



"Accelerating Western Balkans University Modernisation by Introducing Virtual Technologies"

VTech@WBUni

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Selection of pilot courses at each HEI that will use virtual technology

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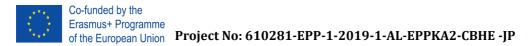


Erasmus+ Programme of the European Union Project No: 610281-EPP-1-2019-1-AL-EPPKA2-CBHE -JP



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1. Project Executive Summary

Possessing specific ICT skills has an effect on economic competitiveness, especially in small countries such as WB countries (Albania, North Macedonia, Kosovo), with high unemployment rates, whereas one of the solutions to survive is active participation in the lifelong learning process (European Commission, 2011), by upgrading current competences and obtaining new competences, needed in the local, regional, European and global labour market.

Virtual Technologies are considered one of the tools to transform and modernize Higher Education. Students today are already familiar with various technologies, which is why computerized tools and apps make sense in a classroom setting. In WB countries the rate of possession of smartphones and other smart equipment is comparable with the rate presented for European countries.

The project's general aim is to introduce for the first time at Western Balkan universities the concept of virtual technologies as a tool for accelerating university modernization while contributing to developing a knowledge-driven society.

By incorporating Virtual Technologies in the academic culture of universities we aim to increase the quality and level of efficiency in teaching and knowledge retention through interactive learning methods, thus contributing to skills enhancement and further building of a digital society in WB countries.

In the mid and long term, the project will enhance the effectiveness of the higher education system in knowledge retention and application. The project's direct beneficiaries are universities, schools, teachers, students, regional industries, and businesses.

Some of the specific objectives of the project are:

- Capacity building of academic staff to incorporate Virtual Technologies in teaching
- Develop teaching methodologies availing of technology and/or ICT tools
- Increase the level of understanding and reduce the grasping time and the effort that students need to learn information by using 3D concepts instead of 2D ones
- Offer a better delivery of basic knowledge even for complex issues, higher learning efficiency, and better learning experience by AR/VR techniques.

The project brings together 11 partners with the University "Aleksander Moisiu" of Durres as the lead partner:

- Aleksandër Moisiu University of Durrës
- European University of Tirana
- Polis University





- Epoka University
- University of Prishtina
- University for Business and Technology
- South East European University
- Mother Teresa University
- University of Ljubljana
- University of Tartu
- Lodz University of Technology

2. About this document

This Report is prepared as an activity and deliverable within VTech Erasmus + project. The compilation of the Report is based on WP2 (2.3.) Activity 2.3.1. Selection of pilot courses at each HEI that will use virtual technology.

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors and project consortium, and the Commission cannot be held responsible for any use which may be made of the information contained therein.





3. Selection of pilot courses

In each project partner, several meetings with academic staff were conducted. In each meeting, in-depth discussions were held to decide for the most suitable courses in which virtual technologies could be implemented. Faculty staff members gave valuable inputs in proposing and elaborating the reasons for proposed courses that can implement VR technology and that will directly impact the teaching and learning process in selected fields.

After the period of discussion within partner institutions, each partner proposed at least three selected courses offered as bachelor and/or master studies that can implement VR technology.

The development of the courses will be based on the development of the methodology which will remain in place for use by the Higher Education Institutions (HEIs) after the project ends. Such development will further contribute to the priorities of the ministries in the WB countries to increase the modernization of HEIs and introduce new technologies.

The HEIs in the WB countries are directly affected by VR courses, which will be available for the students at the national level, to ensure teaching quality and enhance students' performance. Moreover, the courses will be included in the curriculum which will ensure an impact on the HEIs internally.

4. List of Vtech-supported courses

The selected courses from each partner university for implementing virtual technologies are:

- **University of Prishtina** selected seven courses for implementing VR technologies, four in bachelor and three in master-level programs.
- **Polis University** came with three propositions, one for a bachelor, one for an integrated master, and one for the master course.
- **European University of Tirana** stated that three courses are most suitable for implementing these technologies, two in the bachelor and one in the master program.
- **Mother Tereza University** proposed two courses, one in bachelor and one in master-level studies.



