COURSE DESCRIPTION CARD - SYLLABUS

Course name
Engineering graphics and CAD [N1Bud1>GICAD1]

Course

Field of study
Civil Engineering

Year/Semester
1/1

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
part-time

Requirements
elective

Number of hours

Lecture
0

Laboratory classes
0

Other (e.g. online)
0

Tutorials
10

Projects/seminars
20

Number of credit points

3,00

Coordinators

dr inż. Krzysztof Szajek
krzysztof.szajek@put.poznan.pl

Lecturers

Prerequisites

KNOWLEDGE: Basic knowledge of geometry and descriptive geometry. SKILLS: The ability to obtain information from the indicated sources. SOCIAL COMPETENCES: Awareness of the need to acquire and expand knowledge. Willingness to cooperate in a team.

Course objective

Acquiring the ability to create architectural and construction drawings and to read information on archival drawings. To acquaint students with the markings used in the plot or area development plans and the principles of making construction drawings. To acquaint students with the elements of computer graphics in a two-dimensional perspective (projections and sections). To acquaint students with the basics of creating construction and building documentation based on three-dimensional geometry supplemented with information about the represented object.

Course-related learning outcomes

Knowledge:
They know the rules of technical drawing for creating and reading architectural and construction drawings.

Skills:
They can read architectural and construction drawings and prepare graphic documentation with the use of applicable markings and dimensions.
Uses information technologies, Internet resources and other sources to obtain information; is able to integrate and interpret the obtained information.

Social competences:
They are able to define priorities in the implementation of tasks set by himself and others.
They are responsible for the reliability of the obtained results and for their interpretation.
They are aware of the need to improve professional and personal competences.
They are ready to critically evaluate his knowledge and received content, as well as to critically evaluate the results of his own work.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
PROJECTS / TUTORIALS:
Assesment in the form of a test and evaluation of drawing works. Assessment criteria: 100%-91%-5,0; 90%-81%-4,5; 80%-71%-4,0; 70%-61%-3,5; 60%-51%-3,0; poniżej 50%-2,0

Programme content

PROJECTS / TUTORIALS:
Standardization in technical drawing. Drafting materials and tools. Rules for creating and folding drawing sheet formats. Graphic form of the drawing sheet. Graduations. Types and thickness of drawing lines and their purpose in architectural and construction drawings. Technical writing. Graphic designations of building materials. Definitions of basic structural elements of a building. Types of architectural and construction drawings and the rules for their preparation. Contractual and simplified graphic markings used in architectural and construction drawings: general, markings of building elements, markings of installations and equipment of building objects. General principles of dimensioning. Principles of dimensioning in architectural and construction drawings. Principles of drawing up inventory drawings and documentation drawings for renovation and modernization of the building.
Teaching methods: exercise method in the form of auditorium exercises - the method of administration in the form of a programmed text displayed using a computer, work with a book - an indication of the literature to study and master the material, additional explanations to understand the material. Exercise method in the form of design exercises - project method in combination with the instruction method - implementation of a design task based on the given rules and requirements.

Course topics

none

Teaching methods

Exercise method
Demonstration method
Design method

Bibliography

Basic
1. PN-ISO 6707-1:2008 Budownictwo. Terminologia. Terminy ogólne
2. PN-EN ISO 5457:2002 Dokumentacja techniczna wyrobu. Wymiary i układ arkuszy rysunkowych
3. PN-EN ISO 128-23;2002 Rysunek techniczny. Ogólne zasady przedstawiania. Część 23: Linie na rysunkach budowlanych
4. PN-EN ISO 3098-0:2002 Dokumentacja techniczna wyrobu. Pismo. Część 0: Zasady ogólne
5. PN-B01030:2000 Rysunek budowlany. Oznaczenia graficzne materiałów budowlanych
6. PN-B-01025:2004 Rysunek budowlany. Oznaczenia graficzne na rysunkach architektonicznobudowlanych

7. PN-ISO 7518:1998 Rysunek techniczny. Rysunki budowlane. Uproszczone przedstawianie rozbiórki i przebudowy
8. PN-B-01029:2000 Rysunek budowlany. Zasady wymiarowania na rysunkach architektonicznobudowlanych
9. PN-ISO 129:1996 Rysunek techniczny. Wymiarowanie. Zasady ogólne. Definicje. Metody wykonania i oznaczenia specjalne.
10. Rysunek techniczny budowlany - E. Miśniakiewicz, W. Skowroński, Warszawa, Arkady 200711. Rysunek techniczny w budownictwie - J. Bieniasz, B.Januszewski, M.Piekarski, Oficyna Wydawnicza Politechniki Rzeszowskiej, Rzeszów 2009
Additional
1. PN-EN ISO 5455:1998 Rysunek techniczny. Podziałki
2. PN-ISO 128-30:2006 Rysunek techniczny. Zasady ogólne przedstawiania. Część 30: Wymagania podstawowe dotyczące rzutów
3. PN-EN ISO 5456-1,2,3:2002 Rysunek techniczny. Metody rzutowania

Breakdown of average student's workload

	Hours	ECTS
Total workload	57	2,00
Classes requiring direct contact with the teacher	27	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00