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

A. INFORMATION ABOUT THE COURSE

B. Basic information

Name of course	TECHNOLOGY AND ORGANIZATION OF CIVIL ENGINEERING
Field of studies	Civil Engineering
Level of studies	Bachelor's degree
Profile of studies	
Form of studies	
Specialty	
Unit responsible for the field of studies	Faculty of Civil and Environmental Engineering, and Architecture
Name and academic degree of teacher(s)	Jarosław Górecki, PhD
Introductory courses	
Introductory requirements	

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
Spring (II)	30						6

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	has structured and theoretically based knowledge in the field of organization for construction production, necessary to understand development trends in the organization of processes carried out on the construction site and the construction site, including organizational methods in planning construction projects, the course of construction works, taking into account quality assurance as well as safety and health protection at the construction site, production processes in factories of construction materials, semi-finished and prefabricated products, as well as organizing logistics processes		

W2	has structured and theoretically based knowledge in the field of technology for construction production, including methods, techniques and tools for planning and execution of construction works, including mechanization, automation of construction processes, including the knowledge necessary to analyse and select modern technologies of construction works, taking into account organizational aspects and economic and solving problems arising from the technical specification for the construction of buildings		
SKILLS			
U1	is able to use the principles of scientific organization, analyse the implementation conditions; is able to analyse and select the technology of construction works and, on this basis, create a schedule of construction works; design a construction site, manage construction works in accordance with the technical specification and applicable building regulations; is prepared to manage the investment process at its various stages, formulate and negotiate contracts		
SOCIAL COMPETENCES			
K1	is aware of the importance and understands the non-technical aspects and effects of a civil engineer's activity, including its impact on the environment and the related responsibility for decision making process		
K2	can think and act in an entrepreneurial and rational way		

3. TEACHING METHODS

A. Traditional methods used ***

Lecture, interactive lecture and directed 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): e.g. remote lecture in the form of videoconference, remote discussion, etc.
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): e.g. online educational videos, online multimedia presentations, etc.

4. METHODS OF EXAMINATION

Final test, one (1) presentation

5. SCOPE

Lectures	• Basic definitions in the field of construction technology • Designing a building/structures in line with the spirit of the Circular Economy (CE) • Modeling of information about a building/structures (Building Information Modeling, BIM) • Selection of technology based on the Life Cycle Assessment (LCA) • Earthworks

	• Scaffolding • Incremental launch method in a bridge construction • Assembly of a building/structures from prefabricated elements • Renovation and repair technologies for a building/structures • Methods of carrying out the dismantling of a building/structures • Compliance with the principles of occupational safety and health during construction works

6. METHODS OF VERIFICATION OF LEARNING OUTCOMES

LEARNING OUTCOME	Form of assessment					
	Oral examination	Written exam	Colloquium	Project	Presentation	-
W1			x			
W2			x			
U1			x			
U2			x			
K1					x	
K2					x	

7. LITERATURE

Basic literature	• Chudley R., Greeno R., 2005. Construction Technology, Prentice Hall, 634 pp. • Holzer D., 2016. The BIM Manager's Handbook, Wiley, 224 pp. • Pipinato A., 2016. Innovative Bridge Design Handbook: Construction, Rehabilitation and Maintenance, Elsevier, 844 pp. • Lingard H., Wakefield R., Integrating Work Health and Safety into Construction Project Management, Wiley-Blackwell; 1st edition (May 16, 2019). • Friend M.A., Kohn J.P., Fundamentals of Occupational Safety and Health, Rowman&Littlefield, 2000.
Supplementary literature	• Scopus – selected articles • Web of Science – selected articles

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