architect's work - a profession of public trust	AU1_K09

The evaluation methods:

The evaluation methods - lectures:

A series of lectures of "Theory And Principles Designing Housing Architecture 1" ends with the exam. The basis for participation in exam is credit of classes within the learning module. The condition of credit is to obtain a positive assessment of the final exam.

The evaluation methods - classes:

Individual consultations with the teacher, current assessment of design works progress.

Partial reviews summarize subsequent stages of implementation of design task. The condition of credit the course is obtain a positive assessment for partial reviews (formative assesment).

Final review at the last classes – projects exhibition and the commission assessment of projects by 3 teachers.

Prerequisites for credit and evaluation method of project. The following elements are evaluated:

- a) completeness of work in analytic, design and descriptive part, graphic quality of project,
- b) the quality of design solutions,
- c) the degree of connection of designed building with surrounding,
- d) relations between public space, semi-public and private space,
- e) realization of psychophysical and social needs of the residents,
- f) innovation of formal and functional solutions,
- g) correct resolve of technical issues related to residential building,
- h) aesthetics and readability of graphic and descriptive part and model.

Final grading scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0

Course contents

Lectures:

Course of "Theory And Principles Designing Housing Architecture (1)" covers a series of lectures:

Lecture no. 1

How to design a good apartment

The lecture introducing to issues related to design of housing, issues of residential environment and specifics of conditions.

Lecture no. 2

Functions of apartment – and technical specifications

The lecture develops and details the issues related to basic functions, which should be fulfilled by apartment, house in the light of knowledge about forming the functions, ergonomics, social relations etc. and in the context of current building legislation and technical specifications, which should be fulfilled the buildings and their location.

Lecture no. 3

The architecture of detached houses

During the lecture are presented conditions related with designing the detached house. There are presented the following issues: family model and adoption to individual needs of residents, types of building development, possibilities and restrictions related with them, the utilities, functions of particular spaces.

Lecture no. 4

The residential environment

During the lecture are presented issues consisting on concept of "residential environment" including social, spatial, functional and infrastructural components in apartment, apartment building and its environment, as well as in the urban planning context.

Lecture no. 5

The housing architecture in multifamily building

During the lecture are presented conditions related to designing the apartments in multifamily building. There are presented the following issues: the impact of demography on housing policy, norms and standards of housing, programmatic features of apartments and buildings and designing the environment of buildings and complexes of multifamily building.

Lecture no. 6

The architecture of energy-efficient houses

During the lecture are presented the basic issues related to energy saving in the building process of housing architecture and conditions of designing the houses in energy-efficient and passive standard.

Lecture no. 7

Adaptations and reconstructions

During the lecture are presented the adaptations of facilities with primal function different than residential (industrial, military function) to housing functions (e.g. lofts) and reconstructions of existing apartment and adaptation their functional layout to current housing needs.

Lecture no. 8

The shelter

During the lecture are presented the examples of solutions, which providing the basic elements to protect human from adverse external conditions and provide minimum to living under certain conditions.

Lecture no. 9

House, apartment and Vernacular and neo-Vernacular architecture

During the lecture are presented: form, function in the Vernacular housing architecture and local materials and ecological aspects related to their use. Also are presented the possibilities of contemporary use of neo-Vernacular ideas in housing architecture.

Lecture no. 10

The architecture of residential environment designing with support of public funds

During lecture are presented the issues of experiences related to designing the residential environment created with support of public funds.

Lecture no. 11

Social housing

Criteria and features of distinguish in the context of sustainable development idea.

Lecture no. 12

The examples of creative designing the housing architecture

Adoption of building to features of place identity. **The camouflaged houses.**

Lecture no. 13

The principles of designing housing architecture (1). Summary and evaluation.

During the lecture will be summed the series of lectures and will be carried out the evaluation of assimilation process of information from lectures, including the assessment of value of absorption level of issues presented in the scope of theory and principles of designing the housing architecture (1).

Classes:

Conceptual project of any type of detached house on the given parcel/parcels for residents with individuality selected by student.

Analytical part:

- the analysis of initial materials (basic maps, air and satellite photos), autopsy vision of terrain documented by sketches, drawings and photos,
- the analyses in the urban planning and architectural scale: structures of building, greenery, communication, altitude analysis, valorization analysis and insolation,
- critical analysis of Master Plan and administrative decisions concerning terms of construction and land management
- conclusions, design guidance – determine the profile of residents,
- current scale: 1:500.

Design part:

Individual project work:

- context: inclusion of block into environment, public-private relations, interior – exterior,
- function: the implementation of primitive and derivative needs of users compatible with their individuality,
- form: forming the complex human living environment, of which expression corresponds to the individual needs of residents and realizes need of social dialogue in the same time.

