Course Unit Descriptor

Study Programme: Civil Engineering

Course Unit Title: River Hydraulics

Course Unit Code: GH500

Name of Lecturer(s): Budinski Ljubomir, Kolaković Slobodan

Type and Level of Studies: bachelor

Course Status (compulsory/elective): elective

Semester (winter/ summer): winter

Language of instruction: english

Mode of course unit delivery (face-to-face/distance learning): face-to-face

Number of ECTS Allocated: 4

Prerequisites: none

Course Aims:.

Getting to know the basics of river hydraulics, sediment transport and morphology of the river bed. Application base on the practical aspects such as regulation works and measures, or flood protection.

Learning Outcomes:
Knowledge of the processes related to sediment transport in open channels which enables the design of regulatory structures in river flows are acquired.

Syllabus.
Geomorphological characteristics of natural watercourses. Velocity distribution, tangential and turbulent stresses, resistance to friction. Flow resistance in the fixed bottom bed. Coating formation and alluvial resistance. Steady and unsteady flow in natural watercourses. Origin and physical properties of sediment. Sediment transport. Bed load, suspended sediment and total deposition. Regulation works, measures and structures. Flood protection.

Required Reading:
Relevant literature in English, tbd

Weekly Contact Hours:2	**Lectures: 2**	**Practical work: 2**

Teaching Methods:
Teaching is performed interactively in the form of lectures, auditory, laboratory and computer practice. At lectures, theoretical part of the course content is presented, followed by the characteristic examples for easier understanding of the course content. At auditory practice, characteristic exercises are solved and the course content is explained in more detail. At laboratory practice, acquired knowledge is practically applied on the available laboratory equipment. Apart from lectures and practice, consultations are regular. A part of the course content that makes a logical unit can be taken during the teaching process in the form of partial examinations. Partial examinations are taken in written form and as tests. Examination grade is made on the basis of: lecture and practice (auditory, laboratory and computer) attendance, partial examination grade and written examination grade (combined exercises and theory).

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Attendance			
Computer exercises			
Tests (4x)			