

International Faculty Development program on Synergising Problem & Project Based Learning with Design Thinking

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Dr. Neha Mishra

Assistant Professor, ECED
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MMMUT Gorakhpur, India

About University, Electrical Department & Electronics Department:

Madan Mohan Malviya University of Technology, Gorakhpur has been established in the year 2013 by the Government of Uttar Pradesh . It is non - affiliating, Academic & Research University after reconstituting the Madan Mohan Malviya Engineering College, Gorakhpur, established in 1962.

MMMUT has been awarded the prestigious “A” grade by the National Assessment and Accreditation Council (NAAC). The “A” grade has placed MMMUT amongst the India’s most elite and prestigious Higher Educational Institutions (HEI) which is maintaining top standards in delivering and disseminating of quality education to its students. MMMUT has become the only UP State Technical University to bag “A” grade in the first cycle of the accreditation process.

The University offers nine undergraduate programs in the disciplines of Civil, Chemical, Electrical, Mechanical, Electronics & Communication Engineering, Information Technology, Bachelor of Business Administration, Bachelor of Pharmacy and Computer Science & Engineering along with twelve MTech programs and Doctoral Programs in various specializations. It is also a QIP center for the Ph.D. program in Electrical, Mechanical and Electronics & Communication Engineering departments.

The Department of Electrical was established in the year 1962. The program is accredited by NBA in the year 2016 and reaccredited in the year 2019. The PG course with specialization of PED (Power Electronics and Drives) and C&I (Control & Instrumentation) have also been started from 2001 and 2013 respectively.

The Department of Electronics & Communication Engineering was established in the year 1973 with an intake of 20 and has been gradually increased to 75 from the academic session 2000-2001 and 120 from the academic session 2015-2016. The Department has made all round progress in the last four decades as a result of firm determination and continuous efforts made by all the faculty members and staff of the department.



About Gorakhpur

The Gorakhpur is well connected by road and rail to all major cities Lucknow (270 Km), Varanasi (216 Km) and Patna (220 Km). Direct flights are also available from New Delhi to Gorakhpur. The MMM University of Technology is situated on Deoria road about 9 Km from Gorakhpur Junction and 5 Km from the Gorakhpur airport.

Registration Fee

Institute Internal Members: Rs. 250

Others: Rs. 500

Mode of payment

Participants can deposit the registration fee online with following details:

A/C	Madan Mohan Malaviya University of Technology
Account No.	33542824744
IFSC code	SBIN0002578
Bank Name	SBI MMMUT, Gorakhpur

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Organized by

Department of Electrical Engineering &
Department of Electronics Engineering
MMMUT, Gorakhpur, 273010, UP,
(NAAC Grade “A” University)

<http://www.mmmut.ac.in/>

About Program:

The Department of Electrical Engineering is organizing an Faculty Development Program on Synergising Problem & Project-Based Learning with Design Thinking for Nurturing Creativity, Innovation and Entrepreneurship from September 15-19, 2025.

The duration of FDP will be **one-week. It will be conducted by Prof J Ram Kumar IITK, Dr. Deepak L. Waikar and Dr. Saroj Waikar.** The Course is designed for Faculty Members, Teachers, PG students, curriculum designers / managers, education administrators, Research Scholars and anyone interested in synergizing P²BL with DT for nurturing creativity, innovations, and entrepreneurship.

PROGRAM OBJECTIVE:

The objective of the course is at the end of this specially designed interactive and experiential learning empowerment programmer, participants should have:

1. Gained insight into Learner-Centric features of Problem & Project-Based Learning (P²BL) and Design Thinking (DT) Andragogy.
2. Become catalysts in providing enriching and authentic experiences for learners.
3. Devised strategies for managing group dynamics in and outside of classrooms.
4. Crafted a reflective process for enhancing creativity, innovations, and entrepreneurship. Learned to leverage on advances in technology, artificial intelligence, and sustainability Synergised strengths of PBL with DT.
5. Artistically Drafted Synergised PBL-DT User Guide.

Outcome for Program:

After the completion of the FDP the participants implement their plans in respective subjects or courses. To facilitate a smooth transition from conventional teaching to the proposed PBL-DT framework, participants receive special coaching and mentorship from the experienced resource persons. Institutes/Organizations can strengthen and enhance competitive advantage, brand image, and services through this special international collaboration. Organizations/Corporations can use this Program to generate innovative CSR projects.

