Govt. of N.C.T. of Delhi
DELHI TECHNOLOGICAL UNIVERSITY
(Formerly Delhi College of Engineering)
Shahbad Daulatpur, Bawana Road-Delhi-42

DTU/R&D/Faculty Proposal /2025/105/2703 **Date: 21 /03/2025.**

OFFICE ORDER

The competent authority has approved the award of research project under the faculty schemes, as notified vide BOM Notification No. DTU/Council/BOM-AC/Notification/31/2018/512 dated: 09/09/2024. List of approved projects is as follows:

Equipment Matching Grant

Sl. No.	Title of the Project	Dept.	PI
01	Mechanical energy harvesting using Mxene Functionalised polymer composite nano fibre and integrating it with energy storage devices for IOT & wearable application	AP	Dr. Bharti Singh
02	Machine learning assisted first principle study of anomalous nernst effect in Weyl Semimetals	AP	Dr. Mukhtiyar Singh
03	Smart Autonomous Weed Detector and Removal	SE	Dr. Sanjay Patidar

Young Faculty Grant

Sl. No.	Title of the Project	Dept.	PI
01	Augmented Reality based Paradigm for emotion EEG recording and recognition using signal Processing -Machine Learning Framework.	ECE	Dr. Sachin Taran
02	A Language Independent Visual Language Reasoning Method using Deep attention networks for visually Impaired Individual	ECE	Dr. Chhavi Dhiman
03	Design and implementation of performance optimized Quantum-dot-Cellular-Automata-based reversible multiplier for applications in Internet of Things devices	ECE	Dr. Sonal Singh
04	Reliable and Efficient Reconfigurable FET Integration in Next-Generation Mixed-Signal Systems	ECE	Dr. Sumit Kale
05	Development of a Photoplethysmography (PPG)-Based Vital Sign Monitoring System with Real-Time Data Acquisition and Multimodal Validation	ECE	Dr. Manjeet Kumar
06	Design and Prototype of Reconfigurable Multi-RIS-Aided Energy Efficient Wireless Systems via FPGA Based Hardware Software Co-design	ECE	Dr. Rohit Kumar
07	Ka-Band Microwave Imaging	ECE	Dr. Harikesh
08	Development of a Robust Remote Photoplethysmography (rPPG) System for Real-Life Environments Using Multi-Modal Approaches	ECE	Dr. Pankaj Dahiya
09	Design and Analysis of gain Enhanced Antennas using Metamaterials for 5G Applications	ECE	Dr. Deepika Sipal
10	ECG Data Security through Cryptographic Approaches for Privacy and Integrity in Healthcare System	ECE	Dr. Anukul Pandey
11	RECAP: Reversible Embedding with Causal Assistance and Prediction	CSE	Dr. Rajeev Kumar

12	Development of Deep Learning based Muti-Sensor Fusion Framework for Multi-Target Surveillance System	CSE	Dr. Anurag Goel
13	VDM-AR: Video summarization for efficient Data Management and Action Recognition	CSE	Dr. Kavinder Singh
14	Detection of Prohibited Objects from X-Ray Images for Airport Security	IT	Dr. Bindu Verma
15	Design and development of techniques for android malware detection with volatile memory artifects	IT	Dr. Rahul Gupta
16	Design and Development of Fault Tolerant Multifunctional Charger for E-Rikshaw	EE	Dr. Mayank Kumar
17	Development of IoT Enabled Control Strategies for Photovoltaic Micro- Converters under Mismatching Conditions	EE	Dr. Vanjari Venkata Ramana

Faculty Interdisciplinary Research Projects (FIRP)			
Sl. No.	**Title of the Project**	**Dept.**	**PI**
01	Biogenic Nanoparticles: A Green Approach to Solving Environmental and Health Challenge.	AP	Dr. Mohan Singh Mehata
02	Fabrication of Rechargeable Energy Storage Devices Using Low-Cost Materials'.	AP	Dr. Amrish Panwar
03	Value-addition to Waste feedstock through transesterification to produce Biodiesel.	AC	Dr. Richa Srivastava
04	Isolation, characterization, and analysis of amino acids, fatty acids, vitamins, and minerals from plants.	AC	Prof. Ram Singh
05	AI Based Adaptive Learning Content Generation and Assessment for Enhanced Educational Outcomes	DSM	Dr. Yashdeep Singh
06	Life cycle analysis of algal biomass	ME	Prof. Amit Pal
07	Plasma spray coating of Nano-Diamond and Polycrystalline Diamond on Titanium Implants: Enhancing Biocompatibility, Wear resistance, and Mechanical Strength	ME	Prof. Qasim Murtaza
08	Development of micro-chemical based circular flat-plate collector for water heating	ME	Dr. Manjunath K
09	Paint mediated self-healing of cracks by incorporation of bacteria: A new paradigm in Sustainability	BT	Dr. Asmita Das
10	Deciphering the Crosstalk Between Diabetes and Cardiovascular Diseases Through Machine Learning	BT	Prof. Yasha Hasija
11	Homomorphic satellite image encryption algorithm using Chaotic system	AM	Dr. Dhirender Kumar
12	AI Driven Modelling for Prediction and Analysis of Nanowire FET's/HEMT	CSE	Dr. Nipun Bansal
13	Balancing fairness and efficiency in Industrial node detection (BFIND) in social networks using graph neural networks-based framework	CSE	Dr. Sanjay Kumar
14	Effect of Anxiety Reduction Interventions (Raaga, Breathing) on Exam Anxiety Using Physiological Signals and Machine Learning for Students	SE	Dr. Divyashika Sethia
15	Assessment and Classification of Prevalence of Flat Feet using Plantar Pressure Images	SE	Prof. Ruchika Malhotra
16	Investigating Feasibility, Public Perception and Technology adoption framework for Wind Energy Generation above High-Rise buildings	CE	Dr. Ritu Raj
17	Development of An Underwater Amphibious Crawler	CE	Prof. K.C.Tiwari
18	Study on affinity amidst of atmospheric nanoparticle pollution in urban environment of megacity Delhi	EN	Dr. Rajeev Kumar Mishra
19	Design and Modelling of surface enhanced Raman scattering (SERS) substrates of Analyte detection with enhancement factor > 10^9	ECE	Dr. Yashna Sharma
20	Design and Development of SiC/GaN MOSFET based Converters for On-Board Chargers	EE	Prof. Dheeraj Joshi

The office of Dean (R&D) will seek the budget revision in accordance with the suggestions of the Review Committee and the scheme guidelines.

The office of Dean (R&D) will obtain an undertaking from the Principal Investigators (PIs) to ensure compliance with the scheme guidelines. Furthermore, consent will be sought from the Co-Principal Investigators (Co-PIs), if any, regarding potential conflicts of interest, as per the scheme guidelines.

21.3.25

(Prof. A. K. Haritash)
Associate Dean (R&D)

DTU/R&D/Faculty Proposal /2025/105/2703 **Date: 21/03/2025.**

Copy to:

1. PA to Hon'ble VC, for kind information of the Hon'ble VC.
2. PA to Registrar.
3. Dean (R&D)
4. All concerned
5. Guard File.

21/03/2025

(Rahul Thakur)
Coordinator (University-Sponsored Projects/Schemes)