

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Technical Drawings		Code 1010101121010110009
Field of study Civil Engineering First-cycle Studies	Profile of study (general academic, practical) general academic	Year /Semester 1 / 2
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: - Classes: - Laboratory: 15 Project/seminars: 15		No. of credits 2
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) university-wide
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. Krzysztof Szajek email: krzysztof.szajek@put.poznan.pl tel. (0-48) 61 665-2103 Faculty of Civil and Environmental Engineering ul. Piotrowo 5, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Fundamentals of geometry and descriptive geometry.
2	Skills	Ability to gain information from recommended sources.
3	Social competencies	Understanding the necessity of constant actualisation and complementation of knowledge. Readiness to undertake co-operation within a team.
Assumptions and objectives of the course: Obtaining the ability to execute architectural and building drawings as well as the ability to read information from archival drawings.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student knows technical drawings principles concerning execution and reading architectural and construction drawings - [K_W-02]		
Skills:		
1. Student can read architectural and construction drawings and prepare graphic documentation using effective symbols and dimensioning rules - [K_U14]		
2. Student can use information technology, Internet resources and other sources to collect information; student is able to integrate and interpret collected information - [K_U-17]		
Social competencies:		
1. Student is capable to work individually as well as to co-operate within the team on a given assignment - [K_K01]		
2. Student is responsible for the accuracy of obtained results of his/her work and is able to provide interpretation - [K_K02]		
3. Student is aware of the necessity of improvement his/her professional and personal skills - [K_K06]		
4. Student can formulate conclusions and describe results of his/her own work and is communicative in media presentations - [K_K09]		
Assessment methods of study outcomes		

<p>Laboratory: assessment is based on the practical test ? a student create a few simple drawings in CAD environment. The evaluation assess knowledge of CAD tools presented during the course tools as well as ability to apply them in practice.</p> <p>Project: student creates drawings of family house building (a horizontal and vertical section), which are then evaluated in the context of:</p> <ul style="list-style-type: none"> ? correct application of code rules of technical drawing, ? proper selection and use of CAD tools (including layers, blocks, etc.) ? correct presentation of structural and architectural elements ? readability, consistency and esthetics. 		
Course description		
<p>Standardisation in the technical drawing. Drawing instruments and materials. Drawing sheet sizes - rules for creating and folding. Graphical form of drawing sheets. Drawing scales. Line work - line type, thickness and application on construction drawings. Lettering. Graphical symbols of building materials. Definition of basic structural components of building. Drawing types included in building design documents and principles of their creation. Conventional and simplified graphical symbols used in architectural and construction drawings; general symbols, building component symbols, symbols for installations and appliances in buildings. General rules of dimensioning. Principles of dimensioning on construction drawings. Rules of preparing drawings for property condition surveys and documentation of redevelopments and modernisations.</p>		
Basic bibliography:		
<ol style="list-style-type: none"> 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 architektoniczno-budowlanych 7. PN-ISO 7518:1998 Rysunek techniczny. Rysunki budowlane. Uprozczone przedstawianie rozbiórki i przebudowy 8. PN-B-01029:2000 Rysunek budowlany. Zasady wymiarowania na rysunkach architektoniczno-budowlanych 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 2007 11. Rysunek techniczny w budownictwie - J. Bieniasz, B. Januszewski, M. Piekarski, Oficyna Wydawnicza Politechniki Rzeszowskiej, Rzeszów 2009 		
Additional bibliography:		
<ol style="list-style-type: none"> 1. PN-EN ISO 5455:1998 Rysunek techniczny. Podziały 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 		
Result of average student's workload		
Activity	Time (working hours)	
1. Participation in tutorials	15	
2. Participations in projects	15	
3. Preparing the reports (at home)	10	
4. Preparing to the written tests	10	
5. Drafting technical drawings at home	10	
Student's workload		
Source of workload	hours	ECTS
Total workload	50	2
Contact hours	30	1
Practical activities	30	1