CENTRE FOR GREEN AND BIO MATERIALS MANUFACTURING

DEPARTMENT OF MECHANICAL ENGINEERING

The Centre for Green and Biomaterials Manufacturing promote advanced research in sustainable materials and eco-friendly manufacturing technologies. It focuses on bio-based materials, green processing, and circular economy practices to support environmentally responsible industrial development.

The Centre enhances the university's research ecosystem through funded projects, industry collaboration, and innovation-driven activities. It provides students with hands-on training, research opportunities, and skill development in emerging green technologies.

For faculty, the Centre encourages interdisciplinary research, consultancy, funded proposals, and Faculty Development Programs (FDPs), strengthening academic excellence and sustainable engineering leadership.

VISION

- To develop a sustainable centre of excellence for green and bio materials through innovative and eco-friendly manufacturing practices.

MISSION

- To spearhead path breaking research in the development of green and bio materials
- To develop cutting-edge technologies for manufacturing prostheses and bio-composites
- To empower individuals and organizations to adopt and manufacture environmental friendly and biological materials
- To foster collaboration with national and international laboratories and institutions for research and training

MAJOR AREAS OF RESEARCH

- Additive Manufacturing of Orthopedic Implants by Bio Compatible Polymers
- Prostheses Using Hybrid Composites
- Advanced material processing
- Material characterization and testing

KEY FEATURES

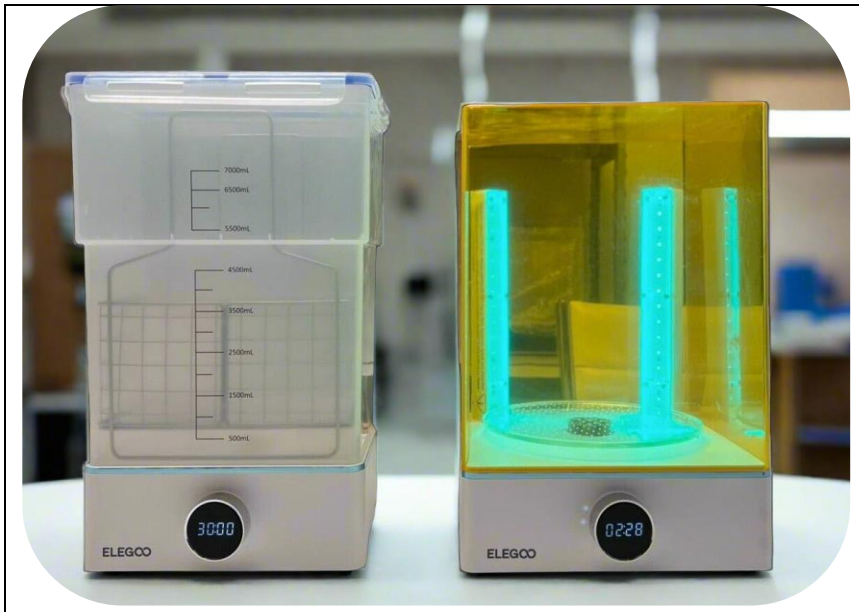
 **Cutting-Edge Research Facilities**	 **Generous Research Funding**
 **Expert Faculty & Researchers**	 **Industry-Academia Collaboration**
 **Focus on Sustainable Technologies**	 **Global Research Impact**

CORE ACTIVITIES

R & D	-Research needed to accelerate standards priorities
PARTNERSHIPS	-Partnerships to meet evolving market needs
CONSORTIA	-Collaboration with industry to identify needed R&D
STANDARDIZATION	- Benchmarking for standards development

FACILITIES

- ❖ Fused Filament Fabrication Machine
- ❖ Washing And Curing Station for Resin 3D Printer
- ❖ 3D Scanner
- ❖ UV Cured Resin 3d Printer
- ❖ Universal Testing Machine
- ❖ Compression Molding Machine
- ❖ Muffle Furnace
- ❖ Specimen Cutting Machine

