



माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत  
MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA  
Deemed University  
(Declared under Distinct Category by Ministry of Education, Government of India)  
NAAC ACCREDITED WITH A++ GRADE



## ELECTRICAL ENGINEERING DEPARTMENT

# ELEC-TECH TIMES

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2025





The Department of Electrical Engineering established in 1957, boasts a rich history as one of the institution's most earliest departments, initially enrolling 40 students. Currently, the department provides a diverse spectrum of educational opportunities, encompassing undergraduate, postgraduate, and doctoral programs in various Electrical Engineering disciplines. As of now, the B.Tech. program has a total capacity of 120 students, while the M.E. program in "Industrial Systems & Drives" accepts 25 students. Notably, in 2020, the department introduced a novel B.Tech. program focused on "Internet of Things," accommodating up to 60 students.

The department's primary areas of emphasis include Power Systems, Power Electronics, Control Systems, and Biomedical Instrumentation. To foster high-quality research, the department offers M.E. and Ph.D. programs, nurturing a culture of excellence in academic exploration. Equipped with cutting-edge laboratories, our department is dedicated to providing hands-on experiences that strengthen students' practical skills and actively support groundbreaking research initiatives.

Our department's mission is to prepare students for challenging roles in a wide array of industries and encourage engagement in research and development endeavors aimed at advancing society. To stay abreast of rapid technological advancements, our course syllabi are continually updated, and our laboratories are modernized.

Our course offerings cater to a broad spectrum of learning needs, spanning from foundational knowledge to advanced expertise. Furthermore, the department offers a wide range of elective courses to cover contemporary technological trends and developments.

### ***Vision***

*Our Vision: To Prepare  
Professionally  
Competent Electrical  
Engineers for Global  
Industrial  
requirements and  
Social needs*

### ***Mission***

*Our mission: Quality  
technical education,  
technology awareness,  
collaboration, and  
holistic student  
development through  
soft skills and ethics  
training.*

## » **WORKSHOP/WEBINAR ATTENDED**

- Dr. Shishir Dixit attended the webinar on “Shaping Ethical Learners: Fostering Academic Integrity from Elementary Education.”, held on April 8, 2025. Conducted by Turnitin.
- Geetam Shukla attended Faculty Development Programme (Offline) entitled: “IoT and Its Applications” conducted by Centre for IoT in collaboration with IIT- Guhawati, Madhav Institute of Technology & Science, Gwalior during 24th March – 29th March 2025.
- Geetam Shukla attended Online Faculty Development Programme titled: “IoT and ML for Advanced Biomedical Signal Processing” organized by Atal Bihari Vajpayee Indian Institute of Information Technology and Management, Gwalior & Electronics and ICT Academy, (Phase II) Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing, Jabalpur during January 15-24, 2025.
- Geetam Shukla successfully completed NPTEL AICTE Faculty Development Programme course on Sensors and Actuators.
- Geetam Shukla successfully completed NPTEL AICTE Faculty Development Programme course on Introduction To Internet of Things.
- Geetam Shukla successfully completed NPTEL AICTE Faculty Development Programme course on Smart Grid: Basics to Advanced Technologies.



