MARDS

REFORMING DOCTORAL STUDIES IN MONTENEGRO AND ALBANIA – GOOD PRACTICE PARADIGM

Grant: 598465-EPP-1-2018-1-ME-EPPKA2-CBHE-SP

Erasmus+ CBHE Field Monitoring Visit

University of Montenegro, 23.03.2023







MARDS

REFORMING DOCTORAL STUDIES IN MONTENEGRO AND ALBANIA – GOOD PRACTICE PARADIGM Grant: 598465-EPP-1-2018-1-ME-EPPKA2-CBHE-SP

Summary on achievements

Prof. dr Radovan Stojanović









Project overview

15 Partners

- EU (5): University of Vienna, University of Zagreb, University of Maribor, University of Banska Bistrica, Association of professionals in doctoral education.
- ME (5): University of Montenegro, University of Donja Gorica, Ministry of education of Montenegro, Ministry of Science of Montenegro, Montenegrin Chamber of Commerce,
- AL(6): University of Schroder "Luigj Gurakuqi", Technical University of Tirana, Vlore University, University Metropoliten Tirana, Ministry of sport and education of Albania.
- <u>Coordinator</u>: University of Montenegro
- <u>EU garnt (all partners)</u>: 868.120 EUR, UCG 201.740 EUR (23.2%), Staff: 61,460.00, Travel: 17,770.00, Stay: 34,560.00, Equ: 57,950.00, Sub: 34,000.00
- Duration: 4 years, NOV 15 2018- NOV 14 2022







General objectives

- 1. To reconstruct Albanian and Montenegrin systems of doctoral education in line with Salzburg Principles
- to establish sustainable and modern Pilot Joint Doctoral Schools between two friendly neighbours partner countries that will serve as an example of "good practice" for the WB Region.

www.mards.ucg.ac.me



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



Field Monitoring Visit

Specific objectives

- 1. <u>to reconsider</u> the existing national policies/standards for doctoral studies in two countries and their compatibility with EU practices.
- 2. <u>to develop and propose</u> a new model of doctoral studies in two countries, adapted to the acquired experiences over past decades and current and future countries' needs.
- 3. <u>to propose a sustainable method</u> of financing doctoral studies in two countries on national levels.
- 4. to establish two Joint Doctoral Schools
 - "Natural sciences and Technology for Sustainable Development" with place in Montenegro (Podgorica)
 - "Economy and Tourism for Sustainable Development" with place in Albania (Shkoder) as the recommendable examples of cross-border PhD programmes.
- 5. <u>to establish a sustainable cooperation</u> with EU partners and established Doctoral School in order to maintain developed standards.





Specific outcomes

- 1. <u>Report</u> on existed doctoral education in Montenegro and Albania with Action plans.
- 2. <u>Proposal of basic legal documents</u> including the model of funding doctoral studies in Montenegro and Albania.
- 3. <u>Conference on PhD education in Montenegro and</u> Albania.
- 4. <u>Guidelines and recommendations</u> for WB academics and professionals in Doc. studies.
- 5. <u>Training staff and support.</u>
- 6. **Providing infrastructural and human resources**
- 7. <u>Accredited Joint Pilot Doctoral School:</u> "Natural sciences and Technology for Sustainable Development" with place in Montenegro, Podgorica,





Specific outcomes

- 8. <u>Accredited Joint Pilot Doctoral School:</u> "Economy and Tourism for Sustainable Development" with place in Albania , Shkoder.
- 9. <u>The First Scholarships for doctoral studies</u> in two countries based on recommended funding model (if allowed by policy makers)
- 10. <u>MARDS Doctoral Colloquium</u> of first PhD generation enrolled under title "Science, Technology and Services for Sustainable development",
- 11. <u>Providided model of cooperation academia –</u> nonacademia in term of MARDS
- 12. Providing sustainability of the achieved results





What we are proud of?

