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# SWARM unique set of courses

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Workshop on  
Theme-based training of teaching staff for acquiring new teaching and  
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UNESCO Chair  
International Network of  
Water-Environment Centres for the Balkans



Aristotle University  
of Thessaloniki

Strengthening of master curricula in water resources  
management for the Western Balkans HEIs and stakeholders

Project number: 597888-EPP-1-2018-1-RS-EPPKA2-CBHE-JP

# Synopsis of proposed courses by WB Universities

The following tables are the final output of the

- ❑ Correspondence between AUTH and project partners.
- ❑ The meeting in Vienna and the discussion that followed the meeting.
- ❑ The response of the WB partners to the mail of AUTH in 26 June 2019 about the current and the proposed curricula.
- ❑ The Report on development of specific competences and learning outcomes of curricula, provided by the WB partners.



Institution	Programme	Existing Courses	SWARM Program outputs
<b>University of Pristina in Kosovska Mitrovica/ Faculty of Technical Sciences</b>	<b>Undergraduate</b>	Basics of Environmental Engineering	Basics of Environmental Engineering
		Fluid-mechanics	Fluid-mechanics
		Hydro-technics	Hydro-technics 1 (Hydrology)
			Hydro-technics 2 (Hydraulics)
		Hydro-technical infrastructure systems	Hydro-technical infrastructure systems
	<b>Master</b>	Design of Hydraulic Structures	Design of Hydraulic Structures
			Hydro technical Systems
			Facilities of hydro power systems and plants
		Planning and design of hydraulic structures	



Institution	Programme	Existing Courses	SWARM Program outputs
<p><b>Technical College of Applied Sciences Urosevac- Leposavic</b></p>		<p>No study programmes or courses related to water resource management</p>	<p>New master with the following courses (among others):</p> <ul style="list-style-type: none"> <li>• Hazardous Material and Hazardous Waste</li> <li>• Fundamentals of water protection</li> <li>• Information and communication technologies in risk management</li> <li>• Basic principles of water management</li> <li>• Sustainable development and environmental protection</li> </ul>



Institution	Programme	Existing Courses	SWARM Program outputs
<b>University of Montenegro/ Faculty of Civil Engineering</b>	<b>Undergraduate</b>	Basics of hydrotechnical engineering	Introduction of laboratory exercises and experiments
	<b>Master</b>	Civil Engineering Master: Module - Water Engineering (120 ECTS)	

Institution	Programme	Existing Courses	SWARM Program outputs
<p><b>University of Novi Sad/ Faculty of Technical Sciences</b></p>	<p><b>Master in Water Treatment &amp; Protection (300 ECTS)</b></p>	<ul style="list-style-type: none"> <li>• Advanced Course in Mathematics</li> <li>• Fundamentals in hydrotechnics, hydromechanics and geotechnics</li> <li>• Chemical sources and environmental pollution</li> <li>• Hazards and Environment</li> <li>• Environmental Protection Systems Management</li> <li>• Renewable Energy Technologies</li> <li>• Material Flow Analysis</li> <li>• Technological processes in water quality control</li> <li>• Hydrotechnical Facilities and Systems</li> <li>• Waste Management</li> <li>• Monitoring and management of systems</li> <li>• Hydrometry</li> <li>• Basics biological principles of environmental protection</li> <li>• Drinking Water Treatment Process Design</li> <li>• Professional Practice</li> <li>• Designing of wastewater treatment processes</li> <li>• Designing environmental management system</li> <li>• Advanced Sanitary Engineering</li> <li>• Master thesis - study research work</li> <li>• Master thesis - preparation and defense</li> </ul>	<p><u>New courses:</u></p> <ol style="list-style-type: none"> <li>1. Analysis of environmental protection systems</li> <li>2. Environmental Practicum</li> <li>3. Groundwater flow</li> <li>4. Alternative separation processes in water treatment</li> <li>5. Water Quality Management and Methods for Sediment Remediation</li> <li>6. Open channel hydraulics</li> </ol>

\* With purple color are denoted the elective courses.



Institution	Programme	Existing Courses	SWARM Program outputs
University of Mostar/Faculty of Civil Engineering	Undergraduate	1. Hydromechanics 2. Water supply and wastewater disposal 3. Hydrotechnical buildings	
	Master	Water protection (e)	Water protection (e)*
		Sustainable management of municipal water utilities	Sustainable management of municipal water utilities *
			Sustainable water management in the local community
			Hydropower (e)
			Wastewater disposal (e)

