



Results from winter school at UNIRIFCE

15.-26.11.2021.

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Workshop on the sustainability of the SWARM results
Thessaloniki, 21/12/2021

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University of Nis



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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

		Winter school at UNIRIFCE			
Monday 15.11.2021. Water management BOJANA HORVAT	Tuesday 16.11.2021. Drinking water supply BARBARA KARLEUŠA	Wednesday 17.11.2021. Flood protection and torrents BOJANA HORVAT	Thursday 18.11.2021. Drainage (waste water and storm water) in urban/rural areas BARBARA KARLEUŠA	Friday 19.11.2021. Synthesis and discussion BARBARA KARLEUŠA BOJANA HORVAT	
9:00-13:00 Lectures: <ul style="list-style-type: none"> • Introduction • Water management in Croatia • Harmonization with EU directives • Water management institutions/agencies: Hrvatske vode ... • International commissions for protection of major river basins (ICPDR, ISRBC) 	9:00-13:00 Lectures: <ul style="list-style-type: none"> • Introduction • Water supply systems • Management of WSS • Presentation of WSS in Croatia - Rijeka and Istria • Challenges in (future) water supply (DRINKADRIA project) 	9:00-13:00 Lectures: <ul style="list-style-type: none"> • Introduction • Types of floods • Flood mapping • Flood hazard and flood risk • INSPIRE Directive: spatial data sharing • Presentation of DAREFFORT Interreg project (Danube River Basin Enhanced Flood Forecasting Cooperation) 	9:00-13:00 Lectures: <ul style="list-style-type: none"> • Introduction • Drainage systems (waste water and storm water) • Management of DS • Presentation of DS in Croatia - Rijeka and Istria • Challenges in (future) drainage in urban/rural areas (RAINMAN project) 	9:00-13:00 Student presentations: <ul style="list-style-type: none"> • During previous 4 days students have to prepare for each day a presentation on that day topic regarding their country / city / region • Those presentations are held by students on Friday and based on all material analysed there is a structured discussion 	
13:00-14:00 Lunch break	13:00-14:00 Lunch break	13:00-14:00 Lunch break	13:00-14:00 Lunch break	13:00-14:00 Lunch break	
14:00-16:00 Student work	14:00-16:00 Student work	14:00-16:00 Student work	14:00-16:00 Student work	14:00-16:00 Student work	
16:00-17:00 Discussion	16:00-17:00 Discussion	16:00-17:00 Discussion	16:00-17:00 Discussion	16:00-17:00 Discussion	
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Winter school at UNRIFCE - AGENDA

Monday 22.11.2021. Coastal engineering IGOR RUŽIĆ NINO KRVAVICA	Tuesday 23.11.2021. Climate change and water management BOJANA HORVAT	Wednesday 24.11.2021. Hydraulic structures: Dams and reservoirs BARBARA KARLEUŠA	Thursday 25.11.2021. Synthesis and discussion BARBARA KARLEUŠA BOJANA HORVAT	Friday 26.11.2021. Laboratory work ELVIS ŽIĆ
9:00-13:00 Lectures: <ul style="list-style-type: none"> Introduction to coastal engineering Presentation of interesting coastal projects in region (marina, port and beach) Advances in using UAV and photogrammetry for coastal monitoring 	9:00-13:00 Lectures: <ul style="list-style-type: none"> Introduction Climate change/variations and its impact on water resources Mitigation measures Green infrastructure Presentation of Danube Floodplain Interreg project 	9:00-13:00 Lectures: <ul style="list-style-type: none"> Introduction Dams and reservoirs Hydropower (HP) plants and HP systems Presentation of interesting HP and other systems with dams and reservoirs in Croatia 	9:00-13:00 Student presentations: <ul style="list-style-type: none"> During previous 3 days students have to prepare for each day a presentation on that day topic regarding their country / city /region Those presentations are held by students on Thursday and based on all material analysed there is a structured discussion 	9:00-13:00 Lectures: <ul style="list-style-type: none"> Introduction Presentation of hydraulic laboratory for research and for teaching (several examples from the hydrotechnical practicum) Application of physical modelling in Fluid Mechanics
13:00-14:00 Lunch break	13:00-14:00 Lunch break	13:00-14:00 Lunch break	13:00-14:00 Lunch break	13:00-14:00 Lunch break
14:00-16:00 Student work	14:00-16:00 Student work	14:00-16:00 Student work	14:00-16:00 Student work	14:00-16:00 Student work
16:00-17:00 Discussion	16:00-17:00 Discussion	16:00-17:00 Discussion	16:00-17:00 Discussion	16:00-17:00 Discussion
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STUDENTS

7 students enrolled the WINTER SCHOOL at UNRIFCE :

