

Government Engineering College Khagaria



Two-Week Hands-on Workshop/FDP

Engineering Applications with MATLAB
Programming and Simulink

1-14 December 2025

Convener

Dr. Nayan Kumar
Dr. Mani Bhushan
Dr. Md Irfan Ansari

Organized by

Department of Electrical Engineering
&
Department of Civil Engineering
Government Engineering College
Khagaria
Bihar – 848203

Patron

Dr. Mani Bhushan, Principal, GEC Khagaria

Conveners

Dr. Nayan Kumar
Dr. Mani Bhushan
Dr. Md Irfan Ansari

Coordinators

Prof. Amit Kumar Singh
Prof. Bijay Kumar Singh
Prof. Ram Kumar
Prof. Kuber Kumar
Prof. Chandan Kumar
Prof. Rajani Kumari
Prof. Baibhav Bishal
Prof. Abhishek Kumar-II
Prof. Aviral Kumar



<https://forms.gle/XF37fRDV1hxijx3s5>

Registration is compulsory for all participants. Interested candidates are requested to register on or before 25th November 2025.

Participation is limited to 50 candidates on a first-come, first-served basis.

There is no registration fee. Participation is free for all.

About the Institution

Government Engineering College (GEC) Khagaria, established in 2019 by the Government of Bihar under the Saat Nischay initiative, aims to provide quality technical education across the state. Functioning under the Department of Science, Technology, and Technical Education, the college offers B.Tech programs in Civil, Mechanical, Electrical, and Computer Science Engineering. Located on a sprawling campus at Alauli, Khagaria, it features modern infrastructure, advanced laboratories, and dedicated faculties. Committed to fostering innovation, critical thinking, and ethics, GEC Khagaria strives to produce competent engineers contributing to regional and national development and envisions becoming a center of excellence in technical education.

About the Department

The *Department of Electrical Engineering* at Government Engineering College, Khagaria, is devoted to imparting quality education and fostering innovation in the field of electrical sciences. The department offers an undergraduate program focusing on both theoretical knowledge and practical skills.

With a team of qualified and experienced faculty members, it emphasizes modern teaching methods, research-based learning, and hands-on laboratory training. The curriculum includes emerging technologies such as MATLAB, renewable energy systems, power electronics, and automation. The department continually strives to create an environment that encourages analytical thinking, creativity, and professional competence among students, lifelong learning attitude among students.

The **Department of Civil Engineering** at Government Engineering College, Khagaria, offers a broad spectrum of learning opportunities covering structural, transportation, environmental, hydrology, hydraulics, geotechnical, and earthquake engineering. As one of the core departments of the institute, it provides a B. Tech. program designed to build strong technical foundations and practical skills. The department emphasizes quality education through a balance of theory, laboratory work, and field exposure. Faculty members are actively involved in teaching, research, and academic development, ensuring that students are well prepared to address real-world challenges and contribute effectively to the civil engineering profession.

Objectives of the Programme

The workshop aims to strengthen the knowledge and computational skills of participants in using MATLAB for solving Engineering problems. It focuses on applications in power systems, control systems, signal processing, and electrical machine analysis. Participants will learn to utilize MATLAB's advanced tools and simulation features for modelling and problem-solving. Sessions will be delivered by eminent experts from reputed institutions, providing valuable insights into modern research and industrial practices. The workshop will benefit undergraduate and postgraduate students, researchers, and faculty members by enhancing their technical proficiency and encouraging innovation in the field of engineering.

Topics to be covered

- ❖ Introduction to MATLAB Environment and Programming Fundamentals
- ❖ Matrix Operations, Data Types, and Visualization Tools
- ❖ Script and Function Files for Engineering Applications
- ❖ Numerical Methods and Equation Solving
- ❖ Control Systems and Signal Processing with MATLAB
- ❖ Modeling and Simulation using Simulink
- ❖ Power System and Circuit Analysis
- ❖ Data Analysis and Graphical Representation
- ❖ Optimization and Case Studies in Engineering Problems
- ❖ Mini Project / Hands-on Practice Session
- ❖ Application of optimization algorithms for solving engineering problems.

Resource Persons

Resource persons are from various IIT's, NIT's, State & Central Universities and Industries.

Eligibility

This program is open to the faculty members of AICTE approved Institutions, Ph.D. scholars, PG & UG Students, and industrial persons.

Important Dates

Online Registration Deadline: 25-11-2025

Confirmation by E-mail: 30-11-2025

Venue

Government Engineering College Khagaria,
AT-Raun, Block-Alauli, Khagaria,
Bihar-848203

E-Certification

E-certificates will be provided to the participants fulfilling the attendance criteria.

General Information

1. No TA/DA will be provided to the participants.
2. Boarding and lodging facilities will be provided depending on seat availability.

Note

- **Hybrid Mode**
- The registration link will be closed once the limit of participants is reached.
- The applications will be accepted on a first-come-first-served basis.
- Maximum *fifty* (50) participants will be accommodated in the workshop.



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Roun, Alauli, Khagaria-848203