COURSE DESCRIPTION CARD - SYLLABUS

Course name
ARCHITECTURAL DESIGN OF WORKPLACES

Course

Field of study
ARCHITECTURE

Year/Semester
IV/8

Area of study (specialization)
-

Profile of study
general academic

Level of study
First-cycle studies

Course offered in
English

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)

Tutorials
0

Projects/seminars
0

Number of credit points

2

Lecturers

Responsible for the course/lecturer:
prof. dr hab. inż. arch. Wojciech Bonenberg
email: wojciech.bonenberg@put.poznan.pl
Wydział Architektury ul. Jacka Rychlewskiego 2, 61-131 Poznań tel. 61 665 32 60

Responsible for the course/lecturer:
mgr inż. arch. Izabela Piklikiewicz-Kęsicka
email: izabela.piklikiewicz-kesicka@put.poznan.pl
Wydział Architektury ul. Jacka Rychlewskiego 2, 61-131 Poznań tel. 61 665 32 60

Prerequisites

student has explicit, theoretically based knowledge including the key issues of designing workplaces architecture,

student has general knowledge of development trends in the scope of designing workplaces architecture,

student has knowledge required for the understanding of social, economic, legal and other determinants outside the engineering field of designing workplaces architecture

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

student can carry out critical analysis of the manner of operation and assess the existing solutions, systems and processes

student can communicate using different techniques in the professional environment and in other environments.

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 design activities, in this impact upon the cultural environment and liability for environment affecting decisions , can work and cooperate in a team, assuming a number of different roles therein,

student is aware of social role of architectural 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.

Course objective

• get the ability to designing the complex architectural structures,

• acquire experiences in the issues of architectural designing workplaces supported by relevant theoretical knowledge,

• knowledge of modern methods of searching innovative design solutions with using the conceptual modeling, CAAD, analyses of functional connections,

• get the ability to designing the work premises (especially office premises), hygienic and sanitary premises and gastronomic premises in workplace

Course-related learning outcomes

Knowledge

A.W1. architectural design for the implementation of simple tasks, in particular: simple facilities taking into account the basic needs of users, single- and multi-family housing, service facilities in residential complexes, public facilities in an open landscape or in an urban environment;

A.W4. principles of universal design, including the idea of designing spaces and buildings accessible to all users, in particular for people with disabilities, in architecture, urban planning and spatial planning, and ergonomic principles, including ergonomic parameters necessary to ensure full functionality of the designed space and facilities for all users, especially for people with disabilities

Skills

A.U4. make a critical analysis of the conditions, including the valorization of the land development and building conditions;

A.U6. integrate information obtained from various sources, formulate their interpretation and critical analysis;

Social competences

A.S2. taking responsibility for shaping the natural environment and cultural landscape, including the preservation of the heritage of the region, country and Europe.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The cycle of lectures ends with a written examination in the form of a test. There are two dates of examinations predicted, the second one is the resit examination. Summary grade: - grade obtained in the written examination. Adopted grade scale: 2,0 (unsatisfactory) 3,0 (satisfactory) 3,5 (satisfactory plus) 4,0 (good) 4,5 (good plus) 5,0 (very good).

Programme content

Specific isues:

Lecture 1. Hygienic and sanitary premises. Review of existing regulations. Types of sanitary and hygienic premises. Architectural requirements related to sanitary and hygienic premises.

Lecture 2. Cloak-rooms and working lavatories. The degree of employees soiling in technological process. Basic types of cloak-rooms and working lavatories. Functional systems. Calculation principles of number of sanitary facilities and superficial demand. Examples of architectural solutions.

Lecture 3. Architecture of office buildings. Technology of office work. Places of office work. Process of office work. Spatial interpretation of office technology. Basic spatial and functional layouts of offices. Office building. Division of surfaces. Flexibility and multifunctionality. Structural and installation specifics. Management of office building. Ergonomics of office work. Office landscape.

Lecture 4. Gastronomy. Technological and sanitary requirements. Dependent and independent canteens (with full production cycle). Technology of processing and food serving. Functional schemas. Examples of design solutions.

General issues:

Lecture 5. Industry in the city. Strategies of workplaces location in spatial and functional structure of urbanized areas. Production and urbanization. Workplaces, places of recreation and places of residence in the city. Transportation needs on line work – leisure – flat. Development of motorization – spatial effects.

Lecture 6. Dynamics of industry. Characteristic periods of development. Industrialization. Spatial expansion. Social transformations. Impact on the city infrastructure. The downfall of traditional interests of industry. Transport „work – house” as a main problem of spatial development of the city. Outside the city strategies of modern industry location. Degradation of old brownfield. Suburbanization phenomena, depopulation of city centers. Depreciation of downtown buildings in connection with downfall of

traditional interests of industry. New “industries of culture” as a chance for revitalization of downtown areas.

Lecture 7. Architecture of industry. Methods of searching the innovative design solutions. Principles of designing. Modularity. Zoning. Repeatability. Flexibility. Multifunctionality. Mobility. Compositional order. The investment process in industry. Stages of preparation and realization of industrial plant project.

Teaching methods

Lecture with multimedia presentation

eKursy (eLearning Moodle) – online system supporting the process of teaching and distant learning

Bibliography

Basic

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.

Additional

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.

Breakdown of average student's workload

	Hours	ECTS
Total workload	15	2,0
Classes requiring direct contact with the teacher	7,5	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	7,5	1,0

[1] delete or add other activities as appropriate