COURSE DESCRIPTION CARD							
The name of the course/module THEORY OF FUNDAMENTAL ARCHITECTURAL DESIGN WITH ELEMENTS OF ERGONOMICS 1				Code A_K_1.1_002			
Main field of study Educational profile				Year / term			
ARCH	ITECTU	RE			(general academic, practical) general academic	I/1	
Specjalization _			-		Language of course: Polish	Course (core, elective) CORE	
Hours						Number of points	
Lectu	ıres: 30	Class	ses: - Labo cl	oratory - asses:	Projects / seminars: 45	1+7=8	
Level of the studies: I Form of (full-time studies) I Full-1 and		Form of s (full-time s studies)	tudies studies/part-time	Educational area(s) Technical Sciences		ECTS distribution (number and %)	
		Full-t and	ime studies part-time studies			8 pkt 100 %	
Courses	status in the s	studies' prog dir	gram (basic, directional ectional	, other)	(general academic, from a differe	ənt major) -	
Leo	cturer res	sponsib	le for the cours	e:	Lecturer:		
Prof. n. dr hab. Inż. arch. Ewa Prusze e-mail: ewa.pruszewicz-sipinska@put. Faculty of Architecture ul. Nieszawska 13A, 61-021 Poznań tel. 61 665 33 05			r ch. Ewa Pruszew z-sipinska@put.po 1-021 Poznań	r icz-Sipińska znan.pl	 Sipińska dr hab. inż. arch. Radosław Barek .pl e-mail : radoslaw.barek@put.poznan.pl Faculty of Architecture ul. Nieszawska 13A, 61-021 Poznań tel. 61 665 33 05 		
Prere	quisites	defined	in terms of kno	owledge, ski	lls, social competence	s:	
1	1 Knowledge:		 Student has basic knowledge of art history, including architecture, Student has basic knowledge of development trends of fine arts and architecture, 				
			 Student has basic knowledge required for the understanding of social determinants of design work of architect, which has direct impact to surrounding area, 				
		 Student knows basic methods, techniques, tools and materials used to solve simple tasks of designing the architectural composition. 					
2	2 Skills:		 Student use the techniques of manual drawing in the designing process, Student can acquire information from publications, data bases and other carefully sources, also in English or another foreign language considered as a language of international communication, can integrate the acquired information, make their interpretation, draw conclusions, formulate and justify opinions, 				
		 Student can communicate using different IT tools in the professional environment and in other environments, 					
		 Student can prepare in Polish (and foreign language), which is considered essential for the field of science and scientific disciplines relevant to the field of study being studied, well-documented description of problems 					
		 Student has self-education skills 					

3	Social Competences	 Student understands the need for lifelong learning; can inspire and organize process of learning other people,
		 Student is aware of the importance of issues made by the architect and the related responsibilities for their actions,
-		 Student is able to think and act in an entrepreneurial, creative and innovative manner,
		 Student can work and cooperate in a team, assuming a number of different roles therein

Objective of the course – LECTURES:

- Presentation of design process, including basic tools of architect work and the main issues related to forming architectural and urban form,
- Presentation of psychophysical relations between human and architecture and design rules consistent to ergonomics,
- Presentation of basic principles of architectural composition,
- Presentation of basic principles of urban composition,
- Introduction to issues concerning development of diverse and often conflicting against each other directions and trends of contemporary architecture and urbanism, including its beginnings, sources of inspiration, program objectives and directions of development.
- Presentation of continuity and evolutionary nature of changes in architecture,
- Introduction to issues concerning changes in architecture resulting from development of culture and society (the transition from an industrial society to information society), which took place in the 20th century and still proceed at the present time,
- Sensitivity to the role of wider context.

Objective of the course – DESIGN CLASSES:

- Knowledge of basic issues in the field of ergonomics: anatomical and physiological determinants of human functioning properly,
- Knowledge of basic problems related to the issues of shaping architectural composition and the future vision the shape,
- Basic knowledge of the relationship between human and device or object,
- Knowledge of basic issues related to elements of urban composition,
- Knowledge of human and monumental scale,
- Knowledge of issues related to the evolution of color and helioplasticy.
- Knowledge and improvement of basic tools and materials useful in the presentation achieved solutions in the field of architectural composition,
- Understanding the relationship between the flat drawing and three-dimensional interpretation,
- Create abstract flat and spatial compositions causing intentional emotions, associations and moods,
- Practice mapping of spatial composition in the form of flat projections onto plains (plans, sections, views, etc.)
- Practice mapping of spatial composition in the form of models,
- Practice teamwork and finding themselves in a variety of roles,
- Practice presentation methods of design solutions, the composition of design boards.

