

COURSE DESCRIPTION CARD				
The name of the course/module ARCHITECTURAL DESIGN OF WORKPLACES 2			Code A_K_2.1_004	
Main field of study ARCHITECTURE		Educational profile (general academic, practical) general academic	Year / term I/1	
Specialization -		Language of course: polish/english	Course (core, elective) core	
Hours Lectures - Classes: 45 Laboratory classes: - Projects / seminars -			Number of points 4	
Level of qualification: II	Form of studies (full-time studies/part-time studies) Full-time studies	Educational area(s) Technical Sciences	ECTS distribution (number and %) 4 100%	
Course status in the studies' program (basic, directional, other) directional		(general academic, from a different major) general academic		
Lecture responsible for the course: prof. dr hab. inż. arch. Wojciech Bonenberg e-mail: wojciech.bonenberg@put.poznan.pl Faculty of Architecture ul. Nieszawska 13C, 61-021 Poznań tel. 61 665 32 60		Lecturer: mgr inż. arch. Piotr Zierke e-mail: piotr.zierke@put.poznan.pl Faculty of Architecture ul. Nieszawska 13C, 61-021 Poznań tel. 61 665 32 60		
Prerequisites defined in terms of knowledge, skills, social competences:				
1	Knowledge:	<ul style="list-style-type: none"> ▪ student has explicit, theoretically based and detailed knowledge including the key issues of designing workplaces architecture, ▪ student has detailed knowledge of development trends in the scope of designing workplaces architecture, ▪ student has detailed knowledge required for the understanding of social, economic, legal and other determinants outside the engineering field of designing workplaces architecture, 		
2	Skills:	<ul style="list-style-type: none"> ▪ student can acquire information from publications, data bases and other Polish and English sources, can integrate the acquired information, can interpret the said information and draw conclusions as well as voice and justify opinions, ▪ student can carry out critical analysis of the manner of operation and assess the existing solutions, systems and processes, ▪ can communicate using different techniques in the professional environment and in other environments, 		
3	Social competences:	<ul style="list-style-type: none"> ▪ 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 , ▪ can work and cooperate in a team, assuming a number of different roles therein, ▪ is aware of social role of technical studies graduate, especially understands the needs of formulation and communication to the public, especially by mass media, information and opinions related to the achievements of technique and other aspects of engineering activity; makes efforts to provide such information and opinion in commonly understood manner. 		
Objective of the course:				
<ol style="list-style-type: none"> 1. get the ability to designing the complex architectural structures, 2. gain experiences in the issues of architectural designing workplaces supported by relevant theoretical knowledge, 3. knowledge of modern methods of searching innovative design solutions with using the conceptual modeling, CAAD, analysis of functional connections, 4. get the ability to designing the work premises (especially office premises), hygienic and sanitary premises and gastronomic premises in workplace. 				

Learning outcomes		
Knowledge:		
W01	Student has explicit, well-grounded theoretical knowledge on designing commercial facilities, offices and other work;	AU2_W07
W02	Has detailed knowledge on selected topics of theory of network systems, acoustic systems, lighting, ventilation and air-conditioning as well as waste disposal systems and on designing such systems;	AU2_W09
W03	Student knows basic methods, techniques, tools and materials applied in the solutions of complex engineering tasks in the scope of architectural designing of complex architectural facilities with complex layout of functions, complex structural layout and complex technologies;	AU2_W11
W04	has the right knowledge of the humanisation of work places, ergonomics and OHS in engineering designing that is in architectural designing and town planning.	AU2_W14
Skills:		
U01	can plan respective stages of the designing process, can carry out analytical study and optimise variant design solutions, as well as can interpret the synthetic data and verify the adopted assumptions;	AU2_U08
U02	can design the architecture of complex architectural facilities with complex layout of functions, complex structural layout and complex technologies	AU2_U17
Social competences:		
K01	can work on a task, comprising many different problems, in a responsible manner, individually and in a team;	AU2_K01
K02	observes the principles of professional ethics; is responsible for the reliability of the obtained results of his/her work and their interpretation	AU2_K03
The evaluation methods:		
<p>Credit conditions</p> <ul style="list-style-type: none"> ▪ Regularity and punctuality of studying. Implementation of existing design tasks. ▪ Attention is given to effective using hours of design classes provided in the program for real project work during classes in university, under protection of employees of Division of Work Places and Recreation (Z1). ▪ Participation in classes (related to both lectures and classes). <p>No active attendance in more than one third of classes prevents completion of the course (even in the case of giving semester work). This condition is related to impossibility of systematic control over independent implementation of project by student in the case of absence at classes.</p> <p>Formative assessment:</p> <ul style="list-style-type: none"> ▪ assessment of knowledge and presentation in the forum of group, joint analysis and discussion, ▪ assessment of delivered report with conclusions to discussion, ▪ presentation on CD with detailed draft and detailed bibliography, ▪ participation in discussions and formulation of final conclusions. <p>Grading scale: 2,0, 3,0; 3,5; 4,0; 4,5; 5,0</p> <p>Summative assessment:</p> <ul style="list-style-type: none"> ▪ grade obtained for written exam, is an average of partial grades (knowledge and drawing skills) <p>Final grading scale: 2,0, 3,0; 3,5; 4,0; 4,5; 5,0</p> <p>Positive grade for module depends on achieved by student all learning outcomes specified in the syllabus.</p>		
Course contents		
<p>Development of conceptual design of plant of creative industry.</p> <p>Stage 1. Analysis:</p> <p>2-week stage of studies of design task, enabling the start of conceptual work.</p> <p>Includes:</p> <ul style="list-style-type: none"> ▪ to study and discuss the received set of information about the topic. ▪ selection of technology (type of creative industry). Preliminary calculation of superficial demand on the basis of functional and usable program and adopted number of employees ▪ function study, implementation of schemas of functional and technological connections (variants). Estimation of surface and shape the needed parcel, accounting for the land reserve for future extension. ▪ preliminary sketches of variants of land management (1:500). ▪ preliminary concepts of architectural form executed in the form of simple working models (e.g. texture, foamed polystyrene). During classes student should have tools (scissors, glue, scotch tape, texture, foamed polystyrene) to work with model in the class. May be useful digital camera to recording emerging ideas. <p>Stage 2. Conception:</p>		

