Name of the module/subject Code 101011410101140494 Technology of Building Works Profile of study (general academic, practical) Profile of study (general academic) Year /Semester 2 / 4 Elective path/specialty - Subject of terried in: Polish Curuse (computery, elective obligatory) Cycle of study: - Profile of study (general academic), practical) Curuse (computery, elective obligatory) Cycle of study: Form of study (ful-time, part-time) Curuse (computery, elective obligatory) No. of nous Ecture: 30 Classes: 15 Laboratory: - Project/seminars: 15 4 Status of the course in the study program (fasic, major, other) other university-wide, from another field) Curversity-wide Education areas and fields of science and at ECT5 diatibution (number and %) ECT5 diatibution (number and %) Responsible for subject / lecturer: dr in2, Pawel Szymanskii emait; pawel Szymanskii emait; pawel Szymanskii emait; pawel Szymanskii emait; pawel Szymanskii enculy of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznan For student has a basic knowledge of technology and building materials. 1 Knowledge The student thas a basic knowledge of technology and building materials. Scial competencies; The student has			STUDY MODULE D	ESCRIPTION FORM				
Field of study Profile of study (general academic, practical) general academic, practical) general academic Year/Semester 2 / 4 Elective path/speciality - Subject offered in: Subject offered in: Polish Course (compulsory, elective obligatory) 2 / 4 Cycle of study: First-cycle studies Full-time Course (compulsory, elective obligatory) No. of ourse Lecture: 30 Classes: 15 Laboratory: Project/seminars: 15 A Status of the course in the study program (Basis, major, other) (university-wide, from another field) University-wide ECT3 distubiton (number and %) Responsible for subject / lecturer: Responsible for subject / lecturer: Crastity and Environmental Engineering u. Piotrowo 5 60-965 Poznan Crastity and Environmental Engineering u. Piotrowo 5 60-965 Poznan Prerequisites in terms of knowledge, skills and social competencies: The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources, it can combine the information obtained. 3 Social competencies: The student should be aware of the consequences of their decisions. Understands the need tor cooperation and transmote. 1 Knowledge The student should be aware of the consequences of their decisions. Understands the need tor cooperation and transmote. 2 Skills Able to obtain information f		•						
Sustainable Building Engineering First-cycle Igneral academic, practical) general academic, practical) 2 / 4 Elective path/specialty Subject offered in: Polish Course (computatory, elective Polish No. of creatis No. of nours Lecturer: To Classes: 15 Laboratory: Project/seminars: 15 4 Status of the course in the study program (Baic, major, other) university-wide, trom another field university-wide ECT3 distribution (number and %) Education areas and fields of science and art Gr in2, Pawel Szymański email: pawel szymański			ing works					
Elective path/specially Course (computery), elective obligatory) Cycle of study; First-cycle studies Form of study (full-lime,part-lime) No. of nours full-time Lecture: 30 Classes: 15 Laboratory; Project/Seminars; 15 4 Status of the course in the study program (Base, major, other) (niversity-wide, from another field) university-wide Education areas and fields of science and at ECTS distribution (number and %) ECTS distribution (number and %) Responsible for subject / lecturer: rinz. Pawel Szymanski@put.poznan.pl dr inz. Pawel Szymanski@put.poznan.pl ELS 2418 900 Faculty of Civil and Environmental Engineering University wide science and at Course (computery): wide ECTS distribution (number and %) 1 Knowledge The student has a basic knowledge of technology and building materials. Paculty of Civil and Environmental Engineering u. Plotrows 5 60-965 Poznań Destanad 2 Skills Able to obtain information from the literature and other sources. It can combine the information dotataned. 3 Social competencies: The student should be avare of the consequences of their decisions. Understands the need for cooperation and the stage of technology works zero state, raw and finishing and suitabiiiy of construction materials at its stage of t	· ·			(general academic, practical)				
Polish obligatory Cycle of study: First-cycle studies Form of study (full-time,part-time). No. of hours full-time Lecture: 30 Classes: 15 Laboratory: - Project/Seminars: 15 4 Status of the course in the study program (Basic, major, other) (university-wide, from another field) university-wide ECTS distribution (number and %) Education areas and fields of science and att ECTS distribution (number and %) ECTS distribution (number and %) remail: pawel szymanski@put.poznan.pl email: pawel szymanski@put.poznan.pl tim.? Pawel Szymanski@put.poznan.pl ut. Piotrows 60-965 Poznan ut. Piotrows 60-965 Poznan ECTS distribution (number and %) Prereusistes in terms of knowledge, skills and social competencies: 1 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information obtained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for cooperation and the stage of execution. 1 Knowledge of technology works zero state, raw and finishing and suitability of constructio					Course (compulsory, elective)			
full-time No. of hours Lecture: 30 Classes: 15 Laboratory: - Project/seminars: 15 No. of credits Status of the course in the study program (Basic, major, other) (university-wide, from another field) Education areas and fields of science and att ECTS distribution (number and %) Responsible for subject / lecturer: Responsible for subject / lecturer: dr in2. Pawel Szymański dr in2. Pawel Szymański email: pawel Szy		1	-					