	Learning outcomes	
Knowled	lge:	
W01	Student has basic knowledge on modern trends in the architectural design	AU1_W02
W02	Student has knowledge in the field of theory of architectural design	AU1_W12
W03	Student has detailed knowledge concerning basics of architectural design and spatial composition	AU1_W13
Skills:		
U01	Student can acquire information from publications, data bases and other Polish and English sources, can interpret the said information and draw conclusions as well as voice and justify opinions	AU1_U01

U02	Student can use means of artistic expression, typical for the execution of tasks of designing an architectural composition	AU1_U07
U03	Student can use various technical and material means for the presentation of an architectural or urban idea	AU1_U27
Social co	ompetences:	
K01	Student observes the principles of professional ethics; is responsible for the reliability of the obtained results of his/her work and their interpretation	AU1_K02
K02	Student can think and act in an entrepreneurial, creative and innovative manner	AU1_K07

The evaluation methods

LECTURES:

Assignments: on the basis of collected materials (sketches, photographs) students prepare a photographic essay depicting contemporary existing building (on any scale) and they evaluate it in the form of authorial commentary. Students complete the graphics part of the essay with the necessary data (author, object name, location, year of description/implementation). Assessed is graphics and text part of work and completeness of work, quality and compositions of the boards, Format A-3, any technique. Electronic record format: JPG or PDF. Students give electronic version of the work on CD-ROM. The basis of taking the exam is to get credit for classes in the education module.

Summative assessment:

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

DESIGN CLASSES:

Prerequisites for passing and method of evaluation. An important criterion for the project evaluation is an approach to the following topics:

- Knowledge of human body's proportions and the elements of ergonomics,
- Ability to perceive and analyze of the human figure in the context of environment, everyday objects and architectural context,
- Forming an abstract architectural composition based on principles derived from theoretical studies,
- Forming an abstract architectural composition causing specific, scheduled emotions, associations and moods
- Practice projection of spatial composition in the form of flat projections onto plains (projections, sections, views, etc.), axonometry, sketches and perspectives,
- Practice projection of spatial composition in the form of models,
- Analysis of architectural and urban context,
- The use of basic tools and materials useful in the presentation achieved solutions of architectural composition,
- Presentation of design solutions in the form of composed/designed boards,
- Presentation of design solutions bearing the handmade text,
- Presentation of design solutions made aesthetically and legibly.

Formative assessment:

- Partial reviews, including individual design tasks, checking the progress of student's work, presented in front of the group, joint discussion,
- Partial reviews, including individual design tasks, checking the progress of student's work, presented in front of other leading classes – brainstorm, joint discussion,
- Final grading scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0.

Summative assessment:

- Final review, including the last design task, which is a summary of knowledge and skills acquired in the previous projects, presentation in front of the group or on collective review in front of other lecturer,
- The comprehensive review, including previous made topics, in order to verify student's development in the context of last design task,
- Conditions for passing is obtain positive grades from all reviews,
- Final grading scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,

Course contents

Lectures:

Lecture 1

The architectural design, determinants of project; phases of architectural design; examples of project and implementation.

Lecture 2

Lecture 3

Contemporary architecture in Poland; discussion of contemporary architecture features on the examples of Polish implementations of the last 15 years (single family house, multifamily building, public building, commercial building).

Lecture 4

Contemporary architecture in the world; discussion of contemporary architecture features on the examples of different countries implementation of the last 15 years (single family house, multifamily building, public building, commercial building).

Lecture 5

The architectural design, presentation and discussion of the architectural design components – plot development design, projections, sections, facades, perspective, axonometry, detail.

Lecture 6

Architectural object; a critical analysis of the existing architectural object, presentation methods of existing building.

Lecture 7

A small architectural form in the urban space, a variety of contemporary architectural language (form, function, materials), multitude of creative attitudes architects.

DESIGN CLASSES:

Topic no. 1

Silhouette of man – parameters – introduction to ergonomics

The task is a measurement and making preliminary sketches depicting the parameters characterizing silhouette of human (standing, sitting, moving, with luggage etc.).

Part 1: Individual work. Drawings graphically draw up, complete, describe hand. Compose all in the A-3 format.

Part 2: Individual work. Make sketches in the terrain – preparation for selection of an element's location in the space (topic no 4). Sketches make in urban space of Poznań while walking route e.g.: Śródka - Ostrów Tumski- Garbary - Old Market (sketches size A-5 or A-4). Sketches must be complete with synthetic descriptions concerning the characteristics of the space and observed elements of its equipment and function.

Topic no. 2

Form and function

Design a form in space made of simple shapes (cylinder, rectangular prism, pyramid recommended by the teacher). Project represented by the models and graphically (projections, views, axonometry, facades, sections). For more analytical form of task, output composition (flat) may consist of 3 or 5 basic figures of selected: square, circle, triangle. Form can serve as a seat, shelter, rest. In the model and drawings presented for comparison scale figure of human, using measurement study of the human figure from topic no. 1. The project should include: preliminary sketches, design sketches, final views, axonometry, views and sections.

Part 1: Individual work. Preparation of projects including a flat composition.

Part 2: Individual work, including implementation of sketches, axonometry, perspectives, which presented development of flat composition in the space. At this stage there are models presenting spatial solutions and the phenomenon of light and shadow.