e – elective

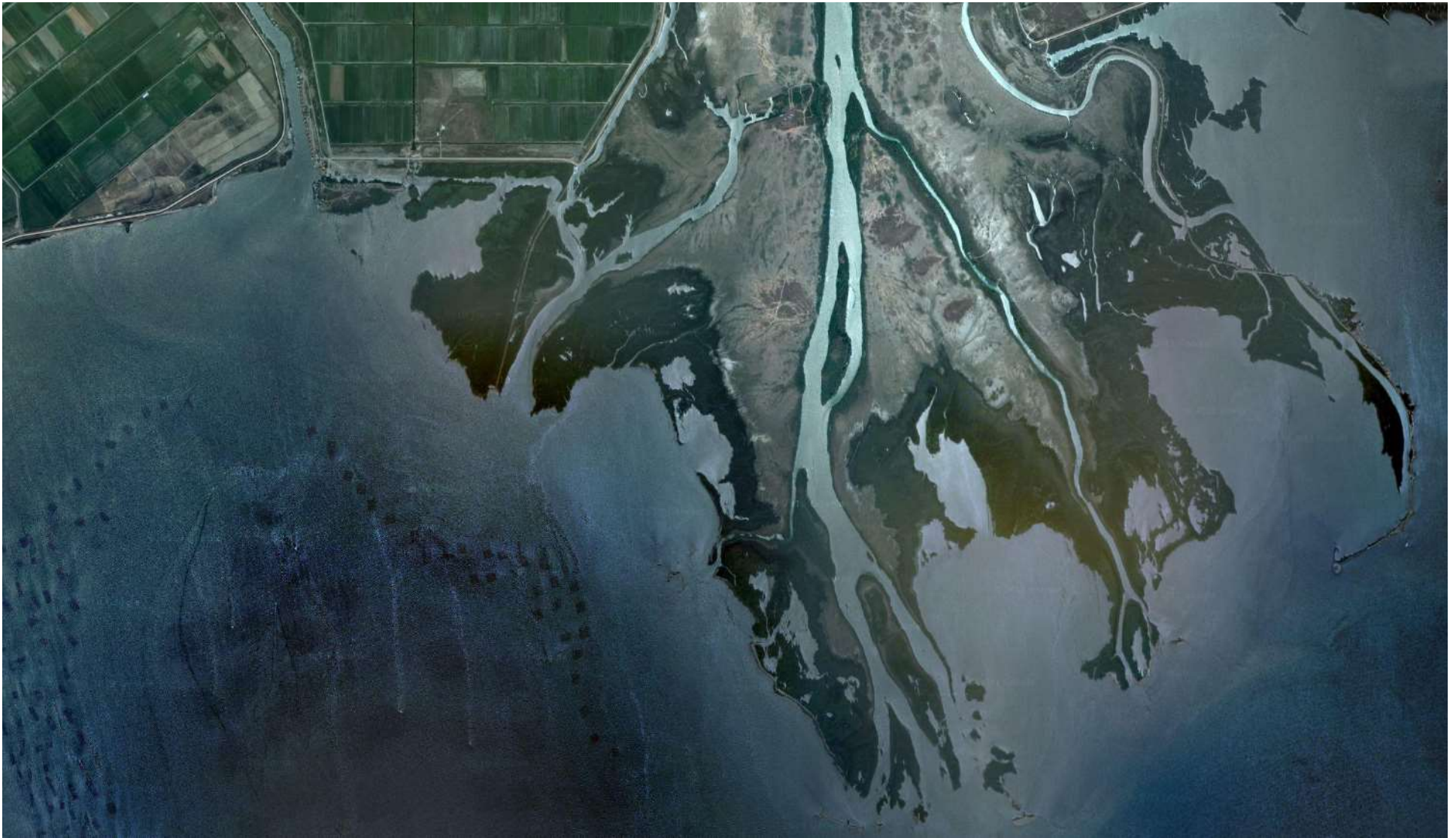
\* courses that will be improved

Institution	Programme	Existing Courses	SWARM Program outputs
University of Nis /Faculty of Civil Engineering and Architecture	Undergraduate	Fluid Mechanics	Fluid Mechanics
		Basics of Hydrology	Basics of Hydrology
		Hydrotehnics	Hydrotehnics
		Hydropower	Hydropower
		Groundwater	Groundwater
		Urban Hydrotehnics	Urban Hydrotehnics
			Basis of hydrometeorology
		Urban Infrastructures	
		Urban Hydrology	
		Urban Water	
	Master	Water Treatment Plant Management	Water Treatment Plant Management
		Drinking Water Purification	Drinking Water Purification
		Water Resources Management	Water Resources Management
			Sustainable Urban Drainage Systems
		Circular Economy and Water Resources	





Institution	Programme	Existing Courses	SWARM Program outputs
<p style="text-align: center;"><b>University of Sarajevo/Faculty of Civil Engineering</b></p>	<p><b>Master</b></p>	Matematic III	<p>Update of existing courses:</p> <ul style="list-style-type: none"> <li>• Water treatment of drinking water</li> <li>• Water resources and systems</li> <li>• Sewage water system</li> <li>• Environmental Protection</li> <li>• River Engineering</li> <li>• Water Protection</li> </ul> <p>New courses</p> <ul style="list-style-type: none"> <li>• <b>Integrated Water Resources Management</b></li> </ul>
		Hydrology	
		Water supply	
		Hydraulic	
		Water treatment of drinking water	
		Water resources and systems	
		Sewage water system	
		Hydrogeology	
		Environmental Protection	
		Solid Waste Management	
		Hydrodynamic of ground water	
		Stochastic hydrology	
		Integral Water Resources Management	
		Project management	
		Hidroenergetika	
		River Engineering	
		Water Protection	
Treatment of waste water			
Numeric hydraulic			
Melioration system			



*Thank you for your attention!*  
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