

Faculty of Philosophy / GEOGRAPHY / Inland Hydrology

Course:	Inland Hydrology			
Course ID	Course status	Semester	ECTS credits	Lessons (Lessons+Exercises+Laboratory)
2251	Mandatory	2	5	3+1+0
Programs	GEOGRAPHY			
Prerequisites	There are no conditions for enrollment and attendance in the course.			
Aims	The content includes an introduction to hydrological phenomena and processes, as well as basic hydrological disciplines such as geohydrology, glaciology, talmatology, limnology, potamology, morphometry, and hydrometry.			
Learning outcomes	After passing this exam, the student will be able to: Understand the basic properties of water. Comprehend the significance of water for the life and work of people (utilization, management, and protection of water resources) and the main principles of water management. Present the basic characteristics/types of surface water, karst water, lakes, wetlands, glaciers, and rivers. Apply morphometry, hydrometry, and GIS tools in the study of water bodies. Determine the elements of the water balance of a watershed. Possess basic knowledge about the waters of Montenegro as a natural resource of the country. Identify and analyze hydrological problems and propose fundamental measures for their resolution.			
Lecturer / Teaching assistant	The instructor is Professor Dr. Dragan Burić, with Dr. Jovan Mihajlović as a collaborator.			
Methodology	The course involves lectures, exercises, fieldwork, consultations, and a final exam.			
Plan and program of work				
Preparing week	Preparation and registration of the semester			
I week lectures	Hydrology Definition and Study Subject, Hydrology Divisions, Water Management.			
I week exercises	Chemical and Physical Characteristics of (Ground) Waters.			
II week lectures	Water and its Basic Properties, Origin and Quantities of Water on Earth, Water Balance on Earth.			
II week exercises	Graphic Representation of Springs - Phreatic and Artesian.			
III week lectures	Origin of Groundwater, Hydro-physical Properties of Rocks, Significance of Groundwater.			
III week exercises	Graphic Representation of Karst Springs and Polluted Karst.			
IV week lectures	Potamology - River System, River Network, and Types of Watercourses.			
IV week exercises	Orohydrographic Map at a Scale of 1:25,000: Watershed and Watershed Divide.			
V week lectures	Valley and River Bed, Divides and Watersheds, Factors and Elements of River Regime.			
V week exercises	Orohydrographic Map at a Scale of 1:25,000: Morphometric Characteristics of the Watershed.			
VI week lectures	Energy and Work of Rivers, River Water Balance, Characteristics of River Water.			
VI week exercises	Calculation of the Average Annual Sum of Precipitation in a Given Watershed and its Immediate Surroundings.			
VII week lectures	Limnology - Formation and Types of Lakes, Morphometric Characteristics, and Movement of Lake Water.			
VII week exercises	Orohydrographic Map at a Scale of 1:50,000: Drawing Watershed and Water Divide.			
VIII week lectures	Characteristics of Lake Waters, Lake Ecosystem, Geographic Distribution, Lake Water Balance.			
VIII week exercises	Orohydrographic Map at a Scale of 1:50,000: Drawing Along the River Profile			
IX week lectures	I COLLOQUIUM			
IX week exercises	Drawing the Hipsographic Curve and Determining the Mean and Absolute Altitude of the Watershed.			
X week lectures	Talmatology - Conditions of Formation and Types of Wetlands; Hydrographic Network of Wetlands, Distribution, and Characteristics.			
X week exercises	Determination of River Flow Using Graphic-Analytical Methods.			
XI week lectures	Glaciology - Conditions for Glacier and Inland Ice Formation, Snow Limits, Snow and Ice Movement.			
XI week exercises	Construction of the Flow Curve - Consumption Curve.			
XII week lectures	Types of Glaciers, Contemporary Glaciation, and Frozen Ground.			

XII week exercises	Computational Task: Specific Runoff, Altitude, and Runoff Coefficient.					
XIII week lectures	Water Resources Management.					
XIII week exercises	Calculation of Runoff and Suspended Sediment Coefficient on a Monthly and Annual Basis.					
XIV week lectures	Protection of Water Resources.					
XIV week exercises	Graphic Representation and Calculation of Morphometric Characteristics of a Given Limnological Object: Lake Length, Lake Width, Length of the Shoreline, and its Indentation.					
XV week lectures	II COLLOQUIUM					
XV week exercises	Determination of Basic Parameters of a Limnological Object Using a Map with Contour Lines.					
Student workload						
Per week			Per semester			
5 credits x 40/30=6 hours and 40 minuts 3 sat(a) theoretical classes 0 sat(a) practical classes 1 excercises 2 hour(s) i 40 minuts of independent work, including consultations			Classes and final exam: 6 hour(s) i 40 minuts x 16 =106 hour(s) i 40 minuts Necessary preparation before the beginning of the semester (administration, registration, certification): 6 hour(s) i 40 minuts x 2 =13 hour(s) i 20 minuts Total workload for the subject: 5 x 30=150 hour(s) Additional work for exam preparation in the preparing exam period, including taking the remedial exam from 0 to 30 hours (remaining time from the first two items to the total load for the item) 30 hour(s) i 0 minuts Workload structure: 106 hour(s) i 40 minuts (courses), 13 hour(s) i 20 minuts (preparation), 30 hour(s) i 0 minuts (additional work)			
Student obligations			Attendance of lectures and exercises, seminars, tests, and two colloquia.			
Consultations			On days when classes are held - Professor: 1 hour weekly; Collaborator: 1 hour weekly.			
Literature			Doderović M., Burić D., Popović Lj. (2018): Hidrologija kopna, Univerzitet Crne Gore, Podgorica. Burić D. (2020): Hydrology of the Land - Authorized Script for Lectures and Exercises.			
Examination methods			Homework = 5 points, test/exercises = 5 points, two colloquia worth 20 points each = 40 points, and a final exam worth 50 points. A passing grade is achieved by accumulating a minimum of 50 points cumulatively.			
Special remarks						
Comment						
Grade:	F	E	D	C	B	A
Number of points	less than 50 points	greater than or equal to 50 points and less than 60 points	greater than or equal to 60 points and less than 70 points	greater than or equal to 70 points and less than 80 points	greater than or equal to 80 points and less than 90 points	greater than or equal to 90 points