University of Niš (UNI): 2

University of Priština in Kosovska Mitrovica (UPKM): 1

Academy of Applied Sciences of Kosovo and Metohija (AASKM): 1

University of Novi Sad (UNS): 2

Džemal Bijedić University of Mostar (UNMO): 1

5 students successfully completed the WINTER SCHOOL at UNRIFCE:

University of Niš (UNI): 1

University of Priština in Kosovska Mitrovica (UPKM): 1

Academy of Applied Sciences of Kosovo and Metohija (AASKM): 0

University of Novi Sad (UNS): 2

Džemal Bijedić University of Mostar (UNMO): 1

EXAMPLES OF WINTER SCHOOL DAYS

Monday, 15 th November 2021	
University of Rijeka, Faculty of Civil Engineering (UNIRIFCE) - ONLINE	
Winter school – 1 st week / 1 st day	
08:30-09:00	Introduction about the Winter school at UNIRIFCE
	Barbara Karleuša Bojana Horvat
TOPIC: WATER MANAGEMENT Teacher: Bojana Horvat	
09:00-13:00	Lectures: <ul style="list-style-type: none"> • Introduction • Water management in Croatia • Harmonization with EU directives • Water management institutions/agencies: Hrvatske vode, International commissions for protection of major river basins (ICPDR, ISRBC), ...
13:00-14:00	Lunch break
14:00-16:00	Student work (research and preparation of presentation)
16:00-17:00	Discussion

STUDENT WORK

➔ **Research the topic of water management structure in your country and prepare a presentation:**

➔ The task is to, based on the knowledge you have gained during the lectures, to describe the structure of water management in your country/area, including:

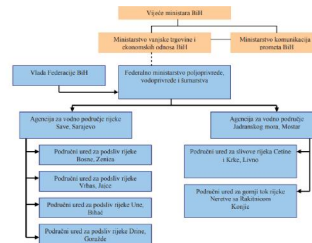
- legal frame,
- legislation,
- organization,
- administrative structure,
- water management financing,
- international cooperation.

STUDENT WORK



Results (presentations and discussion):

Water management in Federation of Bosna and Herzegovina
 Water management in Kosovo
 Water management in Republic of Serbia
 Water management in Vojvodina



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Tuesday, 16th November 2021

University of Rijeka, Faculty of Civil Engineering (UNIRIFCE) - ONLINE

Winter school – 1st week / 2nd day

TOPIC: DRINKING WATER SUPPLY

Teacher: Barbara Karleuša

09:00-13:00	Lectures: <ul style="list-style-type: none"> • Introduction • Water supply systems (WSS) • Management of WSS • Presentation of WSS in Croatia - Rijeka and Istria • Challenges in (future) water supply (DRINKADRIA project)
13:00-14:00	Lunch break
14:00-16:00	Student work (research and preparation of presentation)
16:00-17:00	Discussion

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STUDENT WORK

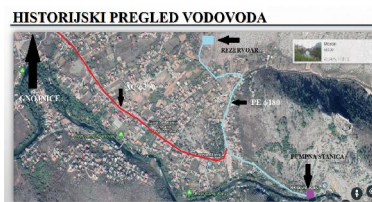
Present the water supply system (WSS) of the city in which you study and/or live

- For the selected water supply system (depending on the available material):
- Describe the WSS area
 - Indicate the type of consumers
 - Determine the type of WSS according to the operating model
 - Describe the elements of the WSS
 - List and explain the water supply sources and methods of water abstraction
 - Describe the water quality and how the water quality is protected
 - List problems if there are any
 - Add plans, blueprints and photos
 - And other info that you find interesting

STUDENT WORK

Results (presentations and discussion):

- WSS of Blagaj
- WSS of Vranje
- WSS of Niš
- WSS of Novi Sad



NIVOS - Niški vodovodni sistem



Monday, 22 nd November 2021	
University of Rijeka, Faculty of Civil Engineering (UNIRIFCE) - ONLINE	
Winter school – 2 nd week / 1 st day	
TOPIC: COASTAL ENGINEERING	
Teacher: Igor Ružić, Nino Krvavica	
09:00-13:00	Lectures: <ul style="list-style-type: none"> Introduction to coastal engineering Presented of interesting coastal projects in region (marina, port and beach) Advances in using UAV and photogrammetry for coastal monitoring
13:00-14:00	Lunch break
14:00-16:00	Student work (research and preparation of presentation)
16:00-17:00	Discussion

STUDENT WORK

➔ Identify a breakwater and describe it

➔ The task is to, based on the knowledge you have gained during the lectures using public data sources, find, identify and describe 2 breakwaters in a defined area.

