Card of Course

Description of Course:	
Code of course	------------------
Name of course	**Mathematical Methods in Transport**
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 Air Transport Engineering
Coordinator of course	Anna Kwasiborska, , Ph.D., 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	No requirements
Limit of number of students	----

C. Effects of education and manner of teaching

Purpose of course	Students learn how to formulate decision-making tasks and become familiar with the methods of solving.
Methods of evaluation	Students independently perform tasks. The task will be reviewed taking into account the correctness of their implementation.
Effects of education	Look – table 1
Form of didactic studies and number of hours per week	Lecture – 2 hours
Contents of education	Formulation of decision-making situations in mathematical form. Acquainting with methods of solving linear programming problems. Presentation of the transportation problem and solution methods.
Methods of verification of effects of education	Look – table 1
Examination	-
Literature	Frederick S. Hillier, Gerald J. Lieberman. Introduction to operations research. Gawinecki Jerzy: Mathematics and Operations Research. Part VII
www of course	Does not have

D. Student's job

Number of credits ECTS	3 ECTS
Number of hours of student's job for achievement of education's effect (description):	75 hours - 10 h. knowledge of subject, 20 h. study of the literature, 35 h. solve exercises and prepare project, 10 h. consultations
Number of credits ECTS on the course with direct participation of academic teacher	2 ECTS - 20 h. study of the literature, 35 h. solve exercises and prepare project, 10 h. consultations
Number of credits ECTS on practical activities on the course	1

E. Additional informations

Notes	
Date of last modernization	14.01.2014

Table 1

General academic profile		
Course's effects	**Field effects**	**Area effect**
Knowledge		
Effect: 1) The student has ordered knowledge of mathematical analysis. 2) The student knows the principles of construction and use of mathematical models supporting decision-making processes (linear and the issue of Transport, Network models of decision-making).	Tr1A_W01	T1A_W01
Code of effect: W_1		
Verification: Forming evaluation: independent execution of tasks.		
Skills		
Effect: 1) The students can obtain information from the literature, databases, and patent information and other reliable sources. 2) The student is able to integrate the information, make their interpretation, and to draw conclusions and formulate and justify opinions.	Tr1A_U01	T1A_U01
Code of effect: U_1		
Verification: Forming evaluation: independent interpretation of the results of optimization tasks.		
Social competences		
Effect: Students can work in a group, taking the different roles.	Tr1A_K03	T1A_K03
Code of effect: U_1		
Verification: Forming evaluation: a common solution to the decision-making using known methods.		