No. of hours No. of arcelits Lecture: 30 Classes: 15 Laboratory: Project/seminars: 15 4 Status of the course in the study program (Basic, major, other) (university-wide, from another field) university-wide Education areas and fields of science and at (university-wide, from another field) ECTS distribution (number and %) Responsible for subject / lecturer: Responsible for subject / lecturer: dr in2. Pawel Szymański email: pawel Szymański email: pawel Szymański dr in2. Pawel Szymański dr in2. Pawel Szymański email: pawel Szymański email: pawel Szymański gr in z. Pawel Szymański gr in z. Pawel Szymański email: pawel Szymański email: pawel Szymański gr in z. Pawel Szymański gr in z. Pawel Szymański gr in z. Pawel Szymański gr in. Piotrow 5 60-965 Poznań I. Know 5 60-965 Poznań I. El Social Competencies: II. 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information dotated. 3 Social Competencies The student should be aware of the consequences of their decisions. Understands the need for cooperation and t	Cycle of	f study:		Form of study (full-time,part-time)				
Lecture: 30 Classes: 15 Laboratory: Project/seminars: 15 4 Status of the course in the study program (Basic, major, other) (university-wide, from another field) university-wide Education areas and fields of science and at ECTS distribution (number and %) ECTS distribution (number and %) Responsible for subject / lecturer: Responsible for subject / lecturer: dr inz. Pawel Szymański emai: pawel.s. szymanski@put.poznan.pl tel. 502 418 900 Faculty of Civil and Environmental Engineering Faculty of Civil and Environmental Engineering IL-loot Vive S 60-965 Poznad IL estudent has a basic knowledge of technology and building materials. 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information obtained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and the stage of execution. 3 Social competencies The student should be aware of the educational results for a field of study Knowledge Nowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of executi		First-cyc	cle studies	full-t	ime			
Status of the course in the study program (Basic, major, other) Integration of the course in the study program (Basic, major, other) (university-wide, from another field) Education areas and fields of science and art ECTS distribution (number and %) Responsible for subject / lecturer: Responsible for subject / lecturer: dr in2. Pawel Szymański email: pawel.s.szymański dr in2. Pawel Szymański erail: pawel.s.szymański email: pawel.s.szymański dr in2. Pawel Szymański erail: pawel.s.szymański Praculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań Paculty of Civil and Environmental Engineering ul. Piotrowo 5 80-965 Poznań Ul. Piotrowo 5 60-965 Poznań The student has a basic knowledge of technology and building materials. 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information obtained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for teaming throughout their working lives. He understands the need for cooperation and teamwork. 2 Skills The student should be aware of the consequences of their decisions. Understands the need for cooperation and teamwork. 2 Skills In	No. of h	iours			No. of credits			
other university-wide Education areas and fields of science and at ECTS distribution (number and %) Responsible for subject / lecturer: Responsible for subject / lecturer: dr in2. Pawel Szymański email: pawel Szymański email: pawel Szymański email: pawel Szymański etc. 502 418 900 dr in2. Pawel Szymański etc. 502 418 900 Paculty of Civil and Environmental Engineering ul. Piotrowo 5 80-985 Poznań Faculty of Civil and Environmental Engineering ul. Piotrowo 5 80-985 Poznań 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information obtained. 3 Social competencies The student has a basic knowledge of technology and building materials. 4 Knowledge The student bould be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: I. Knowledge of selection of technologies and materials of construction works - [[K_U20]] 2. Knowledge of selection of techo	Lectur	re: 30 Classes	s: 15 Laboratory: -	Project/seminars:	15 4			
Education areas and fields of science and art ECTS distribution (number and %) Responsible for subject / lecturer: dr in2. Pawel Szymański email: pawel Szyma	Status o	-			,			
and %) Responsible for subject / lecturer: dr in2. Pawel Szymański email: pawel.s.szymanski@put.poznan.pl tel. 502 418 900 Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań Prerequisites in terms of knowledge, skills and social competencies: 1 Knowledge 2 Skills Able to obtain information from the literature and other sources. It can combine the information obtained. 3 Social competencies Traster of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_U220]] - [[K_U20]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_U220]] - [[K_U20]] 2. Knowledge of selection of technologies and materials of construction works - [[K_U220]] - [[K_U20]] 2. Knowledge of selection of technologies and materials of construction works - [[K_U20]] 3. Knowledge of selection of technologies and materials of construction works - [[K_U20]] - [[K_U20]] 3. Knowledge of selection of technologies and materials of construction works - [[[K_U20]] - [[[K_U20]]] 3. Knowledge of s	Educatio			unive				
