

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Diploma thesis preparation</b>		Code <b>1010102131010100974</b>
Field of study <b>Civil Engineering Second-cycle Studies</b>	Profile of study (general academic, practical) <b>general academic</b>	Year /Semester <b>2 / 3</b>
Elective path/specialty <b>Railways</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>Second-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: <b>1</b>		No. of credits <b>15</b>
Status of the course in the study program (Basic, major, other) <b>other</b>		(university-wide, from another field) <b>university-wide</b>
Education areas and fields of science and art <b>technical sciences</b> <b>Technical sciences</b>		ECTS distribution (number and %) <b>15 100%</b> <b>15 100%</b>
<b>Responsible for subject / lecturer:</b> DSc Eng. Włodzimierz Bednarek email: wlodzimierz.bednarek@put.poznan.pl tel. 2407 Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań		<b>Responsible for subject / lecturer:</b> DSc Eng. Jeremi Rychlewski email: jeremi.rychlewski@put.poznan.pl tel. 2407 Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Knowledge about analysis of construction elements and complex construction systems, methods for solving tasks and undertake non-linear calculations of linear constructions; Knowledge of codes and norms for railroad design; Knowledge about design and construction of transport infrastructure; Knowledge and application of building code.
2	<b>Skills</b>	Can fulfil a static analysis and a stability analysis of a railroad track construction; Uses specialised tools in a search for useful information; Can define a computer model of a rail track and undertake an advanced linear and non-linear analysis of the track; Can critically evaluate results of a numerical analysis; Can choose tools for solving engineering problems; Has an ability to use scientific instruments, according to scientific rules, to formulate and execute preliminary investigation work, aimed at solving engineering problems
3	<b>Social competencies</b>	Can work individually and in a group (also as a leader) on a given task; Is responsible for solidity of results acquired from own or subordinate team's work; Individually supplements and enlarges knowledge about modern processes in rail transport; Is responsible for own and subordinate team's safety; Is conscious about a need to improve own professional and personal skills.
<b>Assumptions and objectives of the course:</b> Prepare to efficiently and punctually write the master thesis, help in writing the thesis.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Knows process for swift and punctual master thesis preparation - [K_W14] 2. Knows process for creative inspiration and control of diploma work writing stages - [K_W17] 3. Has knowledge about substantive formulation of questions, discussion management i preparation of own answers - [K_W18]		
<b>Skills:</b>		

<p>1. Can discuss problems and present topics analysed in the diploma work - [K_U07]</p> <p>2. Can determine a final solution or a work?s concept (during a discussion) and can defend own choice in a discussion - [K_U13]</p> <p>3. Can discuss on problems and data analysed in the diploma work, including problems presented by ther students - [K_U17]</p> <p>4. Has the ability to eliminate mistakes made during diploma work and properly choose sources or reliable information, can critically evaluate a source of information - [K_U18]</p>
<p><b>Social competencies:</b></p> <p>1. Is conscious about responsibility for solidity of acquired results and their interpretation - [K_K02]</p> <p>2. Independently supplements and increases own knowledge of railroads - [K_K03]</p> <p>3. Is conscious about a need to improve own professional and personal skills - [K_K06]</p>

<b>Assessment methods of study outcomes</b>		
<p>Knowledge evaluation: activity during classes and presentation of substantive aspects of the diploma work. Acquiring points for:</p> <ul style="list-style-type: none"> <li>- activity during lectures,</li> <li>- knowledge presented during work?s presentation.</li> </ul> <p>Skill evaluation: activity during seminar classes; presentation of diploma work; substantive discussion on the presented topics and solutions used in the work. Acquiring points for:</p> <ul style="list-style-type: none"> <li>- activity during lectures,</li> <li>- knowledge of topics presented in the diploma work,</li> <li>- substantive quality of topics presented in the diploma work.</li> </ul>		
<b>Course description</b>		
<p>1. Analysis of solutions used for tasks undertaken in the diploma work.</p> <p>2. Proposal of conceivable alternative solutions.</p> <p>3. Inspiring and directing student work on the thesis.</p> <p>4. Substantive explanation of doubtful matters and elimination of mistakes.</p> <p>5. Determination of a final solution or concept (during discussion with the student)</p>		
<b>Basic bibliography:</b>		
<b>Additional bibliography:</b>		
<b>Result of average student's workload</b>		
Activity	Time (working hours)	
1. Attendance to seminars	30	
2. Current preparation for the seminars (repetition of knowledge concerning given topic)	20	
3. Preparation for final assessment and presence at the assessment	20	
<b>Student's workload</b>		
Source of workload	hours	ECTS
Total workload	375	15
Contact hours	0	0
Practical activities	200	8