The description must include:

- Map of the wider area and the location and the name of the port/city
- Satellite image of the port/marina and the break water
- Length of the breakwater
- Type of breakwater and the material used for construction
- The max. depth of the seabed at the end of the breakwater

 **STUDENT WORK**

Co-funded by the Erasmus+ Programme of the European Union 


 **Results (presentations and discussion):**


- Old port of Dubrovnik
- Port of Rijeka
- Port of Krk
- New port of Zadar - Gaženica
- Marina in Umag
- Marina in Rovinj
- Marina Borik, Zadar

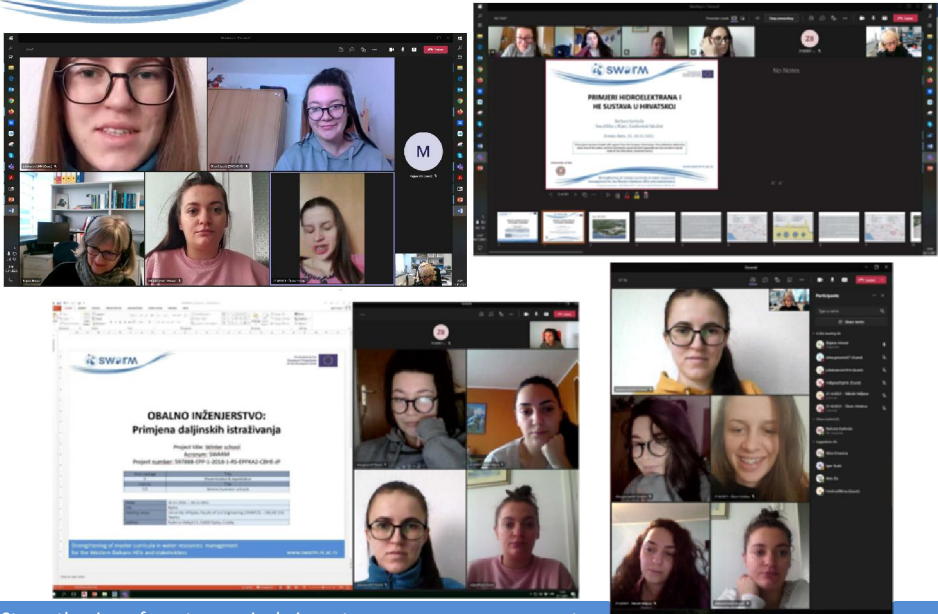


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 **STUDENT WORK**

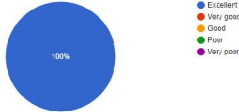
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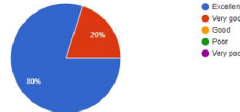
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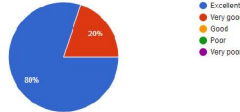
Logistic preparation (visa, invitations, enrolment) and organization of school
5 responses



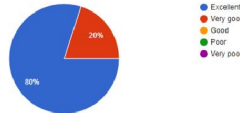
Quality of delivered documentation
5 responses



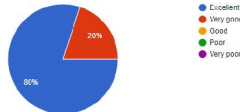
Content of the agenda
5 responses



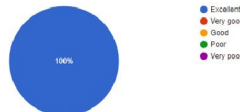
How do you rate the attention given to you?
5 responses



Arrangements of the event (venue, equipment, etc.)
5 responses



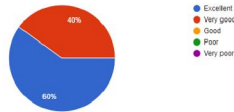
Are you satisfied with the content of the lectures?
5 responses



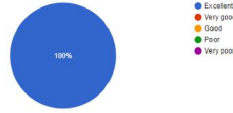
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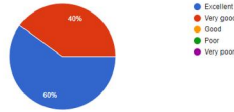
How do you rate social activities and possibilities to interact with others?
5 responses



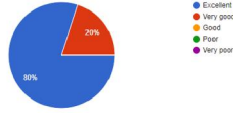
In a general, how do you rate the classroom?
5 responses



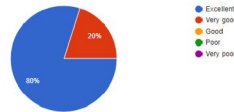
Engagement of the participants in the activities and discussions
5 responses



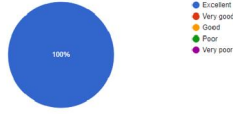
Usefulness of what you learned for your current studies and future profession?
5 responses



How do you rate opportunities to be adventurous?
5 responses



How would you rate the school you have been given?
5 responses



Comment
1 response

I spent a great and quality time in this winter school and I learned a lot of new things. Thank you so much for everything.

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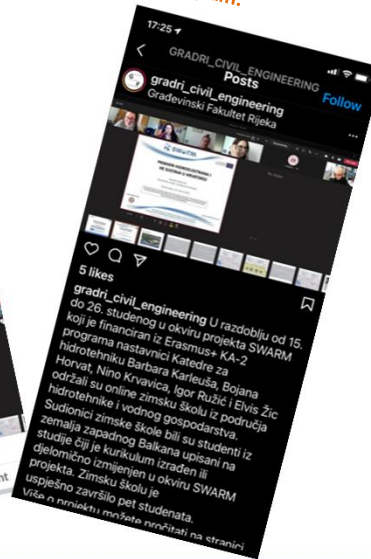




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Thank you for
your attention!

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