

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Computer Graphics		Code 1010104141010111218
Field of study Civil Engineering First-cycle Studies	Profile of study (general academic, practical) (brak)	Year /Semester 2 / 4
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time,part-time) part-time	
No. of hours Lecture: - Classes: - Laboratory: 16 Project/seminars: -		No. of credits 1
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 1 100% 1 100%
Responsible for subject / lecturer: dr inż. Wojciech Sumelka email: wojciech.sumelka@put.poznan.pl tel. (0-48) 61 647-5923 Wydział Budownictwa i Inżynierii Środowiska ul. Piotrowo 5 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Knows the rules of technical drawing for creating and reading architectural drawings, construction.
2	Skills	Basic computer skills.
3	Social competencies	Awareness of the need to constantly update and supplement knowledge and skills.
Assumptions and objectives of the course: To acquaint students with elements of computer graphics in terms of two-dimensional (plans and sections).		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. Student knows the principles of geometry and technical drawing for creating and reading architectural drawings, building surveying and mapping, as well as their preparation with the use of CAD - [K_W02]		
Skills: 1. Student knows how to read architectural drawings, construction, installation and surveying, an inventory of structures and report the graphical environment of selected CAD programs. - [K_U14]		
Social competencies: 1. Student complements and extends knowledge of modern techniques, processes and technology. - [K_K03] 2. Student comply with the rules of ethics. - [K_K10]		
Assessment methods of study outcomes		
Assessment is done on a self-assessment of working at a computer in an AutoCad / QCad. The student has the task of drawing up a few simple drawings. In operation, it will be necessary to demonstrate the knowledge and ability to put into practice the skills learned in the classroom environments AutoCad / QCad.		
Course description		

<p>Students work in the computer lab using cad software (eg. AutoCad, QCad). The following aspects are discussed:</p> <ol style="list-style-type: none"> 1. Creating basic objects: line, polyline, point, circle, ring, arc, area, ellipse, rectangle, polygon. 2. Edition of objects: the toolbar change - erase, copy, mirror, move, chic, move, rotate, scale, cut the, extend. 3. Dimension: Dimension tool - linear, normal coordinates, radius, diameter, angle, line reference marker inside the base-line. 4. Layers: hiding, locking in viewports, close, color, line type, line width. 5. object snap modes: Finally, symmetry, center, point, quadrant, the point of intersection, extension, perpendicular, tangent, close, apparent parallel. 6 Entering text. 7 Hatch: area selection and a hatch pattern, preview hatch scale. 		
Basic bibliography:		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. Participation in laboratory	16	
2. Homework	8	
Student's workload		
Source of workload	hours	ECTS
Total workload	24	1
Contact hours	16	1
Practical activities	16	1