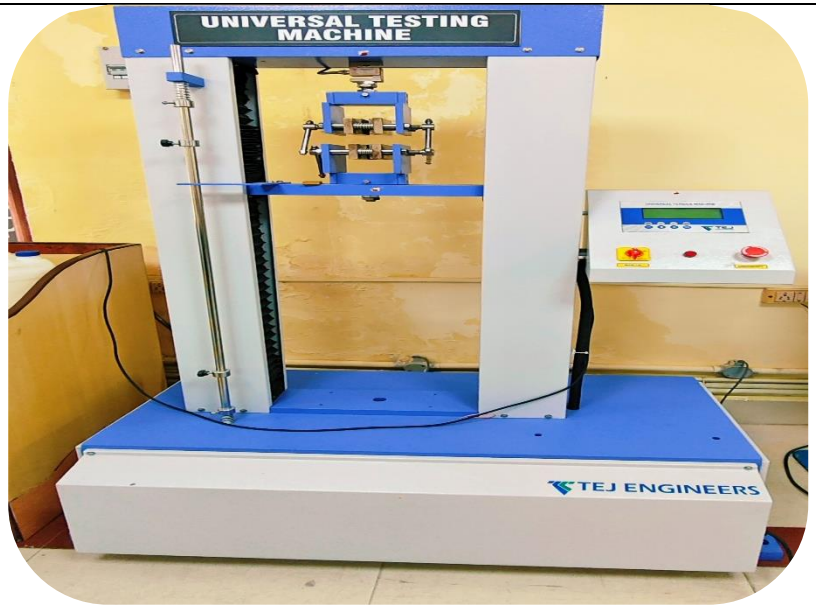


Washing and Curing Station for Resin 3D Printer

Fused Filament Fabrication Machine

3DScanner

Specimen Cutting Machine

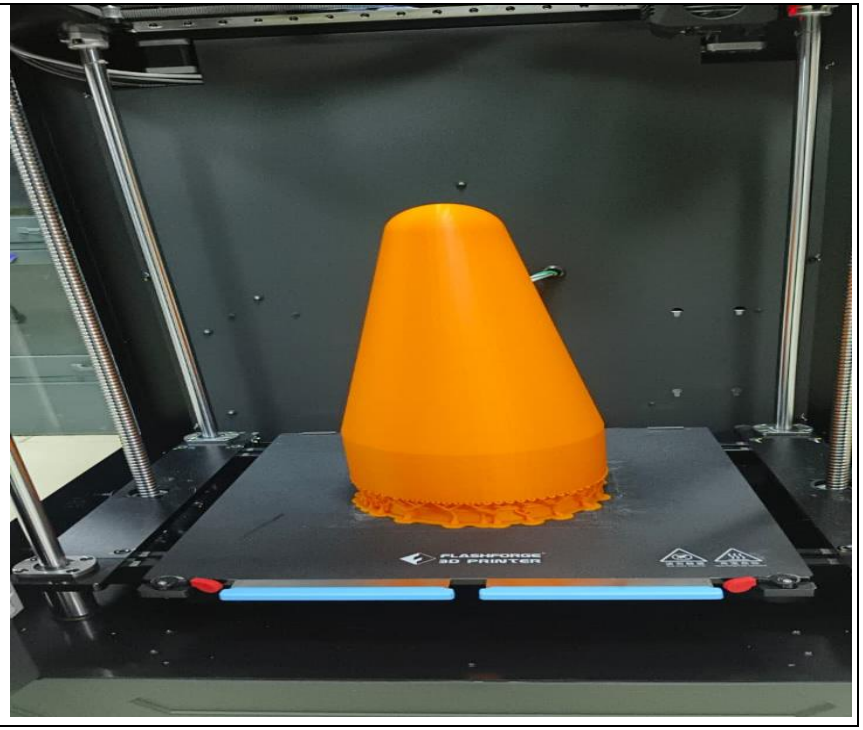


Universal Testing Machine

Muffle Furnace

ACTVIITES DONE

Printed Part to ACS Space Technology Centre



Fused Filament Fabrication Machine

 3D Printed tooth set model – Dental Implants	 Prosthetic Finger

CORE TEAM MEMBERS:

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