3-week stage of creative work on design conception, setting the architectural and urban vision of creative industry plant. Architectural and urban conception of plant on selected parcel includes:

- preliminary development of 3 different variants of land management using working models. Variants should differ with the composition, intensity of buildings (number of storeys), the degree of plant blocking.
- study sketches.
- selection of the best variant to further development.

Stage 3. Development of conception:

6-week stage of creative work on selected design variant in the functional, technical and compositional scope. Includes development of architectural design conception of plant of creative industry:

- master plan of selected variant (1:500). Plan should include: buildings, car roads, park lots for employees, park lots for customers, maneuverable squares (delivery and exportation of goods), pavements for walkers, high and low greenery, location of "small architecture".
- schemas of movement (the flow of people and materials) on master plan. The analysis of collision points.
- profiles of designing plant included in landscape context (1:500).
- development of architectural design of selected fragment (or the whole) of plant (1:200) with participation of classes leading. In the case of development of fragment, design should include hygienic and sanitary subsidiaries for employees, administrative and office part and gastronomy.

The accuracy and scope of development should be close to the stage "architectural conception" (according to The Association of Polish Architects standards).

Stage 4. Graphical development (architectural marketing):

4-week stage of works on a graphical presentation of design. Includes:

- graphical development of boards „on a purely" (50x70 cm format). Development is a result of existing creative achievements and is important element of student work promotion. Has an important impact on final assessment. Development should in attractive graphical form present the whole cycle of designing: preliminary compositional variants, selection of the best variant, Master Plan and architectural conception of selected variant. In assessing the emphasis will be put on correctness of functional solutions, innovation and creativity proposed architecture and also the ability to presentation of the most important advantages of design.

Basic bibliography:

1. Bonenberg W. Przemysł w Mieście. Ekologiczna metoda modernizacji zakładów przemysłowych zlokalizowanych na obszarach intensywnie zurbanizowanych. Zeszyty Naukowe Politechniki Śląskiej. Gliwice 1985,
2. Charytonowicz J. Zasady Kształtowania laboratoryjnych stanowisk pracy. Oficyna Wydawnicza Politechniki Wrocławskiej. Wrocław. 1994.
3. Neufert E. Podręcznik projektowania architektoniczno-budowlanego. Arkady. Warszawa. 1995.
4. ROZPORZĄDZENIA MINISTRA INFRASTRUKTURY z 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie (Dz.U. 2002 r., Nr 75, poz. 690).
5. ROZPORZĄDZENIA MINISTRA PRACY I POLITYKI SOCJALNEJ z 26 września 1997 r. w sprawie ogólnych przepisów bezpieczeństwa i higieny pracy (Dz.U. 1997 r. Nr 129, poz. 844).
6. Werner W.A. Proces inwestycyjny dla architektów. Oficyna Wydawnicza Politechniki Warszawskiej. Warszawa. 1994.

Supplementary bibliography:

1. Małecki Z. (red). Problemy socjologiczne aglomeracji miejsko-przemysłowych. Komitet Inżynierii Środowiska PAN. Kraków. 1995.
2. Smoleń M. Przemysły kultury. Wpływ na rozwój miast. Wydawnictwo Uniwersytetu Jagiellońskiego. Kraków. 2003.
3. Szparkowski Z. Architektura współczesnej fabryki. Wydawnictwo OWPW. Warszawa. 1999.

The student workload		
Form of activity	Hours	ECTS
Overall expenditure	103	4
Classes requiring an individual contact with teacher	54	2
Practical classes	49	2

Balance the workload of the average student

forma aktywności	liczba godzin
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participation in lectures	0 h
participation in classes/ laboratory classes (projects)	45 h
preparation for classes/ laboratory classes	13 x 3 h = 39 h
preparation to colloquium/final review	10 h
participation in consultation related to realization of learning process	6 x 1,5 h = 9 h
preparation to the exam	0 h
attendance at exam	0 h

Overall expenditure of student:

4 ECTS credits

103 h

As part of this specified student workload:

- activities that require direct participation of teachers:

45 h + 9 h = **54 h**

2 ECTS credits