



VEERMATA JIJABAI TECHNOLOGICAL INSTITUTE

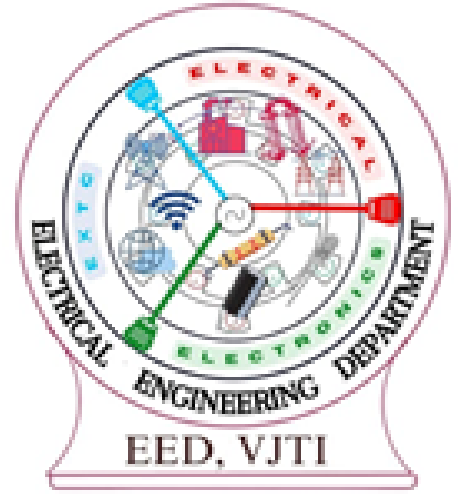
(Autonomous Institute of Government of Maharashtra)

MATUNGA, MUMBAI - 400019

ELECTRICAL ENGINEERING DEPARTMENT (EED)

Institute Website: vjti.ac.in

Department Website: <https://vjti.ac.in/electrical-engineering/>



Courses Offered:

B.Tech in Electrical Engineering (Intake- 60)

M.Tech in Electrical Engineering- **Integrated Power Systems** (Intake- 25)

M.Tech in Electrical Engineering- **Embedded Control Systems** (Intake- 25)

Ph.D. in Electrical Engineering

Expert Areas:

- Non-Linear and Linear System Modelling
- Power System Stability, Control and Fault Analysis
- Grid Connected Converter and Microgrid design simulation
- Embedded Systems and Control
- Electromagnetic Field Analysis
- High Voltage Engineering
- Machine Learning Applications in Engineering
- Temporal Data Study and modelling
- Generative AI-Transformer Architecture

Laboratories:

1. Electrical Machines & Drives Lab
2. High Voltage Lab
3. Simulation Lab
4. E-MC² Lab
5. Controls Lab
6. Electrical Workshop
7. Measurement and Instrumentation Lab
8. Electrical Circuits Lab
9. Power Electronics Lab
10. Basic Electrical and Electronics Lab



Scan me!

INDUSTRY MOUs

- International Gemological Institute Pvt. Ltd.
- Savex Technologies.
- Motwane and Test Data Technologies India Pvt. Ltd.

ACADEMIC MOUs

- Binghamton University, New York, USA.
- University of Sannio, Italy.

NOTABLE ALUMNI

- Dr Arun Mahindrakar (M. Tech in Control Systems 1997) currently - Professor, EED, IIT Chennai
- Dr Ramakrishna Pasumathy (M. Tech in Control Systems 2001) currently - Professor, EED, IIT Chennai
- Dr. Sonam Kharade (M. Tech in Control Systems 2017, PhD, 2022) currently - Postdoc at Argonne National Laboratory, USA



INTERNATIONAL STUDENT ACHIEVEMENTS

- Best Paper Based on Reviewers' Choice for IEMTRONICS 2025, at Imperial College, London.
- Two Research papers accepted for presentation at PESGM 2025, Austin, Texas, USA.



