ERASMUS+
EU programme for education, training, youth and sport

Incoming student mobility

Name of UNIOS University Unit:

COURSES OFFERED IN FOREIGN LANGUAGE FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS

Department or Chair within the UNIOS Unit	Department of Hydraulic Engineering and Environmental Protection

Study program	Civil Engineering

Study level (bachelor/master)	Graduate (master's) level

Course title	Modelling in Hydraulic Engineering
Course code (ISVU)	139718
Language of instruction	English
Course content	The course introduces modeling in hydraulic engineering, including different types of models, modeling approaches, and scenario development. It covers the principles and applications of hydrological and hydraulic models. Students learn how to apply modeling techniques to water supply systems, sewer systems, precipitation catchments, surface runoff, and open-channel flows. Special emphasis is placed on the practical use of models for solving engineering problems in water management and environmental protection.
Prerequisites for enrolment (if any)	Successful completion (passed exams) of the courses Hydraulic Engineering and Hydrology
Learning outcomes	1. Define the possibilities of modeling in hydraulic engineering, basic terms, and types 2. Explain the phases of modeling 3. Argue the advantages and disadvantages of physical and numerical modeling 4. Model hydrological processes 5. Model hydraulic processes
Basic Literature	Walski, T.M.; Barnard, T.E.; Durrans, S.R.; Meadows, M.E. Computer Applications in Hydraulic Engineering-Theory and Practice. 2002.
Additional Literature	Walski, T.M.; Chase, D.V.; Savic, D.A. Water Distribution Modeling. Haestad Press, 2001.;

	Durrans, S.R. Stormwater Conveyance Modeling and Design. Haestad Press, 2003. Dyhouse G.R. Floodplain Modeling Using HEC-RAS. Bently Systems, 2003.
Form of teaching	Lectures, seminars, group supervision, problem-based teaching
Form of assessment	Formative and summative assessments
Number of ECTS	5
Class hours per week	4
Period of realization (summer/winter semester)	winter
Teacher(s) + Email address	Tamara Brleković tamaradadic@gfos.hr
Assistant(s) + Email address(es)	