Required elements of project: drawing and photographic cataloguing, analytic part, the project of parcel development, views of all storeys, sections (minimum 2), facades with emphasis the used materials and coloring, perspectives: internal and external, descriptive part: the superficial and capacity indicators, surfaces statement, urban planning model (with surrounding in the scale 1:500), architectural model (with parcel 1:100).

Basic bibliography:

- Adamczewska-Wejchert H., Kształtowanie zespołów mieszkaniowych, Arkady, Warszawa 1985 + nowe wyd
- Adamczewska-Wejchert H. , Domy atrialne, Arkady, Warszawa
- Basista A., „Betonowe dziedzictwo”
- Barek R., Architektura środowiska mieszkaniowego tworzonoego z udziałem środków publicznych (wyd. drugie), Wydawnictwo Politechniki Poznańskiej, Poznań 2009.
- Dąbrowska –Milewska G., Zabudowa mieszkaniowa w kształtowaniu przestrzeni miasta.
- Grandjean Etienne – Ergonomia mieszkania
- Korzeniewski W.(1989) – Budownictwo mieszkaniowe poradnik projektanta, Arkady , Warszawa1989
- Korzeniewski W. (2011) – Projektowanie mieszkań, Wydawnictwo POLCEN, Warszawa 2011
- Korzeniewski W. Warunki techniczne dla budynków i ich usytuowanie-poradnik z komentarzem , (wydanie 8 i późniejsze) PolCen , Warszawa 2009.
- Pallado J., Architektura wielorodzinnych domów dostępnych.
- Rozbicka M., Małe mieszkanie z ogrodem w tle, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2007.
- (red.) Gałęziowski J., Odbudowa polskiego miasteczka, Kraków 1916, reprint Wydawnictwo Górnollesie, Lublin 2007
- Peters P., Rosner R. Małe zespoły mieszkaniowe , Arkady, Warszawa.
- Włodarczyk J.A. – Życie znaczy mieszkać, PWN, warszawa-Kraków 1997

- ROZPORZĄDZENIE MINISTRA INFRASTRUKTURY z dnia 12 kwietnia 2002r w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie (Dz.U.Nr75,poz.690 z późniejszymi zmianami.)
- Ustawa z dnia 7 lipca 1994 r. Prawo budowlane.
- Rozporządzenie Ministra Infrastruktury z dnia 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie.
- Bell Jonathan, *21st Century House*, wyd. Laurence King, Londyn, 2006.
- Chueca Pilar, *Today's city houses*, wyd. Structure, Barcelona, 2006.
- Davies Colin, *Key houses of the twentieth century*, wyd. Laurence King Publishing, Londyn, 2006.
- Melhuish Clare, *Modern house 2*, wyd. Phaidon, Londyn, 2000.
- Neufert E., Podręcznik projektowania architektoniczno-budowlanego, Arkady, Warszawa 1980 + nowe wydania

Supplementary bibliography:

- Ghel J., *Życie między budynkami. Użytkowanie przestrzeni publicznych*, Wydawnictwo RAM, Kraków 2009.
- Neufert E., *Podręcznik projektowania architektoniczno-budowlanego*, Arkady, Warszawa 1980 + nowe wydania.
- Wječert K., *Elementy kompozycji urbanistycznej*, Arkady, Warszawa.
- Żórawski J., *O budowie formy architektonicznej*, Arkady, Warszawa 1962.
- Rasmunssen S.E., *Odczuwanie architektury*, Wyd. Murator, Warszawa 1999.
- *Periodyki: Czasopisma architektoniczne, urbanistyczne, zeszyty Naukowe Politechniki Poznańskiej, seria Architektura i Urbanistyka*, itp.
- *Renomowane pisma architektoniczne (krajowe i zagraniczne).*
- Giedion Siegfried, *Przestrzeń, czas, architektura. Narodziny nowej tradycji*, tłum. J. Olkiewicz, PWN, Warszawa, 1968.
- Jencks Charles, *Architektura postmodernistyczna*. tłum. B. Gadowska, Arkady, Warszawa, 1987.
- Riley Terrence, *The Un-Private House*, The Museum of Modern Art, Nowy York, 1999.

The student workload

Form of activity	Hours	ECTS
Overall expenditure	210	8
Classes requiring an individual contact with teacher	84	3
Practical classes	126	5

Balance the workload of the average student

Form of activity	Number of hours
participation in lectures	30 h
participation in classes/ laboratory classes (projects)	45 h
preparation for classes/ laboratory classes	13 x 6 h = 78 h
preparation to colloquium/final review	24 h
participation in consultation related to realization of learning process	7 x 1 h = 7 h
preparation to the exam	24 h = 24 h
attendance at exam	2 h

Overall expenditure of student: **8 ECTS credits** **210 h**

As part of this specified student workload:

- activities that require direct participation of teachers:
30 h + 45 h + 7 h + 2 h = **84 h** **3 ECTS credits**