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- **EPOKA University** selected three courses, two in the bachelor and one in the master program.
- Aleksander Moisiu University claimed that in their study programs, there are eight courses that are suitable for implementing virtual technologies, five in bachelor and three in master studies.
- **South East European University** selected four courses, three in bachelor and one in master studies
- **University for Business and Technology** proposed ten courses, five in the bachelor and five in the master program.

| No. | University | Course | Study level Bachelor/ Master | Expected number of students | Academic staff e-mail contact |
|-----|----------------------------------|--|------------------------------------|-----------------------------------|---|
| 1 | University of Prishtina | Fundamentals of Electrical Engineering | Bachelor | 120 | Luan Ahma Luan.ahma@uni-pr.edu |
| 2 | University of Prishtina | Digital circuits | Bachelor | 120 | Enkele Rama Enkele.rama@uni-pr.edu |
| 3 | University of Prishtina | Digital Electronics | Bachelor | 20 | Sabrije Osmanaj <u>sabrije.osmanaj@uni-pr.edu</u> |
| 4 | University of Prishtina | Animation and virtual reality | Bachelor | 30 | Jeta Dobruna j <u>eta.dobruna@uni-pr.edu</u> |
| 5 | University of Prishtina | Multimedia Communications | Master | 20 | Hena Maloku <u>hena.maloku@uni-pr.edu</u> |
| 6 | University of Prishtina | Bio-medicinal electronics | Master | 20 | Sabrije Osmanaj <u>sabrije.osmanaj@uni-pr.edu</u> |
| 7 | University of Prishtina | 3D Animation | Master | 20 | Hena Maloku <u>hena.maloku@uni-pr.edu</u> |
| 1 | POLIS University | Computational aided design | Integrated Master | 100 | Ledian Bregasi <u>ledian_bregasi@universitetipoli</u> <u>s.edu.al</u> |
| 2 | POLIS University | Computer-based Arts | Bachelor | 80 | Gerdi Papa gerdi papa@universitetipolis.e du.al |
| 3 | POLIS University | Interactive Design | MSc | 80 | Valerio Perna valerio perna@universitetipolis .edu.al |
| 1 | European University of Tirana | Anatomy | Bachelor | 75 | Brunilda Mezani Brunilda.mezani@uet.edu.al |
| 2 | European University of Tirana | Digital Design – Digital visual effects | Master | 15 | Shaqir Veseli <u>Shaqir.veseli@uet.edu.al</u> |
| 3 | European University of Tirana | Multimedia Communications | Bachelor | 92 | Gejsi Tafa <u>Gejsi.tafa@uet.edu.al</u> |

The selected courses for each HEI are presented in the table below:



