

About AICTE-ATAL Academy

The primary objective of the ATAL Academy is to plan and help in imparting quality technical education in the country and to support technical institutions in fostering research, innovation and entrepreneurship through training. The Academy stresses upon empowering technical teachers and techniques using Information and Communication Technology. It provides a variety of opportunities for training and exchange of experiences. Such as workshops, orientation, learning communities, peer monitoring and other FDPs

About GGITS Jabalpur

Gyan Ganga Institute of Technology & Sciences, Jabalpur is a renowned institute that has carved a niche for itself in the field of technical education in a very short span of time, since its inception in 2003. GGITS is an ISO 9001:2008 Certified technical institution affiliated to State Technical University, RGPV, Bhopal runs UG courses B.E.in various discipline like EC, EE, EX, ME, CE, CS & IT and also nine PG M.Tech courses. To promote industry academics interaction for the working professionals, a Part Time M. Tech. course in Power System & Automation is also run in the institute with evening classes. Three department of the institute namely EC , EE & ME have been accredited by NBA.

About EE Department -

Department of Electrical Engineering is established in the year 2003. Excellent infrastructure and state of art simulation software & equipments are provided in the laboratories not only to meet out curriculum needs but also to provide platform for research & developments.

The Electrical Engineering program was initially accredited by the NBA, in the year 2009 and has been reaccredited in 2015 valid upto 2018.

High voltage testing lab for testing of 11kV transformers as per IS-2026, , has been designed & developed by the department with separate source 30 kV high voltage generation , HV measurement systems, double frequency double voltage setup, boosters for loss measurement, transformer oil breakdown strength setup etc. The full HV testing laboratory has been developed in house as minor /major project by the students.

Electrical Engineering Department has Industrial collaborations with as many as 8 manufacturing /service industries to fulfill the objective of interaction with the outside world and academics/industry interaction for both faculty members and students. These tie ups are bilateral i.e. to explore the solutions of identified technical problems in industries and also to carry out the minor and major projects accordingly. In order to contribute for the sake of environment, special efforts have been made for promotion of use or alternate source of energy. Installed roof top grid connected 250kW solar power plant, solar water pumping system, solar night lighting systems etc are operating successfully.

Faculty Development Program on Block Chain Technology: Current Trends and Future Aspects in Smart Grid

CHIEF PATRONS

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Er. Shri V. K. Jain, Mentor, GGCT, Jabalpur

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ATAL Academy ,AICTE Sponsored



FDP on Block Chain Technology:
Current Trends and Future
Aspects in Smart Grid
12 July 2021 to 16-July2021



ORGANISED BY
Department of Electrical Engineering
Gyan Ganga Institute of Technology & Sciences,
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FDP on
Block Chain Technology: Current Trends
and future aspects in Smart Grid
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Preamble

The objective of this FDP is to equip the participants with a technical knowhow on the various technologies pertaining to the revival of conventional power grid into smart power grid and with the insight of blockchain technology and its applications to smart grid.

Theme and sub-themes of the FDP

The concept of smart grid has been introduced as a new vision of the conventional power grid to figure out an efficient way of integrating green and renewable energy technologies. In smart grid vision, a collection of existing and emerging technologies works together to achieve energy efficiency, automation and financial benefits in the production, transport, consumption of electrical energy and to obtain sustainable society. In this course, participants learn about the requirement for a smart grid in future. The smart grid transforms the operation of the grid into decentralized architecture from its centralized form. In this scenario, Blockchain technology, with its excellent features, makes it a promising application for smart grid paradigm. Smart contracts are gaining interest now a days amongst researchers.

As a whole, the FDP will cover the following topics:

1. Introduction to Blockchain Technology
2. Concepts of Blockchain Technology
3. Blockchain Technology for Smart Grid
4. Introduction to Smart Grid
5. Embedded Systems for Smart Grid
6. Microgrid Implementation and Control
7. Electrical Vehicles in Smart Grids
8. Communication Protocols for Smart Grid
9. Smart Contract Implementation

The expansion of renewable energy is rapidly increasing as part of the energy revolution. The structure of energy supply systems is becoming increasingly decentralized. In particular, the increasing complexity of control and the load on the network infrastructure and the high requirements on data security, which are associated with the exchange of electricity require digitalization. The Blockchain could be a driver of the Energy revolution for the development. Surveys indicate that Blockchain has high potential in the medium and long term to significantly impact the energy industry in the coming years.

Expected Outcome

After attending the FDP participants would be enriched with fundamentals of block chain technology and its various uses in smart grid operation. In this course, participants learn about the requirement for a smart grid in the future. Further, they will be exposed to several modern and evolving technologies that can be applied in transforming the present electrical power grid into the smart electric power grid.

Information for Participants Eligibility

The FDP is open to faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Industry (Bureaucrats/ Technicians/ Participants from Industry etc.).

REGISTRATION DETAILS

Maximum 200 participants may be allowed to attend FDP on a first come first serve basis. All the participants are requested to register online by visiting <https://www.aicte-india.org/atal>. Registration for all the participants is mandatory.

Contact:-

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AICTE Sponsored FDP on
Block Chain Technology: Current Trends and
future aspects in Smart Grid

RESOURCE PERSONS

The course will be conducted by the eminent experts from the reputed institutes like IITs, IIITs, NITs and experts from Power Sector industry.

- ❖ **DR. APARAJITA OJHA**
PROFESSOR
COMPUTER SCIENCE & ENGINEERING
IIITDM, JABALPUR
- ❖ **DR. ANIL SWARNKAR**
ASSOCIATE PROFESSOR
DEPARTMENT OF ELECTRICAL ENGINEERING
MANIT, JAIPUR
- ❖ **DR. SACHIN KUMAR JAIN**
ASSISTANT PROFESSOR
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IIT BHILAI, DURG
- ❖ **DR. PRASHANT AGNIHOTRI**
ASSISTANT PROFESSOR
DEPARTMENT OF ELECTRICAL ENGINEERING
AND COMPUTER SCIENCE, IIT BHILAI
- ❖ **DR. PREMLATA JENA**
ASSOCIATE PROFESSOR
DEPARTMENT ELECTRICAL ENGINEERING
IIT, ROORKEE
- ❖ **DR. S. VENKATESAN**
PROFESSOR
DEPARTMENT OF ELECTRICAL ENGINEERING
IIT, ALLAHABAD
- ❖ **MR. MANISH K. JAIN**
INTERNATIONAL CORPORATE TRAINER
INDORE, MADHYA PRADESH
- ❖ **DR. SUSHANT MISHRA**
MEDICAL OFFICER,
DEPARTMENT OF AYUSH, UTTARAKHAND

PROGRAM SCHEDULE

DAYS	EXPERTS SESSIONS		
DAY-1	SESSION 1	SESSION 2	SESSION 3
DAY-2	SESSION 4	SESSION 5	SESSION 6
DAY-3	SESSION 7	SESSION 8	SESSION 9
DAY-4	SESSION 10	SESSION 11	SESSION 12
DAY-5	SESSION 13	SESSION 14	VALEDICTORY SESSION