

Card of Course

Description of Course:	
Code of course	-----
Name of course	Transportation Railway Systems
Version of course	2013/2014
A. Place of the course in system of study	
Level of education	Intermediate
Degree of education	engineering
Kind of education	Full-time studies
Field of study	Transport
Profile of study	General academic profile
Specialisation	Main field
Place of teaching of course	Faculty of Transport
Place of realization of course	Department of Transport Infrastructure
Coordinator of course	Jacek Kukulski, Ph.D., M.Sc., Transp. Eng.
B. General characteristic of the course	
Block of courses	Main field
Group of courses	specialization
Level of course	Intermediate
Status of course	Faculty with choice limited
Language of course	english
Nominal semester	-
Academic year	2013/2014
Preliminary requirements	Transport Infrastructure
Limit of number of students	-

C. Effects of education and manner of teaching	
Purpose of course	learn the principles of designing railway stations and track systems
Methods of evaluation	prepare a presentation and discussion (or execution of the project)
Effects of education	Look – table 1
Form of didactic studies and number of hours per week	Lecture – 2 hours
Contents of education	Lecture with Transportation Railway Systems include: - design of railway siding (route survey, longitudinal profile of this line, location plan, cross section of railway line). Lecture includes also design of tracks system for small railway station.
Methods of verification of effects of education	Look – table 1
Examination	-
Literature	<p>TSI HS INFR. – Technical specification for interoperability relating to the „infrastructure” sub-system of the trans European high – speed rail system 2008/21/EC</p> <p>TSI CR INFR_ - Technical specification for interoperability relating to the „infrastructure” sub-system of the trans European conventional – speed rail system</p> <p>Esveld Coenraad „Modern Railway Track</p> <p>TSI PRM - Technical Specification for Interoperability for Persons with Reduced Mobility</p> <p>ENV 13803-1- Railway applications – Track alignment design parameters – Track gauges 1435 mm and wider – Part 1: Plain line</p> <p>Polish references documents:</p> <p>Basiewicz T., Rudziński L., Jacyna M. Linie kolejowe. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 1997.</p> <p>Drogi kolejowe., pod red. J. Sysaka, PWN, Warszawa 1986.</p> <p>Towpik K. Infrastruktura Transportu Kolejowego, Oficyna Wydawnicza Politechniki Warszawskiej. Rok wydania: 2004.</p> <p>Id-1 (D1) Warunki techniczne utrzymania nawierzchni na liniach kolejowych PKP Polskie Linie Kolejowe S.A. 2005.</p>
www of course	Does not have
D. Student’s job	
Number of credits	3

ECTS	
Number of hours of student's job for achievement of education's effect (description):	43 h: work on the project activities 10 h, study of the literature for project 15 h, performance presentation or prepare the documentation project (calculations and drawings form) 15 h, consultations 3 hours.
Number of credits ECTS on the course with direct participation of academic teacher	1. ECTS (13 h: 10 h - work on the project activities, consultations 3 h)
Number of credits ECTS on practical activities on the course	2 ECTS (28 h: work on the project activities 10 h; performance presentation or prepare the documentation project (calculations and drawings form) 15 hours, consultations 3 h
E. Additional informations	
Notes	
Date of last modernization	15.01.2014

Table 1

General academic profile			
Course's effects		Field effects	Area effect
Knowledge			
Effect:	It has a theoretical knowledge on railway lines and track systems	Tr1A_W08	T1A_W03
Code of effect:	W_01		
Verification:	The presentation or prepare the documentation project		
Effect:	He knows of the characteristics of the geometric parameters of the railway line	Tr1A_W09 Tr1A_W12	T1A_W07 T1A_W04
Code of effect:	W_02		
Verification:	The presentation or prepare the project documentation		
Effect:	He knows the rules of shaping systems of track geometry and design of tracks system for small railway station	Tr1A_W09 Tr1A_W12	T1A_W07 T1A_W04

Code of effect:	W_03		
Verification:	The presentation or prepare the documentation project		
Skills			
Effect:	It has an evidence base the design of railway line and the tracks small station		
Code of effect:	U_01		
Verification:	The presentation or prepare the documentation project (calculations and drawings form) , discussion	Tr1A_U03 Tr1A_U20 Tr1A_U23 Tr1A_U24	T1A_U02 T1A_U14 T1A_U16
Social competences			
Effect:	Is able to participate in the project team		
Code of effect:	K01	Tr1A_K03	T1A_K03
Verification:	Implementation of the project, individual and group consultation of the project, oral defense of the concepts used in the project		