## » Publications

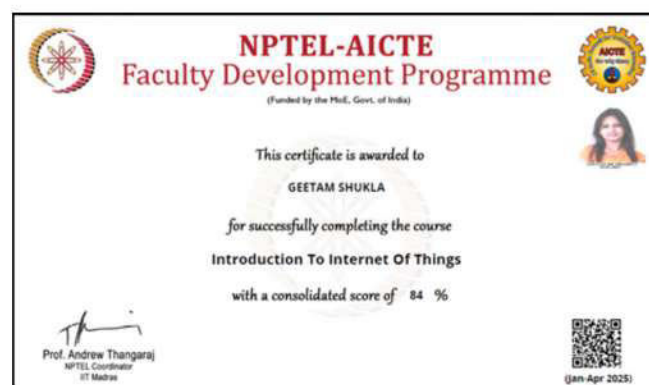
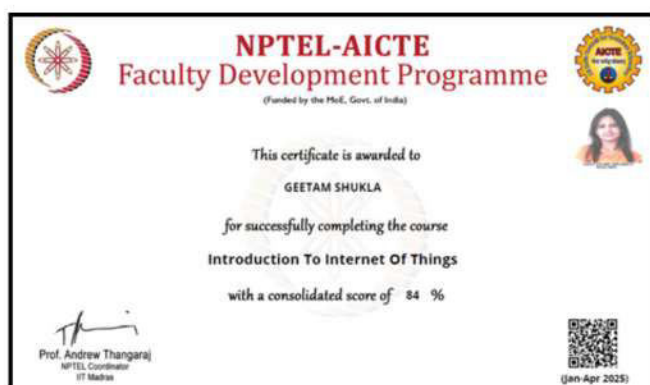
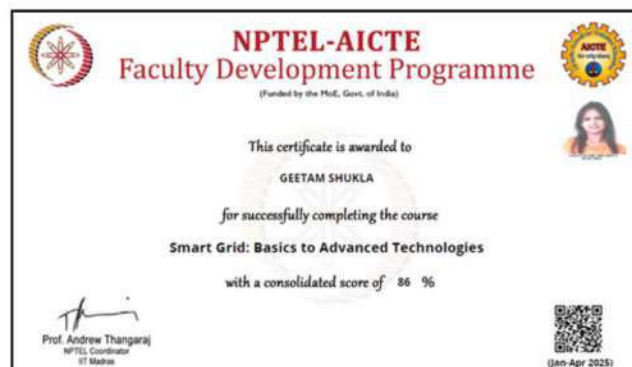
### *(Journals, Conferences & Book Chapter)*

- Gupta S., Sawle Y., Thakre K., & Thirunavukkarasu M. (2025). Techno-economic-environmental analysis of hybrid renewable energy system with lead acid and lithium-ion energy storage under different PV tracking orientations. *Journal of Energy Storage*, 130, 117417. (9.8 Impact Factor, Q1)
- Y. Sawle, "Assessing the economic and technical feasibility of off-grid renewable hybrid energy systems through optimization." *Frontiers in Energy Research* 13 (2025): 1504972. (2.4 Impact Factor, Q2)
- Nagendra Singh, Payal Suhane, Shilpa Kalambe Jain, Geetam Shukla, Anuprita Mishra, *Economic load dispatch by the heuristic optimization techniques, Power System Management*, Edition 1st Edition, 2025, CRC Press, Pages 16, eBook ISBN 9781003516156.

## » ACHIEVEMENTS

- .Dr Yashwant Sawle, Deliverd conference paper presentation title “Hybrid Renewable Energy Systems: Enhancing Sustainability in Ahmedabad using Homer Pro” in physical mode for ICTIS-2025 at Bangkok Thailand.
- Dr Yashwant Sawle recognized as an NPTEL Star (NPTEL ENTHUSIASTS) dated: May 29, 2025.
- Dr Yashwant Sawle , Shortlisted as Translator for NPTEL lectures, Mar 11, 2025.
- Dr Yashwant Sawle, attended NPTEL Swayam 12 week Certification course entitled Operation and Planning of Power Distribution Systems.
- Dr Yashwant Sawle, attended NPTEL Swayam 12 week Certification course entitled Renewable Energy Engineering: Solar, Wind, and Biomass Energy Systems.
- Dr. Shishir Dixit, “Device to Measure Sugar Content in Food Products”, Patent granted, Intellectual property rights, India, (Design 451247-001, dated 12/03/2025
- Dr. Shishir Dixit, “AI and IoT Based Route Navigation and Assistance Application System for Managing Large Scale Environment”, Patent granted (Design No: 449454-001, dated 26.02.2025
- Dr. Abhishek Saxena, has been awarded Ph.D. Degree in the stream of Electrical Engineering, Title: ASSESSMENT AND ANALYSIS OF WHEELING PRICES IN RESTRUCTURED POWER SYSTEM USING AI TECHNIQUES”, in the month of April. (Under the supervision of Dr. Shishir Dixit).
- Geetam Shukla attended NPTEL Swayam 12 week Certification course entitled “ Sensors and Actuators” with Elite Plus Siver.
- Geetam Shukla attended NPTEL Swayam 12 week Certification course entitled “Introduction To Internet of Things” (Elite plus Silver).
- Geetam Shukla attended NPTEL Swayam 12 week Certification course entitled “Smart Grid: Basics to Advanced Technologies” (Elite plus Silver) with 5% Topper.

