COURSE DESCRIPTION CARD

<table>
<tr><td colspan="11">Faculty of Civil Engineering and Environmental Sciences</td></tr>
<tr><td>Field of study</td><td colspan="6"></td><td colspan="2">Degree level and programme type</td><td colspan="2"></td></tr>
<tr><td>Specialization/ diploma path</td><td colspan="6"></td><td colspan="2">Study profile</td><td colspan="2">Academic profile</td></tr>
<tr><td rowspan="2">Course name</td><td colspan="6" rowspan="2">Basics of road engineering</td><td colspan="2">Course code</td><td colspan="2">IS-FCEE-00176-1W</td></tr>
<tr><td colspan="2">Course type</td><td colspan="2">Erasmus</td></tr>
<tr><td rowspan="2">Forms and number of hours of tuition</td><td>L</td><td>C</td><td>LC</td><td>P</td><td>SW</td><td>FW</td><td>S</td><td colspan="2">Semester</td><td colspan="2">winter</td></tr>
<tr><td>15</td><td></td><td></td><td>15</td><td></td><td></td><td></td><td colspan="2">No. of ECTS credits</td><td colspan="2">2</td></tr>
<tr><td>Entry requirements</td><td colspan="10">-</td></tr>
<tr><td>Course objectives</td><td colspan="10">Acquainting students with the land transportation infrastructure characteristics and basics of road design.</td></tr>
<tr><td>Course content</td><td colspan="10">Lecture:
Characteristic of land transportation. Fundamentals of road's horizontal and vertical alignment, characteristics of road cross-section elements. Characteristics of road construction and road drainage systems. Public transport policy - development strategies, characteristics and priorities for public transport. Basics of road intersections and traffic engineering. Facilities for pedestrians and cyclists. Basics of road traffic safety.
Project:
Elaboration of a geometry design of a rural road including calculations and graphical interpretation of horizontal and vertical alignment of a road and cross-sections on straight and superelevation segments of the road.</td></tr>
<tr><td>Teaching methods</td><td colspan="10">Lecture - informative lecture, problem lecture</td></tr>
<tr><td>Assessment method</td><td colspan="10">Lecture - written exam
Project classes – evaluation of student's projects and preparation for the classes, written test</td></tr>
<tr><td>Symbol of learning outcome</td><td colspan="8">Learning outcomes</td><td colspan="2">Reference to the learning outcomes for the field of study</td></tr>
<tr><td>LO1</td><td colspan="8">Student characterizes different land transportation modes</td><td colspan="2">K_B1_W04, K_B1_W07, K_B1_U06 K_B1_U23</td></tr>
<tr><td>LO2</td><td colspan="8">Student identifies parameters related to traffic engineering</td><td colspan="2">K_B1_W08, K_B1_W18, K_B1_U13, K_B1_U18</td></tr>
<tr><td>LO3</td><td colspan="8">Student knows the bases of horizontal and vertical road and alignment and cross-section design</td><td colspan="2">K_B1_W11, K_B1_U16</td></tr>
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LO4	Student identifies basic transport and safety problems	K_B1_U007, K_B1_U17
LO5	Student cooperates in teams	K_B1_U14
Symbol of learning outcome	**Methods of assessing the learning outcomes**	**Type of tuition during which the outcome is assessed**
LO1	written test	L
LO2	evaluating student's projects and preparation for the classes , tests on the lecture content	L, P
LO3	evaluating student's projects and performance in classes	P
LO4	written test	L
LO5	evaluating student's performance in classes	P
LO6		

Student workload (in hours)		**No. of hours**
Calculation	participation in lectures	15
	participation in classes, laboratory classes, etc.	15
	implementation of project tasks	8
	working on projects, reports, etc.	10
	participation in student-teacher sessions related to the classes	5
	preparation for and participation in exams/tests	10
	TOTAL:	**63**

Quantitative indicators	**HOURS**	**No. of ECTS credits**
Student workload – activities that require direct teacher participation	37	1,5
Student workload – practical activities	38	1,5

Basic references	Principle of transportation engineering, Partha Chakroborty, 2003 Handbook of transportation engineering, Myer Kutz, 2001 Wright P.H., Dixon K.: Highway Engineering, John Wiley&Sons, Inc. 2004
Supplementary references	Traffic and highway engineering, N.J. Garber, L.A. Hoel, 2009 Rozporządzenie MTiGW z dnia 2 marca 1999. Dz.U. Nr 43, poz. 430 Gaca S., Suchorzewski W., Tracz M.: Inżynieria ruchu drogowego. Teoria i praktyka, WKiŁ 2009

Organisational unit conducting the course	**Department of Construction and Road Engineering**	**Date of issuing the programme**
Author of the programme	**Robert Ziółkowski, PhD. Eng.**	**25.02.2020**

L – lecture, C – classes, LC – laboratory classes, P – project, SW – specialization workshop, FW - field work, S – seminar