

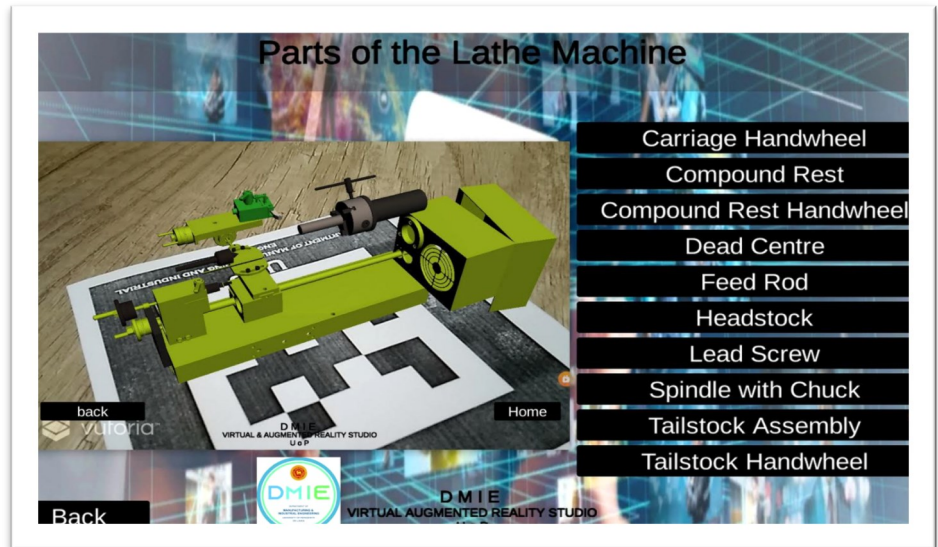


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A move towards the Factories of the Future



DMIE Teaching Factory Research Cluster introduces state-of-the-art Laboratory based education to our staff, students, as well as for the stakeholders in the industry.

Purpose: To increase the students' competencies by allowing to interact with virtual machines.

Using virtual technologies, students can operate machines and manipulate various adjustments in an environment suitable for them to construct their knowledge and skills.

Through the virtual technologies, students can be given increased autonomy in using the machines that can help them develop to carry out open-ended inquiries, not mere execution of sequential instructions.

Enhances the process in which the student actively constructs their own ideas that are linked with other ideas.

The ability to precisely record the virtual interactions allows teachers to conduct assessments more objectively.

Phase 2:

To Recommend technological developments on the foundation of augmented reality for effective Human-IMS collaboration and demonstrate its functionality.

Phase 1:

To train students and operators and guiding them to accomplish certain tasks, for example, by displaying a layer of virtual instructions over the real equipment and machines.





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Benefits to our undergraduate and industry

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Training for Industry

- Training of new operators
- Awareness sessions on new technologies
- Demonstration of remote assistance
- Emergency preparedness training
- Simulation of new layouts and factory expansions
- Learning from expert human skills (Phase 2)



Final Year

- Immersive CAD/CAM experience
- Immersive layout planning experience
- Simulation of Lean flow
- Observations and EHS Assessments
- Ergonomics Assessment of simulated work
- Immersive experience of maintenance work



Third Year

- Simulated Automated Facilities
- Immersive experience with complex systems
- Simulated machine designing and operation



Second Year

- Simulation of Mechanics of Machines applications
- Immersive 3D designing
- Simulated Product Design and Prototyping
- Immersive experience with machine elements
- Simulated Machining



First Year

- Simulation of manufacturing fundamentals
- Simulated engineering workshop