dr inz. Pawel Szymański emai: pawel. s. szymański@put.poznan.pl tel. 502 418 900 dr inż. Pawel Szymański@put.poznan.pl tel. 502 418 900 Pracuty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information dotained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Knowledge: 1. Knowledge of stechnology works - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 3. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 3. Knowledge of selection of technologies and materials for the construction works - [[K_U20]] - [[K_U20]] 3. The student can choose equipment for construct	Education							
dr inz. Pawel Szymański emai: pawel. s. szymański@put.poznan.pl tel. 502 418 900 dr inż. Pawel Szymański@put.poznan.pl tel. 502 418 900 Pracuty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information dotained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Knowledge: 1. Knowledge of stechnology works - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 3. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 3. Knowledge of selection of technologies and materials for the construction works - [[K_U20]] - [[K_U20]] 3. The student can choose equipment for construct								
email: pawel.s.szymanski@put.poznan.pl email: pawel.s.szymanski@put.poznan.pl tel. 502 418 900 faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań ul. Piotrowo 5 60-965 Poznań Prerequisites in terms of knowledge, skills and social competencies: 1 Knowledge 2 Skills 3 Social competencies 1 The student has a basic knowledge of technology and building materials. 2 Skills 3 Social competencies 1 The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1. 1. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]]	Resp	onsible for subj	ect / lecturer:	Responsible for subject	ct / lecturer:			
tel. 502 418 900 tel. 502 418 900 Faculty of Civil and Environmental Engineering ul. Piotrows 5 60-965 Poznań Faculty of Civil and Environmental Engineering ul. Piotrows 5 60-965 Poznań Prerequisites in terms of knowledge, skills and social competencies: Image: Social competencies 1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information obtained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1 1. Knowledge of technology works - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technology and materials of the construction works - [[K_U20]] - [[K_U20]] 3. Social competencies: 1. The student can choose the technology and materials of the construction works - [[K_U20]] - [[K_U20]] 2. The student can choose equipment for construction work	dr ir	nż. Paweł Szymański		dr inż. Paweł Szymański				
Faculty of Civil and Environmental Engineering Faculty of Civil and Environmental Engineering I Prerequisites in terms of knowledge, skills and social competencies: 1 Knowledge 2 Skills 3 Social competencies: 1 The student has a basic knowledge of technology and building materials. 2 Skills 3 Social competencies: The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1 1. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials for the construction works - [[K_U20]] - [[K_U20]] 2. The student can choose the technologies and materials of construction works - [[K_U20]] - [[K_U20]] 3. Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results			@put.poznan.pl		put.poznan.pl			
ul. Piotrowo 5 60-965 Poznań ul. Piotrowo 5 60-965 Poznań Prerequisites in terms of knowledge, skills and social competencies: 1 Knowledge 2 Skills 3 Social competencies: 3 Social competencies: The student has a basic knowledge of technology and building materials. 3 Social competencies: The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works - [[K_U20]] - [[K_U20]] 2. The student can choose equipment for construction works - [[[K_U20]] 3. The student can choose the technology and materials for the construction works - [[[K_U20]] - [[[K_U20]] Stills: 1. The student can choose the technology and materials of their work and their interpretation - [[[K_K02]] S			onmental Engineering					
1 Knowledge The student has a basic knowledge of technology and building materials. 2 Skills Able to obtain information from the literature and other sources. It can combine the information obtained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1. Knowledge of technology works 2. Knowledge of technology and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of technology and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials for the construction works - [[K_U20]] - [[K_U20]] 2. The student can choose equipment for construction works - [[K_U20]] 3. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] 3. Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]]				-				
1 Knowledge 2 Skills 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technology and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technology and materials of construction works - [[K_U20]] - [[K_U20]] 3. The student can choose equipment for construction works - [[K_U20]] - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] 3. Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2.	Prere	equisites in term	s of knowledge, skills an	d social competencies:				
2 Skills obtained. 3 Social competencies The student should be aware of the consequences of their decisions. Understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. The student can choose equipment for construction works - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] 3. Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K03]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]	1	Knowledge	The student has a basic knowledge of technology and building materials.					