- We change the system of PhD studies in Montenegro (modern approach, lower fees, intensive work, motivated candidates and teachers, mobility, research, publications, the tuition fee for doctoral studies has been reduced to symbolic 0€-€250- €750 per semester.). In addition, the MARDS project contributed to the improvement of other policies and measures in doctoral education in Montenegro, e.g. at the University of Montenegro.
- We developed, accredited, licensed and start up the first international multidisciplinary PhD programme "Sustainable Development" in Montenegro, <u>https://www.mards.ucg.ac.me/PhD/</u>
- We developed, accreditated and start up the First International multidisciplinary PhD programme "Economy and Tourism in Sustainable Development" in Albania,
- We enrolled 2 generations of the students in Montenegro and one in Albania. The first generation students made great progress The MARDS program attracted most of the students enrolled in Ph.D. studies (16 studies programs) at the University of Montenegro in the 2021/2022 academic year. As many as 15 students out of a total of 93 are enrolled in this program (16%.). At the end of the academic year, all enrolled students mastered the defined curriculum with more than 75 % of success. All of them defended their colloquium works within Doctoral Symposium . The students were very proactive in mobility, their research stays at a partner institution, and 83% spent that stay, mainly at the University of Maribor.





What we are proud of?

- The MARDS is a "de facto and de jure" international program. It originated from an international project, conducted in English by international institutions and professors, including international students. Circa 36 % of the enrolled students of the first generation completed their previous level of education at one of the foreign universities. This percent in 2nd generation goes to 90%. Some of them returned to Montenegro to continue their studies and professional development. About 50% of professors and supervisors were from foreign universities. About 40% of all authors, at Symposium, were out of Montenegro. The Program offers opportunities for the scientific diaspora of Montenegro and the wider Western Balkan.
- We have established traditional Colloquium for Doctoral Students, the first in history of WB DS, <u>www.doc-me.com</u>.
- We have become an good example in the Region on modern DS.









"Sustainable development" PhD Structure





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



Staff Week Meeting, November, 2022

Eligibility

- MSc students obtained 300 ECTS in one of the following profiles:
 - 1. All technical sciences
 - 2. Biotechnical/technology sciences
 - 3. Natural sciences and mathematics
 - 4. Multidisciplinary sciences compatible with programme
 - 5. Biomedical engineering
 - 6. Medicine and related sciences







Spisak predmeta - doktorske studije "Održivi razvoj" (MARDS, UCG) The list of the courses - PhD studies "Sustainable Development" (MARDS, UCG=University of Montenegro)

| # | Predmet (MNE) | Course(ENG) | Predavač/Teacher | ECTS | Status | Nosilac Institution |
|-----|---|--|------------------------------------|------|---------------------|--------------------------------------|
| 1 | Metodologija naučno-istraživačkog rada | Methodology of science and research work | Prof. dr Veljko Milutinović | 10 | | Indiana University Bloomington |
| 2 | Daljinsko istraživanje | Remote sensing | Prof. dr Dušan Gleich | 10 | izborni elective | Univ. Maribor |
| - 3 | Upravljanje i zaštita elektroenergetskih sistema | Power system control and protection | Prof. dr Boštjan Polajžer | 10 | izborni elective | Univ. Maribor |
| 4 | Komunikacija čovjek-računar u medijima | Human-computer interaction in the media | Prof. dr Matjaž Debevc | 10 | izborni elective | Univ. Maribor |
| 5 | Intelegentna obrada podataka | Intelligent data analysis | Prof. dr Iztok Fister | 10 | izborni elective | Univ. Maribor |
| 6 | Distributivni sistemi za smještanje podataka | Distributed data storage systems | Prof. dr Aida Kamišalić Latifić | 10 | izborni elective | Univ. Maribor |
| 7 | Pretraživanje nestrukturisanih podataka | Mining unstructured data and natural language processing | Prof. dr Sašo Karakatič | 10 | izborni elective | Univ. Maribor |





