MODULE SPECIFICATION

Module code	
Module title in Polish	**Budownictwo komunikacyjne**
Module title in English	**Transport Engineering**
Module running from the academic year	**2016/2017**

A. MODULE IN THE CONTEXT OF THE PROGRAMME OF STUDY

Field of study	**Civil Engineering**
Level of qualification	**First cycle** *(first cycle, second cycle)*
Studies profile	**Academic** (*academic/practical)*
Mode of study	**Full-time** *(full-time / part-time)*
Specialism	
Organisational unit responsible for module delivery	**The Department of Transportation Engineering**
Module co-ordinator	**Piotr Nita, PhD hab., Eng., Professor of the University**
Approved by	**Marek Iwański, Professor**

B. MODULE OVERVIEW

Module type	**Core module** (*core/programme-specific/elective HES*)*
Module status	**Compulsory module** *(compulsory / non-compulsory)*
Language of module delivery	**English**
Semester in the programme of study in which the module is taught	**Semester 3**
Semester in the academic year in which the module is taught	**Winter semester** *(winter / summer)*
Pre-requisites	**None** (*module code/module title, where appropriate)*
Examination required	**Yes** *(yes / no)*
ECTS credits	**4**

Mode of instruction	**lectures**	**classes**	**laboratories**	**project**	**others**
Total hours per semester	**30**			**15**	

* elective HES − elective modules in the Humanities and Economic and Social Sciences

C. LEARNING OUTCOMES AND ASSESSMENT METHODS

Module aims	The aim of the module is to acquire design skills of a road on a plan and profile.

Module outcome code	Module learning outcomes	Mode of instruction *(l/c/lab/p/ others)*	Corresponding programme outcome code	Corresponding discipline-specific outcome code
W_01	A student is knowledgeable about the location, classification, and surface structure.	l/p	B_W10 B_W12	T1A_W02 T1A_W03 T1A_W04 T1A_W05 T1A_W07 T1A_W08
U_01	A student can design the course of a road in a cross section.	l/p	B_U01 B_U03	T1A_U08 T1A_U09 T1A_U13
U_02	A student can design terrain configuration in the profile.	l/p	B_U07 B_U13	T1A_U03 T1A_U05 T1A_U07 T1A_U11 T1A_U14 T1A_U15 T1A_U16
K_01	A student can work individually.	p	B_K01	T1A_K01 T1A_K03 T1A_K04
K_02	A student is responsible for the reliability of the obtained results.	p	B_K02	T1A_K02 T1A_K05 T1A_K07
K_03	A student can formulate conclusions.	p	B_K04	T1A_K01 T1A_K07

Module content:

1. Topics to be covered in the lectures

No.	Topics	Module outcome code
1	Transport in national economy.	W_01
2-5	Road transport. Road transport infrastructure. Roads: their construction, geometrical shaping, the system of a road on a plan, and a cross section. The structure of a road and dimensioning. Technical parameters of motorways. The program of building motorways in Poland. Expressways. Road junctions. Streets (their classification and crossroads). Urban transport.	W_01 U_01 U_02
6-9	Railway transport. Railway transport infrastructure. Railways (railway types, traffic control and communication, traction system, and rolling stock. Railway stations and the elements of station systems. High velocity lines. The advantages of modern railways.	W_01
10-14	Airports and airways. The principles of locating airports. The classification of airports according to ICAO. Geometrical shaping of components concerning the manoeuvre field. The realisation and construction of surface. Technical diagnostics and the assessment of surface technical condition.	W_01
15	Combined and unconventional transport.	W_01

2. Topics to be covered in the classes
3. Topics to be covered in the laboratories
4. Topics to be covered in the projects

Project number	Topics	Module outcome code
1	Topographic plan.	W_01
2	Cross sections of roads.	U_02
3	Calculating the parameters of a circular curve (selecting the value of a radius concerning a circular curve, calculating constructional elements of a road curve).	U_01
4	Inscribing a circular curve, calculating hectometres on a circular curve, calculating terrain height in hectometre points.	U_01
5	Calculating longitudinal incline of a vertical alignment. A longitudinal profile of a terrain and the designed road axis vertical alignment. Calculating ordinates of vertical alignment.	U_01
6	Calculating geometrical parameters of vertical curves.	U_01
7	Completing a table of ground works.	U_02
8	Oral defence of projects.	W_01 U_01 K_01 K_02

Assessment methods

Module outcome code	Assessment methods *(Method of assessment; for module skills − reference to specific project, laboratory and similar tasks)*
W_01	An examination, a project, and oral defence
U_01	An examination, a project, and oral defence
U_02	A project and oral defence
K_01	An examination, a project, and oral defence
K_02	An examination, a project, and oral defence
K_03	A project

C. STUDENT LEARNING ACTIVITIES

ECTS summary		
	Type of learning activity	**Study time/ credits**
1	Contact hours: participation in lectures	**30**
2	Contact hours: participation in classes	
3	Contact hours: participation in laboratories	
4	Contact hours: attendance at office hours (2-3 appointments per semester)	**2**
5	Contact hours: participation in project-based classes	**15**
6	Contact hours: meetings with a project module leader	**10**
7	Contact hours: attendance at an examination	**3**
8		
9	**Number of contact hours**	**60** *(total)*
10	**Number of ECTS credits for contact hours** *(1 ECTS credit =25-30 hours of study time)*	**2.4**

11	Private study hours: background reading for lectures	**5**
12	Private study hours: preparation for classes	
13	Private study hours: preparation for tests	**5**
14	Private study hours: preparation for laboratories	
15	Private study hours: writing reports	
16	Private study hours: preparation for a final test in laboratories	
17	Private study hours: preparation of a project/a design specification	**20**
18	Private study hours: preparation for an examination	**10**
19		
20	**Number of private study hours**	**40** *(total)*
21	**Number of ECTS credits for private study hours** *(1 ECTS credit =25-30 hours of study time)*	**1.6**
22	**Total study time**	**100**
23	**Total ECTS credits for the module** *(1 ECTS credit =25-30 hours of study time)*	**4**
24	**Number of practice-based hours** *Total practice-based hours*	**48**
25	**Number of ECTS credits for practice-based hours** *(1 ECTS credit =25-30 hours of study time)*	**1.9**