

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Fundamentals of Road Construction		Code 1010101161010129343
Field of study Sustainable Building Engineering First-cycle	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
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: 15 Classes: - Laboratory: - Project/seminars: 15		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 %) 100 2% 100 2%
Responsible for subject / lecturer: dr inż. Marcin Bilski email: marcin.bilski@put.poznan.pl tel. 61 665 34 85 Faculty of Civil and Environmental Engineering ul. Piotrowo 5 61-138 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	- W01 - knowledge of the fields of mathematics, physics, chemistry and other fields of science useful for formulating and solving tasks related to sustainable construction (construction, environmental engineering and architecture) - W02 - knows the rules of descriptive geometry and technical drawing regarding the creation and reading of architectural drawings, construction drawings and surveying maps, as well as their preparation in a traditional manner and using BIM (Building Information Modeling) technology programs
2	Skills	- U01 - can obtain information from literature, databases and other properly selected sources; can integrate the obtained information, make their interpretation, as well as draw conclusions and formulate and justify opinions
3	Social competencies	- K03 - independently completes and expands knowledge in the field of modern techniques, processes and technologies - K09 - understands the need to protect copyrights and the principles of professional ethics
Assumptions and objectives of the course: Gaining basic knowledge and skills by the student in the field of road construction and design.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. W01 KSB_W11 - Has basic knowledge of road design - [P6S_WG]		
2. W02 KSB_W25 - He knows the basic methods, techniques, tools and materials used in solving engineering tasks in the field of road design - [P6S_WG]		
Skills:		
1. U01 KSB_U11 - He can dimension the structure of a road surface with the use of Catalogs - [P6S_UW P6S_UK]		
Social competencies:		
1. K01 KSB_K02 - He is responsible for the reliability of the results of his work and their interpretation - [P6S_KK]		
Assessment methods of study outcomes		

Passing the lectures in the form of a single-choice test (closed questions). Passing projects consists in the implementation of project documentation of the road section.

Evaluation of lectures:

score 3.0 <50% of the correct answers
 score 3.5 <60% of the correct answers
 score 4.0 <70% of the correct answers
 score 4.5 <80% of the correct answers
 score 5.0 <90% of the correct answers

Evaluation of projects:

score from 3.0 to 5.0 - preparation of project documentation in specific time according to the requirements of the subject, the quality and correctness of the prepared design documentation determine the assessment

Course description

Lecture 1

General characteristics of road surfaces.

Lecture 2

Introduction to road design.

Lecture 3

A road in the map.

Lecture 4

Vertical alignment.

Lecture 5

Designing curves for the road in map and vertical alignment.

Lecture 6

Other elements of the road.

Lecture 7

Examination

Projects 1

General characteristics of road surfaces.

Projects 2

Introduction to road design.

Projects 3

A road in the map.

Projects 4

Vertical alignment.

Projects 5

Designing curves for the road in map and vertical alignment.

Projects 6

Other elements of the road.

Projects 7

Submission of project documentation.

Basic bibliography:

1. Rozporządzenie Ministra Transportu i Gospodarki Morskiej z dnia 2 marca 1999 roku w sprawie warunków technicznych, jakim powinny odpowiadać drogi publiczne i ich usytuowanie, tekst jednolity Dz. U. z 2016 r. poz. 124 (selected fragments of the ordinance are translated into English)

Additional bibliography:

1. E. J. Yoder, M. W. Witczak, Principles of Pavement Design, John Wiley & Sons, 2008
2. A.T. Papagiannakis, E.A. Masad, Pavement Design and Materials, John Wiley & Sons, 2008

Result of average student's workload

Activity	Time (working hours)
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1. Participation in lectures (contact hours)	15	
2. Participation in projects (contact hours)	15	
3. Participation in consultations related to the implementation of the education process (contact hours)	5	
4. Preparation for projects (independent work)	15	
5. Preparation for passing lectures (independent work)	10	
Student's workload		
Source of workload	hours	ECTS
Total workload	60	2
Contact hours	30	1
Practical activities	15	1