Second competencies for learning throughout their working lives. He understands the need for cooperation and teamwork. Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1. Knowledge of technology works 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 2. Knowledge of selection of technology and materials of construction works - [[K_U20]] - [[K_U20]] 3. The student can choose equipment for construction works - [[K_U20]] - [[K_U20]] - [[K_U20]] 3. In the student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] 3. In the student can choose the technology and materials for the construction works - [[K_K01]] 3. In the student can choose the	2	Skills		from the literature and other sources. It can combine the information				
Assumptions and objectives of the course: Transfer of knowledge engineering technology works zero state, raw and finishing and suitability of construction materials at the stage of execution. Study outcomes and reference to the educational results for a field of study Knowledge: 1. Knowledge of technology works - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] Skills: 1. The student can choose equipment for construction works - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]	3		for learning throughout their working lives. He understands the need for cooperation and					
Study outcomes and reference to the educational results for a field of study Knowledge: 1. Knowledge of technology works - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 3. Knowledge of selection of technology and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] 3. Knowledge of selection of technology and materials for the construction works - [[K_U20]] - [[K_U20]] Skills: 1. The student can choose equipment for construction works - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]	Assu	-						
Knowledge: 1. Knowledge of technology works - [[K_W12, K_W14]] 2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] Skills: 1. The student can choose equipment for construction works - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]	Transfe	er of knowledge engin		e, raw and finishing and suitabi	lity of construction materials at			
 Knowledge of technology works - [[K_W12, K_W14]] Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] Skills: The student can choose equipment for construction works - [[K_U20]] The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: Able to work independently and collaborate as a team on the specific task - [[K_K01]] He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]] 		Study outco	mes and reference to the	educational results for	a field of study			
2. Knowledge of selection of technologies and materials of construction works zero state, raw and finishing - [[K_W12, K_W14]] Skills: 1. The student can choose equipment for construction works - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]	Know	vledge:						
[[K_W12, K_W14]] Skills: 1. The student can choose equipment for construction works - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]	1. Knowledge of technology works - [[K_W12, K_W14]]							
Skills: 1. The student can choose equipment for construction works - [[K_U20]] 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]								
 2. The student can choose the technology and materials for the construction works - [[K_U20]] - [[K_U20]] Social competencies: Able to work independently and collaborate as a team on the specific task - [[K_K01]] He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]] 								
Social competencies: 1. Able to work independently and collaborate as a team on the specific task - [[K_K01]] 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]	1. The student can choose equipment for construction works - [[K_U20]]							
 Able to work independently and collaborate as a team on the specific task - [[K_K01]] He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]] 								
 2. He is responsible for the accuracy of the results of their work and their interpretation - [[K_K02]] 3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]] 	•							
3. Isolated complements and extends knowledge of modern techniques and technologies - [[K_K03]]								
Assessment methods of study outcomes								

Lectures:							
- A written examination							
Exercise:							
- Test after exercise.							
Projects:							
- Commitment to and defense of the project							
Course description							
Lectures:							
1. Introduction and discussion of the principles of technology works							
2. Technology earthmoving							
3. Concrete and formwork							
4. Erection of steel structures							
5. Installation of prefabricated reinforced concrete structures							
6. Bricklaying							
7. Floors							
8. Facades, stucco and dry construction							
9. Industrial Floor							
10. Roofs and flat roofs							
11. Examination							
Exercise :							
Exercise 1							
Rules shortages and calculations bulldozers + calculation example							
Rules shortages and calculations scrapers + calculation example							
Exercise 2							
The balance of earth masses							
Rules shortages excavators + calculation example							
Principles of shortages of transport + calculation example							
Exercise 3							
Rules shortages cranes + calculation example							
Rules for selection of slings + calculation example							
Exercise 4							
Rules shortages formwork , horizontal and vertical partitions + calculation example							
Fresh concrete pressure + calculation example							
Exercise 5							
The principles of assembly work ? and examples of variants of							
The location of the crane and its work ? examples							
Landfills and roads ? examples							
Exercise 6							
Principles of shortages of materials - insulation, concrete, walls, facades floor in terms of what solutions are acceptable and							
which are not? examples							
Exercise 7							
Colloquium 45 minutes (test with 30 questions)							
Basic bibliography:							
1. Alma mater							
Additional hibliography							
Additional bibliography:							
Result of average student's workload							
	Time (working						
Activity	hours)						

Student's workload				
Source of workload	hours	ECTS		
Total workload	60	4		
Contact hours	30	2		
Practical activities	30	2		