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| 1 | Mother Teresa University | Computer Architecture | Bachelor | 20 | Bekim Fetaji Bekim.fetaji@unt.edu.mk |
|---|-----------------------------------|---|----------|-------|--|
| 2 | Mother Teresa University | Game Programming | Bachelor | 10 | Stojan Kitanov stojan.kitanov@unt.edu.mk |
| 1 | EPOKA University | Data Structures | Bachelor | 120 | Enea Mancellari emancellari@epoka.edu.al |
| 2 | EPOKA University | Circuit Theory | Bachelor | 160 | Julian Hoxha jhoxha@epoka.edu.al |
| 3 | EPOKA University | Digital Image Processing | Master | 20 | Arban Uka <u>auka@epoka.edu.al</u> |
| 1 | Aleksander Moisiu University | Fundamentals of Electrical Engineering | Bachelor | 20 | Marsida Ibro <u>marsida.ibro@gmail.com</u> |
| 2 | Aleksander Moisiu University | Data structures | Bachelor | 50 | Kristel Bozhiqi bozhiqikristel@yahoo.com |
| 3 | Aleksander Moisiu University | Operating Systems | Bachelor | 50 | Emiliano Mankolli <u>emiliano_fshn@hotmail.com</u> Viola Shtino <u>vf.sh@hotmail.com</u> |
| 4 | Aleksander Moisiu University | Image processing | Bachelor | 25 | Marsida Ibro marsida.ibro@gmail.com |
| 5 | Aleksander Moisiu University | Integrating Marketing Communications | Bachelor | 50 | Xhafer Rakipllari xhrakipllari@gmail.com |
| 6 | Aleksander Moisiu University | Multimedia Laboratory | Master | 15-20 | Marsida Ibro/ <u>marsida.ibro@gmail.com</u> Uendi Çerma/ <u>cermauendi@gmail.com</u> Albana Halili <u>ndreualbana@yahoo.com</u> |
| 7 | Aleksander Moisiu University | Advanced Multimedia Technologies | Master | 15-20 | Frida Gjermeni/ <u>Frida gjermeni@hotmail.com</u> Kristel Bozhiqi <u>bozhiqikristel@yahoo.com</u> |
| 8 | Aleksander Moisiu University | Data Mining | Master | 20-25 | Emiliano Mankolli/ emiliano fshn@hotmail.com Senada Bushati bushatin@yahoo.com |
| 1 | South East European University | Game programming | Bachelor | 20 | Xhemal Zenuni <u>xh.zenuni@seeu.edu.mk</u> |
| 2 | South East European University | Computer Graphics | Bachelor | 20 | Visar Shehu <u>v.shehu@seeu.edu.mk</u> |
| 3 | South East European University | Capstone Projects | Bachelor | 10 | Visar Shehu <u>v.shehu@seeu.edu.mk</u> Marika Apostolova Trkovska <u>m.apsotolova@seeu.edu.mk</u> |
| 4 | South East European University | Master Thesis | Master | 1-5 | Visar Shehu <u>v.shehu@seeu.edu.mk</u> |

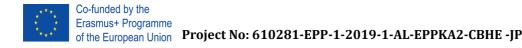


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|----|-----|--|----------|-----|---|
| | | | | | Arbana Kadriu |
| | | | | | <u>a.kadriu@seeu.edu.mk</u> |
| 1 | UBT | Fundamentals of Mechanical Engineering | Bachelor | 50 | Xhemajl Mehmeti <u>xhemajl.mehmeti@ubt-uni-net</u> |
| 2 | UBT | Game Programming | Bachelor | 250 | Astrit Hyseni astrit.hyseni@ubt-uni.net |
| 3 | UBT | Introduction to System multimedia | Bachelor | 85 | Faton Spahiu <u>faton.spahiu@ubt-uni.net</u> |
| 4 | UBT | Lab Course 1/2 | Bachelor | 80 | Besnik Qehaja <u>besnik.qehaja@ubt-uni.net</u> |
| 5 | UBT | Web Multimedia | Bachelor | 250 | Xhelal.jashari <u>xhelal.jashari@ubt-uni.net</u> |
| 6 | UBT | Digital elektronics and signals | Msc | 85 | Zhilbert Tafa <u>zhilbert.tafa@ubt-uni.net</u> |
| 7 | UBT | CAD and Computational Structural Analysis | Master | 15 | Betim Shabani <u>betim.shabani@ubt-uni.net</u> |
| 8 | UBT | Dizajnimi dhe Modelimi i Softuerit | Msc | 80 | Edmond Jahjaga <u>edmond.jahjaga@ubt-uni.net</u> |
| 9 | UBT | Modelimi i Sistemeve Softuerike Komplekse | Msc | 20 | Krenare Pireva <u>Krenare.pireva@ubt-uni.net</u> |
| 10 | UBT | Power electronics in smart grids | Master | 30 | Armend Ymeri armend.ymeri@ubt-uni.net |





Conclusion

This report summarized the selected courses from all partner universities for implementing virtual technology.

This selection is based on a couple of meetings that all partners conducted in their universities with academic staff engaged in study programs.

From the discussions, all partners decided on the most suitable courses in which they asses that virtual technologies can be implemented.

Courses were selected from bachelor and master-level programs.

With the implementation of VR technology in these pilot courses, it is understandable that the teaching process will be significantly enhanced and that the students will benefit greatly from this experience.

We are positive that in the near future, many more courses will follow these steps in the implementation of VR technology in their teaching process.