# FACULTY ACHIEVEMENTS





# FACULTY ACHIEVEMENTS





## » FOURTH YEAR

- Druve Gupta (IoT MITS-DU) et al. accepted the paper titled “Hybrid Renewable Energy Systems: Enhancing Sustainability in Ahmedabad using Homer Pro” in physical mode for ICTIS-2025 at Bangkok, Thailand.
- Aayushi Sharma participated in the “ Tech Blitz ” a hackathon organized on 25-27<sup>th</sup> April 2025. She secured second position in the event.

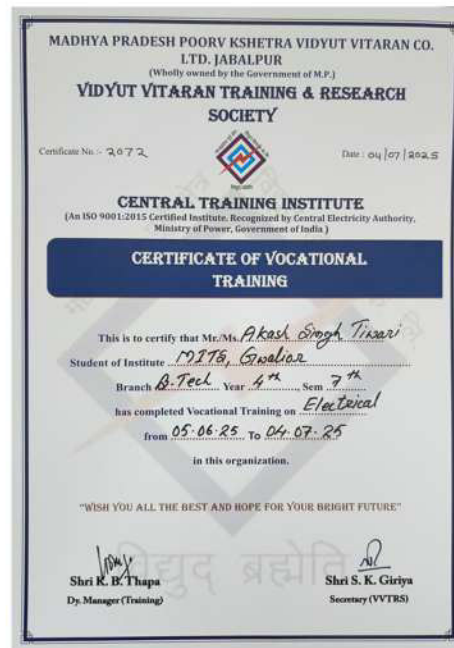


- Sahil Shaikh participated in the “ Biodivinity - The Quiz Quest ” organized by Disaster management and Awareness Club MITS-DU Gwalior.





- Akash Singh Tiwari received certificate of vocational training at Central Training Institute (CTI), Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Limited (MPPKVVCL), Jabalpur, India, Jun.-Jul. 2025



- Naman Gupta, "Participation in NEXUS Quiz National Level Event," IEEE PES SBC in collaboration with IEEE IAS and IEEE RAS SBC, Madhav Institute of Technology and Science (Deemed University), Gwalior, India, Jun. 15, 2025



- Vartika Survey, "Campus Ambassador for My Job Grow," IIT Bombay (in collaboration), Certificate of Recognition, May 31, 2025



## THIRD YEAR

- Rajvardhan Singh Tomar secured third position in the "Diversity Quiz'25" conducted by Quiz Club and unmukt, IIT Kanpur.



- Manasvi Gupta was awarded certificate for successfully participating in NSPC-2025





- Ashu Agrawal received certificate of appreciation for completing KNIGHT'S ARENA MITS-DU GWALIOR and scoring 2 out of 5 rounds.



- Kratika Samadhiya was awarded a certificate for participating in a workshop at Kitech.



- Krishna Sharma was awarded a certificate for attending an event organised on the occasion of International Yoga Day.



- Manasvi Gupta was awarded certificate for participating in “World Hypertension Awareness Day” a quiz organized by IEEE Engineering in Medicine and Biology Of IEEE KPRIET SB.



- Manasvi Gupta was awarded certificate for participating in the workshop At Kitech.



- Rajvardhan Singh Tomar, "Participation in NEXUS Quiz National Level Event," IEEE PES SBC in collaboration with IEEE IAS and IEEE RAS SBC, Madhav Institute of Technology and Science (Deemed University), Gwalior, India, Jun. 15, 2025

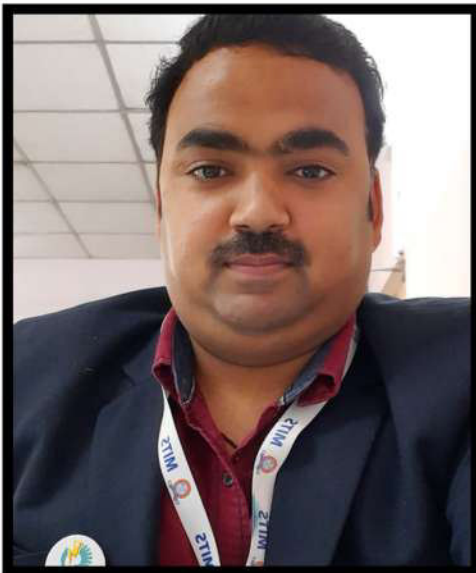




# *Editorial board*

NEWS  
LETTER

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**Advisor**



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**Newsletter Coordinator**

**Dr. Vishal Chaudhary**  
**Newsletter Coordinator**



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