

DERHE Project Newsletter

University of Montenegro

Activities and results in Montenegro

<https://derhe.si>

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Digital Education Readiness in the Field of Higher Education

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Digital learning facilities at the Faculty of Mechanical Engineering

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training programmes developed

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individual student projects

Digital education connected with industry

The University of Montenegro is strengthening digital education through DERHE. New equipment and practical learning facilities support blended teaching, while courses and student projects connect learning with company needs.



Students and teaching staff during project training



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LEARNING FACILITIES IN MONTENEGRO

A centre for digital and practical learning



Digital teaching equipment at the Faculty of Mechanical Engineering

**Investment at
UoM****€101,586**University of Montenegro
grant**€37,400**

Equipment allocation

Product development and process optimisation

The Centre for Education in Product Development and Process Optimisation at the Faculty of Mechanical Engineering provides facilities for practical exercises, training and student project work in Montenegro.

The equipment includes 3D printers, computer workstations, an interactive display and a camera for digital teaching. These facilities support blended learning and the application of digital manufacturing and Lean methods.



Space for practical exercises and collaborative learning



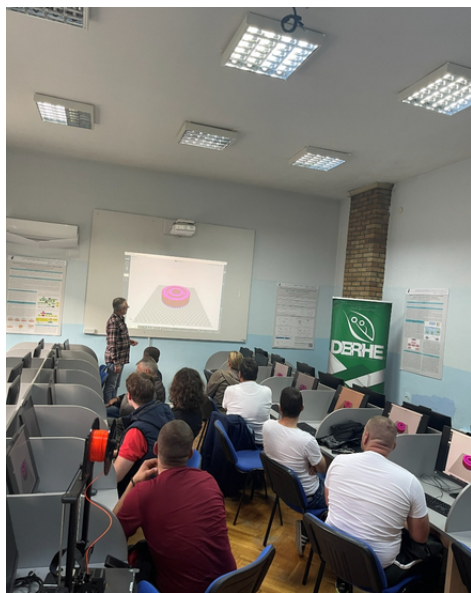
Equipment for digital teaching

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TRAINING FOR COMPANIES AND STUDENTS

Blended learning in practice



Company training



Collaborative learning during project training

Learning with company employees

Company training combined five online lectures with five practical sessions in the Faculty's laboratories or at company premises.

Participants came from Montleon, Pro Tool, M Code, Autoremont LMI, Symetria, Nelt, EFT Montenegro, Crnogorski elektroprenosni sistem and Elektroprivreda Crne Gore.

Two training programmes

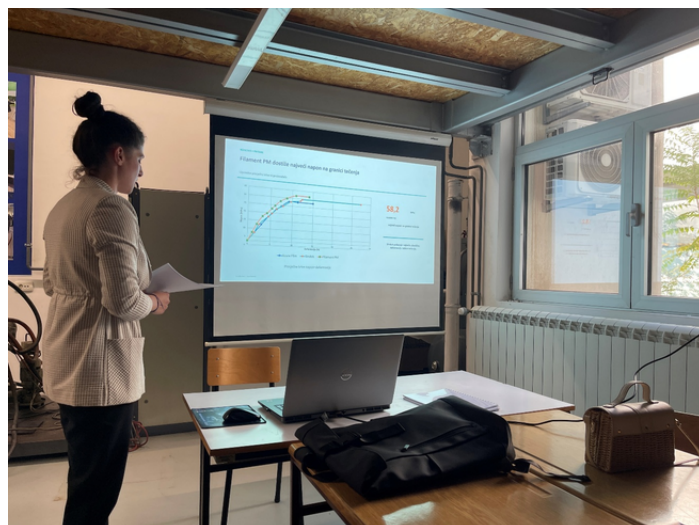
3D modelling and 3D printing with Lean principles

Process optimisation through Lean methodology

Student training

2 online lectures
3 practical sessions

Laboratory work connected theoretical content with practical engineering tasks.



Sharing methods and project work in the learning centre

STUDENT PROJECTS

Student solutions for industry

Students at the Faculty of Mechanical Engineering worked on company challenges through three individual projects in digital manufacturing and process improvement.

01 Aleksa Vuković

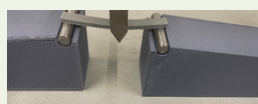
Reducing 3D printing costs

The project investigates how infill density and pattern, specimen geometry and printer build volume affect production time, energy use and carbon footprint. Experiments use PLA and ABS filaments.

**02 Ljubica Medigović**

Testing filament properties

Compression and bending tests compare the mechanical properties of filaments from different manufacturers. The work supports recommendations for material selection according to the expected loading.

**03 Sara Ivković**

Improving delivery performance

Analysis of a company's vehicle fleet operations identifies causes of delayed deliveries to retail outlets and explores measures to improve this part of its business.



Real challenges from industry

APPLIED RESEARCH AND INSTITUTIONAL RESULTS

Research and teaching at the University

Master's research by Mirjana Šoškić

Development of a test rig for cylindrical gears made from 3D printed thermoplastic polymers



Test rig for investigating 3D printed gears at the Faculty of Mechanical Engineering

This research connects 3D printing with experimental testing of mechanical components, using the Faculty's facilities for practical engineering work.

Results for the University of Montenegro

4 updated syllabi

Revised course syllabi in the Mechanical Engineering study programme.

Microcredential proposal

An accreditation proposal prepared, based on a developed training programme.

Company cooperation

Cooperation agreements signed with companies in Montenegro.

CONFERENCE AT THE CHAMBER OF ECONOMY OF MONTENEGRO

Connecting universities and business

16 October 2026 • Chamber of Economy of Montenegro



Conference on skills for the future • Photo: Chamber of Economy of Montenegro

Skills for the future

The Chamber of Economy organised the DERHE conference “Skills for the Future: Education, Technology and Business in the New Industrial Era”. Participants discussed how education can respond to companies’ changing skills needs.

Prof. Janko Jovanović presented UoM results, including training, updated courses and the learning centre. Students and company participants shared their experiences of applying new knowledge.

Practical skills and employability

A panel brought together students, academic staff and company mentors to discuss practical work, digital and professional skills, placements and employment.



UoM results and participant experiences • Photos: Chamber of Economy of Montenegro



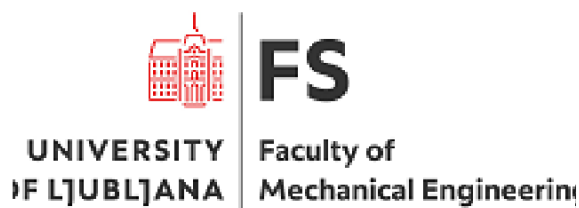
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