Part 3: Individual work, including implementation of final monochrome model and then document of phenomena occurring on the model in a variety of lighting scenarios

Part 4: Individual work. Presentation of design solutions on the boards containing the description, drawings, perspectives, axonometry and photos.

Topic no. 3

Model of complex structure - chiaroscuro, illumination, texture, color

Perform a model of a complex structure, which is an interpretation of complex urban or architectural composition. Also allowed the continuation of the previous topic and use of created spatial composition to be enriched by elements of texture and color. To conduct studies of created structure by the use of different

texture, color and lighting. The final model is a basis of photographic registration. Perform boards with descriptions.

Part 1: Individual work. Searching for various materials to perform model.

Part 2: Individual work. Preliminary and conceptual sketches to illustrate dependencies and rules for the selections of the used material.

Part 3: Individual work. Working models presenting dependencies and rules for the selections of the used materials.

Part 4: Individual work. Presentation of design solutions on the boards containing the description, drawings, perspectives, axonometry and photos.

Topic no. 4

The project, sketch, model and place context

Design a spatial form (sketches, model, projections, sections), test its impact on the environment in views, panoramas of the existing part of the city.

Part 1: Group work. Performance of land model/space context as a basis for future abstract architectural composition. Location agreed with the teacher (possible choice of space from exercise no. 1).

Part 2: Individual work. Preliminary and conceptual sketches presenting the seeking of form localized in context. The spatial composition is made on the basis of analyses. Working model.

Part 3: Individual work. Working models showing the relationship between design form and space context. The composition supported by analysis made on the basis of substantive foundation. The model also illustrates the rule in the selection of materials.

Part 4: Individual work. Presentation of design solutions on the boards containing the description, drawings, perspectives, axonometry and photos.

Basic bibliography:

- 1. Ch. Jencks, Architektura postmodernistyczna, Warszawa 1984
- 2. Ch. Jencks, Architektura późnego modernizmu, Warszawa 1985
- 3. Ch. Jencks, Ruch nowoczesny w architekturze, Warszawa 1987
- 4. A.Szymski, S.Latour, Rozwój współczesnej myśli architektonicznej, Warszawa 1985
- 5. P. Jodidio, Nowe formy. Architektura lat dziewięćdziesiątych XX wieku, Warszawa 1998
- 6. P. Nuttgens, Dzieje architektury, Warszawa 1997
- 7. D.Ghirardo, Architektura po modernizmie, Toruń 1999
- 8. D.Watkin, Historia architektury zachodniej, Warszawa 2001
- 9. Fikus M., Przestrzeń w autorskich zapisach graficznych, Wyd. PP. IAiPP, Poznań 1991
- 10. Wjechert K., Elementy kompozycji urbanistycznej, Arkady, Warszawa
- 11. Żórawski J., O budowie formy architektonicznej, Arkady, Warszawa 1962.

Supplementary bibliography:

- 1. Bańka Augustyn, Architektura psychologicznej przestrzeni życia. Behawioralne podstawy projektowania architektonicznego, Gemini S.C., Poznań, 1997.
- 2. Jencks Charles, Architektura Postmodernistyczna, Arkady, Warszawa, 1987.
- 3. Jencks Charles, Architektura późnego modernizmu i inne eseje, Arkady, Warszawa, 1989.
- 4. Jodidio Philip, Nowe formy. Architektura lat dziewięćdziesiątych XX wieku, Taschen, Muza S.A. Warszawa, 1998.
- 5. Krier Rob, Urban space, Rizzoli, New York, 1979.
- 6. Norberg-Schulz Christian, Znaczenie w architekturze zachodu, Wydawnictwo Murator, Warszawa, 1999.
- 7. Adamczewska-Wejchert H., Kształtowanie zespołów mieszkaniowych, Arkady, Warszawa 1985 + nowe wyd.
- 8. Ghel J., Życie między budynkami. Użytkowanie przestrzeni publicznych, Wydawnictwo RAM, Kraków 2009
- 9. Neufert E., Podręcznik projektowania architektoniczno-budowlanego, Arkady, Warszawa 1980 + nowe wydania
- 10. Rasmunssen S.E., Odczuwanie architektury, Wyd. Murator, Warszawa1999
- 11. Periodyki: Czasopisma architektoniczne, urbanistyczne, itp

The student workload			
Form of activity	Hours	ECTS	
Overall expenditure	208,5	8	
Classes requiring an individual contact with teacher	87,5	3	

Practical classes	152,5	6
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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 5 h = 65 h
preparation to colloquium/final review	4 x 8 h = 32h
participation in consultation related to realization of learning process	7 x 1,5 h = 10,5 h
preparation to the exam	24 h
attendance at exam	2 h

Overall expenditure of student: 8 ECTS credits

208,5 h

As part of this specified student workload:

• activities that require direct participation of teachers:

30 h + 45 h + 3 h + 2 h = **87,5 h**

3 ECTS credits