Drives & Control Lab

RESEARCH FACILITIES

Typhoon HIL

dSpace

DIgSILENT

COMSOL Multiphysics

PIC EM Simulator

FPGA

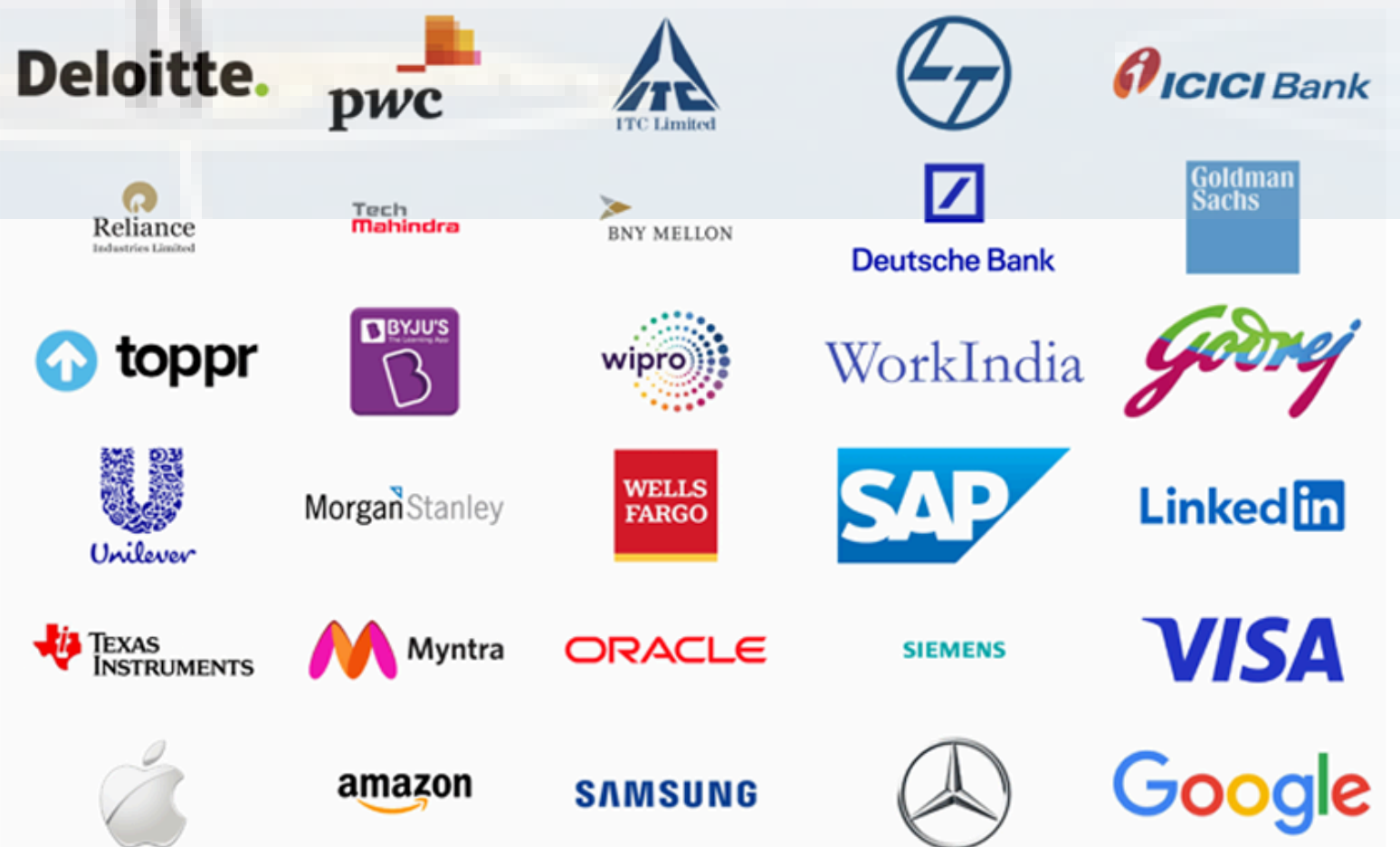
MATLAB

Tiny ML-Adriano Nano



E-MC² Lab

TOP RECRUITERS



dSPACE



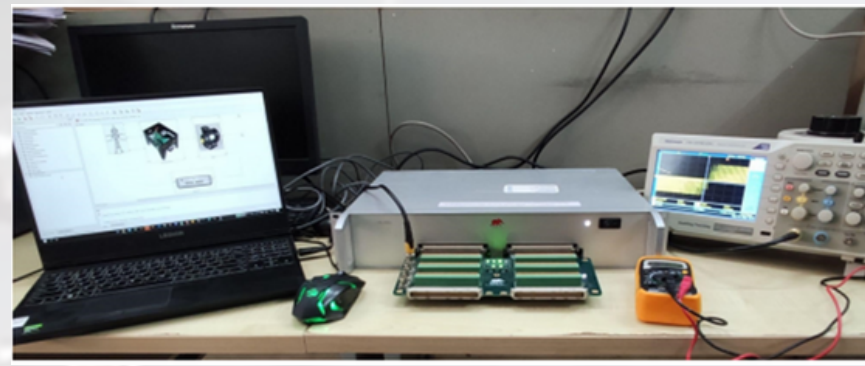


VEERMATA JIJABAI TECHNOLOGICAL INSTITUTE
(Autonomous Institute of Government of Maharashtra)
Matunga, Mumbai – 400019
Electrical Engineering Department (EED)