| 8 Savremeni građevinski materijali | Contemporary building materials | Prof. dr Radomir Zejak | 10 | izborni elective | GF UCG |
|---|--|---|----|---------------------|----------------------|
| 9 Eksperimentalna analiza konstrukcija | Experimental analysis of structures | Prof. dr Biljana Šćepanović | 10 | izborni elective | GF UCG |
| 10 Upravljanje rizikom u građevinarstvu | Risk management in civil engineering | Prof. dr Miloš Knežević | 10 | izborni elective | GF UCG |
| 11 Energetska efikasnost zgrada | Energy efficiency of buildings | Prof. dr Radmila Sinđić Grebović | 10 | izborni elective | GF UCG |
| 12 Izabrana poglavlja iz električnih mašina | Selected topics in electrical machines | Prof. dr Gojko Joksimović | 10 | izborni elective | ETF UCG |
| 13 IoT ekosistemi | IoT ecosystems | Prof. dr Radovan Stojanović | 10 | izborni elective | ETF UCG |
| 14 Eksergetske analize u HVAC instalacijama | Power analyses in HVAC systems | Prof. dr Igor Vušanović | 10 | izborni elective | MF UCG |
| 15 Kompleksi metala i njihova primjena | Metal complexes and their application | Prof. dr Željko Jaćimović, Prof. dr Nedeljko Latinović | 10 | izborni elective | MTF UCG i BTF UCG |





| 16 | Hemija životne sredine | Environmental chemistry | Prof. dr Željko Jaćimović, Doc. dr Miljan Bigović | 10 | izborni elective | PMF UCG |
|----|---|---|--|----|---------------------|----------------------|
| 17 | Ekologija i životna sredina | Ecology and enviroment | Prof. dr Marijana Krivokapić | 10 | izborni elective | PMF UCG |
| 18 | Ekologija i biodiverzitet akvatičnih sredina | Ecology and biodiversity of aquatic ecosystems | Prof. dr Marijana Krivokapić | 10 | izborni elective | PMF UCG |
| | Biološki procesi u životnoj sredini - odabrana poglavlja | Biological processes in the environment - selected chapters | Prof. dr Jelena Rakočević | 10 | izborni elective | PMF UCG |
| 20 | Precizna poljoprivreda | Precision agriculture | Prof. dr Radovan Stojanović, Prof. dr Nedeljko Latinović | 10 | izborni elective | ETF UCG i BTF UCG |
| 21 | Brodska alternativna goriva i pogoni | Ships' alternative fuels and propulsion | Prof. dr Danilo Nikolić | 10 | izborni elective | PF UCG |
| 22 | Održavanje zasnovano na pouzdanosti | Reliability-based maintenance | Prof. dr Špiro Ivošević | 10 | izborni elective | PF UCG |
| 23 | Modeliranje u Supply Chain Management- u | Modeling the supply chain | Prof. dr Branislav Dragović | 10 | izborni elective | PF UCG |

www.mards.ucg.ac.me



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



Staff Week Meeting, November, 2022

| 24 Kontinuiteti u građenju grada | Continuities in the city building | Doc. dr Vladimir Bojković | 10 | izborni elective | AF UCG |
|--|---|---|----|---------------------|----------------------------|
| 25 Energetska i ekološka rehabilitacija zgrada | Energy and environmental refurbishment of buildings | Prof. dr Dušan Vuksanović | 10 | izborni elective | AF UCG |
| 26 Dizajn i priroda | Design and nature | Prof. dr Slavica Stamatović Vučković | 10 | izborni elective | AF UCG |
| 27 Naučna komunikacija i pisanje | Science communication and writing | Doc. dr Nela Milošević | 5 | izborni elective | Univeristy Donja Gorica |
| 28 Napredno preduzetništvo | Advanced entrepreneurship | Prof. dr Dijana Kovačević | 5 | izborni elective | University Donja Gorica |
| 29 Tehnološko preduzetništvo | Technological entrepreneurship | Prof. dr Radovan Stojanović | 5 | izborni elective | ETF UCG |

