

Description of course					
Code of course	1160-TR000-MSA-0302				
Name of course	Preparation for Research				
Version of course	2021/22				
A. Place of the course in system of studies					
Level of education	Second-cycle degree				
Form and mode of studies	Full-time studies				
Field of studies	Transport				
Profile of studies	General academic profile				
Specialization	Subject common to the course of study				
Place of teaching of course	Warsaw University of Technology, Faculty of Transport, Division of Traffic Control and Transport Infrastructure				
Place of realization of course	Not applicable				
Coordinator of course	Professor Dariusz Pyza, PhD, DSc, Division of of Traffic Control and Transport Infrastructure, Faculty of Transport, Warsaw University of Technology				
B. General characteristic of the course					
Group/Block of courses	Basic subjects				
Level of course	Intermediate level				
Type of course	Compulsory subject				
Language of course	English				
Location of the course in the study plan – nominal semester	3 semester				
Location of the course in the academic year	Winter semester				
Preliminary requirements - formal	Lack				
Limit of students	Lecture: 100 people.				
C. Effects of education and manner of teaching					
Purpose of course	After completing the series of lectures, students have knowledge of the preparation and conduct of scientific research and the forms of its dissemination.				
Effects of education with reference to the learning outcomes for the area and field of study					
No. effect	Description of the effect	Reference to the characteristics of learning outcomes	Reference to the learning outcomes in the program		
Assumed learning outcomes in terms of knowledge					
W01	Has in-depth knowledge of the goals and types of scientific research and research procedures.	I.P7S_WK	Tr2A_W13		
W02	Has in-depth knowledge of the organization of research, research methods and tools, and documenting research results.	I.P7S_WG.o I.P7S_WK	Tr2A_W10 Tr2A_W13		
Assumed learning outcomes in terms of skills					
U01	He can use his knowledge in the selection and use of appropriate methods and tools for the specificity of the conducted research.	I.P7S_UW.o. III.P7S_UW.o	Tr2A_U16		
Assumed learning outcomes in the field of social competences					
KS01	Is willing to recognize the importance of knowledge in solving cognitive problems.	I.P7S_KK	Tr2A_K02		
Form of didactic studies and number of hours	Lecture	Exercise	Laboratory	Project	Other
On a weekly plan	1	0	0	0	0
Throughout the semester	15	0	0	0	0

<i>Contents of education - separately for each form of didactic studies</i>	<u>Lecture</u> Objectives and functions of scientific research. Tasks and types of research. Research procedures. Organization and stages of research. Methods, techniques and research tools. Documenting research results. Scientific cooperation. Reliability in scientific research. Publishing and presenting research results. Types of research papers. Methodological elements of scientific work. Research projects and application sources. Legal conditions for obtaining academic degrees and titles.
<i>Teaching methods</i>	<u>Lecture:</u> Lecture with the use of multimedia presentations.
Methods of verification of effects of education	
<i>No. effect</i>	Methods of verification
Assumed learning outcomes in terms of knowledge	
W01	Written test, 5 open questions, it is required to provide full answers to at least 3 of these questions.
W02	Written test, 5 open questions, it is required to provide full answers to at least 3 of these questions.
Assumed learning outcomes in terms of skills	
U01	Written test, 5 open questions, it is required to provide full answers to at least 3 of these questions.
Assumed learning outcomes in the field of social competences	
KS01	Written test, 5 open questions, it is required to provide full answers to at least 3 of these questions.
<i>Methods of evaluation</i>	<u>Lecture:</u> Written test, 5 open questions, it is required to provide full answers to at least 3 of these questions.
<i>Exam</i>	No
<i>Literature</i>	Basic literature: <ol style="list-style-type: none"> 1) Creswell John W., Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Pubn 2018. 2) Creswell John W., Concise Introduction to Mixed Methods Research, Sage Publications 2014. 3) Largan Claire, Qualitative Secondary Research. SAGE Publications Ltd 2019. 4) Margaret Cargill, Patrick O'Connor, Writing Scientific Research Articles. John Wiley & Sons, 2013. 5) Lene Cobb, Research Design and Methodology. ML Books International – IPS, 2017. Supplementary literature: <ol style="list-style-type: none"> 1) Efron Sara Efrat, Writing the Literature Review, Guilford Publications 2018.
<i>Website of the course</i>	–
D. Student's activity	
<i>Number of ECTS credits</i>	1
<i>Number of hours of student's work to achieve effects of education</i>	25 hours, including: work during lectures 15 hours, reading the literature for the subject 5 hours, consultations 1 hour, preparation for a test outside class hours 4 hours.
<i>Number of ECTS credits on the course with direct participation of academic teacher</i>	1.0 ECTS points (16 hours, including: work during lectures 15 hours, consultations 1 hour)
<i>Number of ECTS credits on practical activities on the course</i>	0
E. Additional information	
<i>Notes</i>	<i>As long as it does not cause changes in the relationship of a given subject with the directional effects in the content of education, changes may be introduced on an ongoing basis, taking into account the latest scientific achievements.</i>
<i>Date of last edition</i>	2021-08-24 13:30