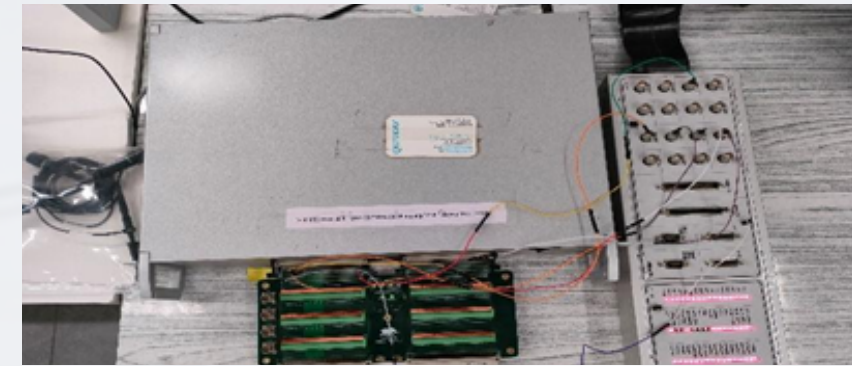


Why Join M.Tech Integrated Power Systems?

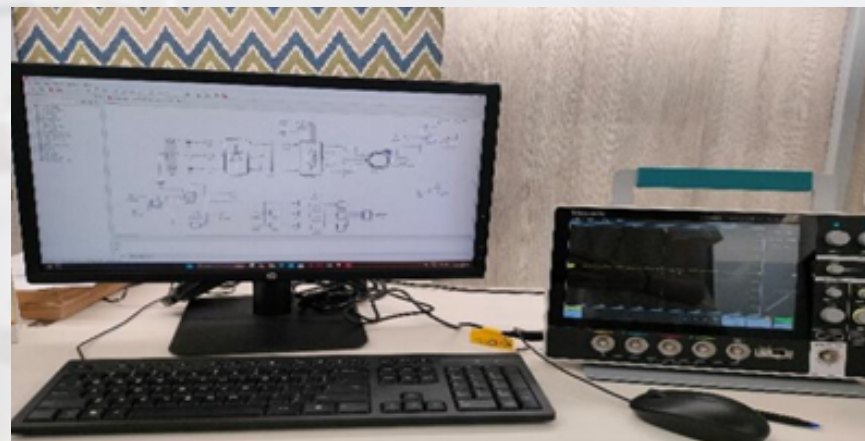
- Equip students with a strong foundation in modeling, analysis, dynamics, control, and protection of Integrated Power systems.
- Bridges the gap between classical Power engineering and intelligent, modern Power system applications- helping to aim for a career in utilities, research, manufacturing, or the evolving EV and automation sectors.
- Emphasis on practical problem-solving through hands-on labs, real-time hardware interfacing - tools - MATLAB/ Simulink/ Typhoon/ dSpace
- Interdisciplinary exposure to modern control, optimization, AI/ML.



