

Study Programme: Civil Engineering			
Course Unit Title: Railway track and stations design			
Course Unit Code: GH408			
Name of Lecturer(s): Jovanović Stanislav			
Type and Level of Studies: bachelor			
Course Status (compulsory/elective): elective			
Semester (winter/ summer): summer			
Language of instruction: english			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 5			
Prerequisites: none			
Course Aims: Explanation of basic principles and methods for planning and design of railway tracks, stations and nodes.			
Learning Outcomes: Enabling students for work within the domain of planning and design of railway tracks, stations and nodes. Enabling students to apply acquired skills both in practice and further education.			
Syllabus. Railway track (RT) horizontal and longitudinal layout elements; standard RT cross section; notion of track layout and route design; position of stations on the route; elements and position of stations within horizontal and longitudinal layout; geometric and dynamic route analysis; methodology and technology of the design of new RTs; specific aspects concerning planning and design of high-speed lines; station categorization; station design elements; basic design principles for all types of railway stations and forming conceptual design solutions of railway nodes; methods for dimensioning of basic station capacities; validation of variant solutions Exercises: individual exercises; every student receives individually conceived tasks, thematically and chronologically compliant with the lectures. Tasks consist of carrying out one design solution of a RT route for conventional traffic at the level of General Design including switches & crossings elements design, switch fans (balloons/ladder) structures; inter-station design; design of entrances to switchyards (sorting yards) stations, marshalling (classification) yards/stations and passenger stations.			
Required Reading: Relevant literature in English, tbd			
Weekly Contact Hours:2	Lectures: 3	Practical work: 2	
Teaching Methods: Lectures (auditory, power-point), practice (numerical and graphical), consultations.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Attendance			
Computer exercises			
Tests (4x)			