www.mards.ucg.ac.me



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



Staff Week Meeting, November, 2022



REFORMING PHD STUDIES



Programme Coordinator

Prof. dr Radovan Stojanović, University of Montenegro





REFORMING PHD STUDIES



Research Coordinator

Prof. dr Veljko Milutinović, Indiana University Bloominghton







Students of the first generation of international doctoral studies "Sustainable Development" at the University of Montenegro





Ana Radović

Master of Science – Chemical technology Manager of Department of accreditation laboratories and inspection bodies, Lead assessor for laboratories and inspection bodies Accreditation body of Montenegro

Anita Martić Master of Science - Sus

Master of Science - Sustainable Agriculture Plant protection technologist at 13 Jul-Plantaze





Branka Knežević

Master of Science - Biology Deputy Secretary in Secretariat for Spatial Planning and Sustainable Development of Capital City Podgorica

David Kočović

Master of Science – Food Technology and Proccesing Head of Laboratory at "Institute for medicines and medical devices of Montenegro"



NG PHD STUDIES





Ivana Mitrović Master of Science – Ecology Advisor at Environmental Protection Agency Montenegro **Maša Jovanović** Doctor of Veterinary Medicine Dr vet. Med RoyalVet





Neda Bošković

Master of Science- Environmental Protection PhD student - Environmental Protection Professional person for performing safety at work

Mladen Femić

Master of Science - Geodesy and GIS Land use and surveying lead engineer in Project manager unit for the Bar-Boljare highway Project Monteput doo





Osman Šurla

Master of Science – Biology High-school teacher of biology, life sciences and health education

Sanja Pavićević Master of Science - Physics Consultant/Freelancer





Snežana Lješnjak Master of Science – Ecology Teacher of Biology at Primary School "Marko Miljanov"

Stefanela Žarković

Master of Science - Architectural technology and construction Architect at Zetagradnja



MA



Tanja Radovanović Master of Science / Master of Architecture UX/UI Designer

Vesna Pavlović Master of Science – Biology Implementation Manager at Ministry of Finance and Social Welfare





Students of the **2nd generation** of international doctoral studies "Sustainable Development" at the University of Montenegro

Students of the 2nd generation of international doctoral studies "Sustainable Development" at th University of Montenegro



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





<u>Selma Sellaku</u> <u>Anja Babić</u>





<u>Azra Vuković</u>



Branislav Proročić

Students of the 2nd generation of international doctoral studies "Sustainable Development" at th University of Montenegro



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





Maja Božović





Dejan Zejak



Nikola Bajović





























University of Monteneg





































ON AIR 🜔

David Kočović

UT User Experience: Challenges of the Present

Product is only necessible III it turns line an experience.
Functionality and usability are not example for usera anymore.
For having experiences humans are using their natural tools which are emotions.
To deviain positive product experiences we can use Enclosen all design process which reakers in adapt additional maniput to the product and it is also prover to influence user decision making, affect attention, ememory, engagement etc. *
The problem that currently Emotional design being used to be a set of the product additional maniput to the product and the site of the product set of the set of the

RDS

REFORMING PHD STUDIES



For a better city for the and ME think SUSTAMABLITY



12 111 2

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





RDS

REFORMING PHD STUDIES















media





society



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

REFORMING PHD STUDIES

r d s









managment



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

MARDS









Conclusion

- it was not an easy job.
- we succeeded.
- we will maintain and improve achievements.
- where we failed, we will always do it again.
- because the green reforms and new ideas never end.
- For more info:
- <u>https://www.mards.ucg.ac.me/workflow.html</u>
- <u>https://www.mards</u>. <u>me/PhD/</u>





