

# Card of Course

<b>Description of Course:</b>	
Code of course	-----
Name of course	<b>Operations Research</b>
Version of course	2013/2014
<b>A. Place of the course in system of study</b>	
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 Stelmach, Ph.D., Eng.
<b>B. General characteristic of the course</b>	
Block of courses	Main field
Group of courses	General
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	20

<b>C. Effects of education and manner of teaching</b>	
Purpose of course	Introduction to problems and mastering of basic knowledge about implementing selected algorithms of operational research in transport area
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 the methods of task resolution using graph theory and network.
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 Hamdy A. Taha : Operational Research
www of course	Does not have
<b>D. Student's job</b>	
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
<b>E. Additional informations</b>	
Notes	
Date of last modernization	16.01.2014

**Table 1**

<b>General academic profile</b>			
<b>Course's effects</b>		<b>Field effects</b>	<b>Area effect</b>
<b>Knowledge</b>			
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 (using graph theory) and the issue of Transport.	Tr1A_W01	T1A_W01
Code of effect:	W_1		
Verification:	Forming evaluation: independent execution of tasks.		
<b>Skills</b>			
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.		
<b>Social competences</b>			
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.		