Course code: ……. **Plan position:** ……

A. INFORMATION ABOUT THE COURSE

B. Basic information

Name of course	Roadway Design
Field of studies	Construction
Level of studies	Bachelor's degree
Profile of studies	General academic
Form of studies	Full time
Specialty	-
Unit responsible for the field of studies	Faculty of Civil Engineering, Architecture and Environmental Engineering, Department of Road Engineering, Transport and Geotechnics
Name and academic degree of teacher(s)	Marcin Karwasz, dr inż. (PhD, Eng.)
Introductory courses	------
Introductory requirements	not applicable

C. Semester/week schedule of classes

Semester	Lectures (W)	Auditorium classes (Ć)	Laboratory classes (L)	Project classes (P)	Seminar (S)	Field classes (T)	Number of ECTS points
summer	30						

2. LEARNING OUTCOME

No.	Learning outcomes description	The reference to the learning outcomes of specific field of study	The reference to the learning outcomes for the area
KNOWLEDGE			
W1	student knows the basic terminology in the field of road and roadway design	K_W17	P6S_WG
W2	student has knowledge of arising and maintaining elements of the road, roadway and pavement design	K_W17	P6S_WG
SKILLS			
U1	student can obtain information from literature and databases and other sources	K_U01	P6S_UW, P6S_UK, P6S_UU,
U2	student can make basic drawings on some elements of road intersection knows the elements of spatial development in road construction	K_U10	P6S_UW,
SOCIAL COMPETENCES			

K1	student is aware of the importance and understands the non-technical aspects of the effects of a civil engineer's activity, including its effect on the environment and the associated responsibility for the actions taken decisions	K_K02	P6S_KO, P6S_KR

3. TEACHING METHODS

A. Traditional methods used ***

multimedia lecture, demonstration, discussion,

B. Distance learning methods used ***

Synchronous method (classes conducted in a way that ensures direct interaction between the student and the teacher in real time, enabling immediate flow of information, the method can be used only if it is provided for in the study plan for a given cycle of education): remote lecture in the form of videoconference, remote discussion.

Asynchronous method used as an auxiliary (a method that does not ensure direct interaction between the student and the teacher in real time, used only as an auxiliary / complementary method):
online educational videos, online multimedia presentations,

4. METHODS OF EXAMINATION

Colloquium in the form of a test

5. SCOPE

Lectures	Characteristics of land transport. Road classification - categories and classes technical. Organization of road construction in Poland. Geometric elements shaping and designing roads: situational plan, longitudinal profile, cross-section transverse. Design road surface and pavement. General characteristics of intersections and road junctions. Selected issues of traffic engineering. Airport roadway elements.
Laboratories	--

6. METHODS OF VERIFICATION OF LEARNING OUTCOMES

LEARNING OUTCOME	Form of assessment					
	Oral examination	Written exam	Colloquium	Project	Presentation	Discussion
W1			x			
W2			x			
U1			x			x
U2			x			x
K1			x			x

7. LITERATURE

Basic literature	1. ROZPORZĄDZENIE MINISTRA INFRASTRUKTURY z dnia 24 czerwca 2022 r. w sprawie przepisów techniczno-budowlanych dotyczących dróg publicznych (Dz.U.2022.1518 z dnia 2022.07.20) 2. Wzorce i Standardy drogowe Ministerstwo Infrastruktury (Zesztyty: WR-D-00 do WRD-90) 3. Młodożeniec W.S., 2011, Budowa dróg – podstawy projektowania, BEL Studio, Warszawa.

	4. Marszałek J. (red.), 2016, Budownictwo komunikacyjne: podręcznik, BEL Studio, Warszawa. 5. Sieniawska-Kuras A., 2016, Budownictwo drogowe w zarysie, KaBe, Krosno. 6. Świątecki A., Nita P., Świątecki P., 1999. Lotniska, WITWL, Warszawa.
Supplementary literature	1. Wytyczne projektowania skrzyżowań drogowych cz. I i II. Generalna Dyrekcja Dróg Publicznych, 2001, Warszawa. 2. Gaca St., Suchorzewski W., Tracz M., 2014, Inżynieria ruchu drogowego. Teoria i praktyka, WKŁ, Warszawa.

8. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE EXPECTED LEARNING OUTCOMES EXPRESSED IN TIME AND ECTS CREDITS

Student's activity		Student workload– number of hours
Classes conducted under a direct supervision of an academic teacher or other persons responsible for classes	Participation in classes indicated in point 1B	30
	Supervision hours	10
Student's own work	Preparation for classes	40
	Reading assignments	50
	Other (preparation for exams, tests, carrying out a project etc)	50
Total student workload		180
	Number of ECTS points	6