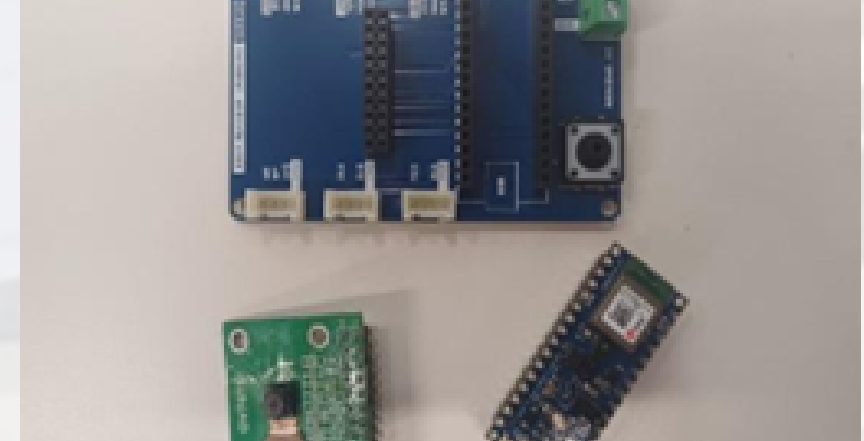
RTHIL- Testbed



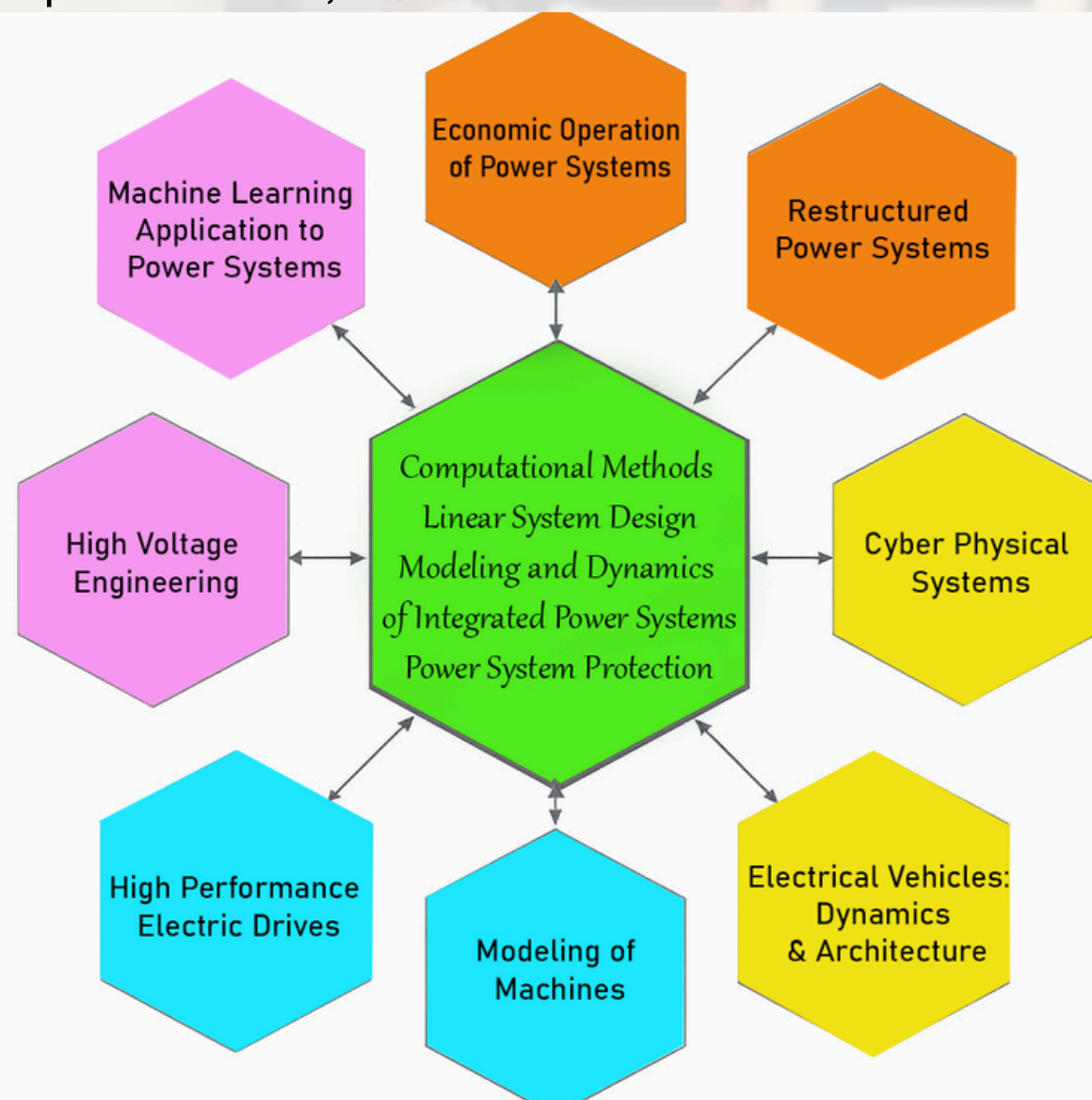
dSpace Interface



Typhoon HIL Software Interface



Tiny ML Arduino Nano



About the Two-Year Program

- Build a strong foundation in essential mathematics—including Linear Algebra, Differential Equations, Probability & Statistics, and Optimization.
- Learn to model Large-scale power networks, analyze their Dynamic behavior, and design Controllers for Stability and Optimal performance under disturbances.
- Integrate theory with application by mastering Cyber-Physical Systems and their role in Electric Vehicles, and by developing skills in modeling and controlling Electric Machines, Drives, and Power electronic converters.
- Engage in lab-based learning using advanced hardware and simulation environments, complemented by a dissertation or internship focused on real-world problem solving.

After M. Tech in IPS

- Work in Automotive and Electric Vehicles, Power & Energy Utilities, Energy trading & Electricity markets, Renewable Energy systems, High voltage equipment & testing.
- Research positions in Academic labs and R&D centers.
- Opportunity to pursue a Ph.D. in Power systems, Power Electronics, Renewable Energy & Microgrids, and related areas.



Drives and Control Lab



EV Lab (in collaboration with Mechanical Engineering Dept.)