Contents of the Course

In this course five phases, consisting of Foundation Module, Coaching & Mentorship Module, Post-Execution Review Module, Facilitation Certification Module, and Symposium module, have been conceptualized for smooth transition, adoption, implementation, and effectiveness of the proposed PBL-DT framework as shown in Figure. Each phase with defined outcome customized with local ecosystem prepare participants for systematically designing, drafting, and deploying synergised features of P²BL-DT in their teaching and curriculum

Flow Diagram of proposed P²BL-DT Framework

It is generalized by different topic under these categories to fulfil the depth Knowledge:

- Problem or Project Based Learning
- Key Features, Benefits, & Challenges of using Design Thinking (DT)
- Strategies for Synergising P²BL with DT
- Infusion of Synergised P²BL-DT into respective subjects
- Selection of Topics for Infusing Synergised P²BL-DT
- Teaching versus Facilitation Debate
- Design of Student Assessment and Evaluation
- Smart implementation Strategies
- Presentations of Concept Design and Plan by Participants
- Revision and Submission of Updated Plans
- Post-implementation review of the concept design, lesson plans, and assessment
- Learning from Learners' feedback
- Recommendations for the next cycle
- Design Innovative PBL-DT Portfolio
- Micro-Facilitation Session
- Assessment and Evaluation for Certification
- Design Symposium Theme, Tracks, and Tutorials. Invite faculty members and researchers who have completed P²BL-DT Foundation/Refresher, Coaching & mentorship, and Post Execution Modules to submit articles, case studies, research proposals, work in progress, and project summary.
- Organize Symposium preferably 2 days.
- Compilation of proceedings, booklets, and Post Symposium Review

Registration form

Synergising Problem & Project-Based Learning with Design Thinking for Nurturing Creativity, Innovation And Entrepreneurship

Name:.....
Designation:.....
Department:.....
Institute:.....
.....
Address:.....
.....
.....
Email:.....
Phone No:.....
Qualification:.....
Area of specialization:.....
.....
Prior exposure to composites (optional):.....
.....
Payment Details: Amount in Rs:.....
.....
Transaction ID (online transfer):.....
.....
Date of Transaction:.....

(Please enclose transaction slip)

Signature of applicant

Recommendation

(Signature of Head of the Institution/ Head Of the Department with seal)

Fill the following form after online payment:

<https://forms.gle/DZSC3c8uYt7EHUPYA>



International Faculty Development program on Synergising Problem & Project Based Learning with Design Thinking

Proposed Schedule

Time: 3.00 P.M. to 6.00 P.M, Dates: 15 September to 19 September 2025

Date	Time	Activity / Session	Resource Persons
15/9/2025 Monday	3.00 P.M. to 3.30 P.M.	Inaugural Session	Address by Chief Guest, Guest of Honor and other dignitaries
	3.30 P.M. to 4.00 P.M.	High Tea	
	4.00 P.M. to 5.00 P.M.	Problem Based Learning (PBL): Principles & Concepts	Dr. (Mrs.) Saroj D. Waikar
	5.00 P.M. to 6.00 P.M.	PBL: Advantages & Disadvantages. Define Problem Statements	Dr. Deepak L. Waikar
16/9/2025 Tuesday	3.00 P.M. to 4.00 P.M.	Project Based Learning (PjBL): Principles & Concepts, PjBL: Merits and Demerits	Dr. Deepak L. Waikar
	4.00 P.M. to 5.00 P.M.	Conceptualisation of Project based on Problem Statements & topics in curriculum	Dr. (Mrs.) Saroj D. Waikar
	5.00 P.M. to 6.00 P.M.	Case Studies in PjBL or equivalent topic	Prof. J. Ram Kumar, IITK
17/9/2025 Wednesday	3.00 P.M. to 4.00 P.M.	Key Features, Benefits, & Challenges of using Design Thinking (DT)	Dr. Deepak L. Waikar
	4.00 P.M. to 5.00 P.M.	Strategies for Synergising Problem & Project Based Learning (PjBL) with DT, Generating Alternative Ideas, Selection and refining of Ideas	Dr. (Mrs.) Saroj D. Waikar
	5.00 P.M. to 6.00 P.M.	Case Studies on Design Thinking and Entrepreneurship or equivalent topic	Eminent Speaker
18/9/2025 Thursday	3.00 P.M. to 4.00 P.M.	Teaching versus Facilitation Dilemma Design/Redesign Student Assessment.	Dr. (Mrs.) Saroj D. Waikar
	4.00 P.M. to 5.00 P.M.	Infusion of Synergised PjBL with DT into respective subjects/courses.	Dr. Deepak L. Waikar
	5.00 P.M. to 6.00 P.M.	Preparation of Concept Design, Plans, and Group Activities & Assignments	Prof. S.N. Singh, HSSD
19/9/2025 Friday	3.00 P.M. to 4.00 P.M.	Presentation of Concept Design & Plans by Participants,	Moderated by Dr. Deepak L. Waikar
	4.00 P.M. to 5.00 P.M.	Peer Feedback, Coaching & Mentoring Session Summary and Concluding Remarks	Moderated by Dr. (Mrs.) Saroj D. Waikar
	5.00 P.M. to 5.30 P.M.	Valedictory Session Sharing of Views by participants Address by Guest of Honors	Coordinated by Organising Committee
	5.30 P.M. to 6.00 P.M.	High-Tea	

Note: Participants are expected to carry out individual and group activities and assignments