

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Computer Aided Design		Code 1010134231010130660
Field of study Environmental Engineering Extramural First-	Profile of study (general academic, practical) (brak)	Year /Semester 2 / 3
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: 15 Classes: - Laboratory: 20 Project/seminars: -		No. of credits 2
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 %) 2 100% 2 100%
Responsible for subject / lecturer: dr inż. Fabian Cybichowski email: fabian.cybichowski@put.poznan.pl tel. 61 665 24 14 Wydział Budownictwa i Inżynierii Środowiska ul. Piotrowo 5 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Knowledge about Excel, level intermediate.
2	Skills	Ability to work with personal computer, including Excel.
3	Social competencies	Awareness of the need to continually update and supplement one's knowledge and skills.
Assumptions and objectives of the course: Familiarize students with advanced Excel, in particular with the VBA addition.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student has basic programming skills concerning Visual Basic - [K_W07] 2. Student knows how to create and use macros in Excel - [K_W07] 3. Student knows how to create and use interactive formants - [K_W07] 4. Students knows the basics of programming in VBA extension for Excel - [K_W07]		
Skills:		
1. Basic programming skills in Visual Basic - [K_U02, K_U07, K_U09] 2. The student can write user functions in Excel VBA - [K_U02, K_U07, K_U09] 3. Student is able to create forms and interactive elements in Excel spreadsheet - [K_U02, K_U07, K_U09]		
Social competencies:		
1. The student is aware of the value of information and knowledge - [[K_K07]		
Assessment methods of study outcomes		
Podstawowy sposób sprawdzania efektów kształcenia: w ramach wykładu sprawdzian pisemny - test wielokrotnego wyboru przeprowadzany na ostatnich zajęciach, w ramach ćwiczeń laboratoryjnych ? kolokwium na ostatnich zajęciach.		

Course description		
Basic method for checking the effects of education: (lecture) multiple choice test performed on the last class, (laboratory exercises) ability test performed on the last class.		
Basic bibliography:		
1. John Walkenbach, Excel 2013 PL. Programowanie w VBA dla bystrzaków. Wydawnictwo Helion.		
2. John Walkenbach, Excel 2013 PL. Programowanie w VBA. Vademecum Walkenbacha. Wydawnictwo Helion.		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. Lectures	15	
2. Laboratory classes	20	
3. Preparation for laboratory classes	10	
4. Preparation for final tests	5	
Student's workload		
Source of workload	hours	ECTS
Total workload	50	2
Contact hours	35	2
Practical activities	20	1