

About the Program

This training program is provided in association with M/s. Delta Electronics which is a multinational and AME Consultants, Bhopal.

The course is intended to cover all the traditional as well as advanced topics of PLC programming and their control including modeling and simulations. The training program is meant for Academicians and students along with Industry persons.

1. The said program is for 10 days duration with two sessions one in the Forenoon and other in the afternoon.
2. This is a joint certification course. The certificate shall be jointly issued by MANIT, Bhopal, Delta Electronics & AME Consultants.
3. The teaching will be interactive - **ON LINE** over **Google meet**.
4. Proper links for downloading the PLC programming link along with simulator shall be provided to all the participants. They can download the program on their laptops. This will help them to LEARN & DEVELOP programs. Since simulator is provided, they shall be validating their programs as well.
5. The training program is being conducted by experts both from Delta Electronics & AMECONS. Having a very large experience in Programmable Logic Controllers, Human Machine Interface, SCADA, Drives and servo systems & Robotics.
6. The training program shall be followed by Module Learning Examination (MLE). There shall be 4 Nos of such Module Learning Exams - MLE1 to 4. The examination shall be ON-LINE as stated earlier. The score required for issue of certificate shall be minimum 80 on average of 4 MLE. While the lowest permissible shall be score of 70 on each Module. The further details are mentioned in the attachment provided.
7. There must be full attendance in the training program which shall be monitored by the data available in **Google meet**.

About the Institute

The Institute is successfully meeting the objective of producing skilled Technocrats of the highest quality who can take up the challenges of the industries and Research organizations of the country. MANIT offers various undergraduate and post graduate courses and research programs. Under the peaceful and friendly environment, MANIT producing technocrats who are resources to Nation and the world. Our bright students with excellent technical skills have always been contributed to the successes of various sections towards the technical group.

The total area of campus is 600 acres and protected by boundary wall and ring road. The entire campus consists of administrative and academic building, workshop, Library and community centre, Residential area accommodation for students and staff and other general amenities such as post office, Shopping complex, a School for children, dispensary, an auditorium with capacity of 1000 persons and sports complex with vast expand of open area.

About the Energy Centre

MANIT was chosen as the nodal centre for energy theme under Indo-UK RECs project in 1994 by Government of India. Energy centre, MANIT Bhopal was inaugurated by the former president of India late Dr. Shankar Dayal Sharma on 12 July 1997. Energy Centre premises have a built-up area of about 3000 sq m. Many associated faculty members have received extensive training in specialized fields of energy in different British Universities and industries under indo- UK RECs project. The centre has developed nine laboratories in various specialized area like energy conservation, energy audit solar thermal and PV technology, wind energy, heat transfer systems etc.

About AME Consultants

The organisation is run by professionals who have more than 30 years of experience in the field of automation, PLC, SCADA, DAS & Drives. Being a System Integrator of Rockwell Automation—Allen Bradley the experts have engineered, designed and

commissioned more than 300 system ranging from 10 to 1000 I/O's for various applications like, Food processing, Life science, Retrofitting applications, Utility automation, Cement, sugar, process plants, etc. Since 2011 they have been provided training to students of Engineering Colleges. Thereafter they have been providing training to corporates on Energy Management Systems, Variable Speed Drives, Power Transformers, Overhead Crane Maintenance and Safety in Industry. **For further details you can visit on <http://amecons.com/>**

About Delta Electronics

Delta, founded in 1971, is a global giant with Its mission statement, **"To provide innovative, clean and energy-efficient solutions for a better tomorrow,"** Delta's business categories include **Power Electronics, Automation, and Infrastructure**. Delta Electronics India is a 100% subsidiary of Delta Electronics (Thailand) PLC. Operating in India since 1992, Delta Electronics India is a major source of Industrial Automation - PLC, Display Solutions, Drives, Robotics, Switches, UPS, DC Fans & Blowers, Components, Biomedical, LED Lighting, Automotive electronics and Renewable Energy Products. It has 8 Regional Offices, 3 manufacturing facilities at Rudrapur, Gurgaon, and Hosur and 2 R&D centers in Gurgaon and Bangalore. Delta has a strong presence across India with more than 100 channel Partners, further details can be obtained from: **www.delta.com.tw/**



Maulana Azad

**National Institute of Technology, Bhopal,
M.P. – 462003**

TEQIP (III) sponsored

**TWO-WEEK SHORT-TERM COURSE ON
Programmable Logic Controller:
Basics, Selection and
Programming**

3rd August 2020 to 14th August 2020

Patron

**Prof. N.S. Raghuwanshi
Head, Energy Centre**

**Prof. Prashant Baredar
Coordinators**

Prof. Arvind Mittal

Dr. Amit Ojha, Dr. Shailendra Kumar



Organized by

Energy Centre

In Coloration with



&



Course Content

- Introduction to Delta, Industrial automation, Mechatronics and PLC.
- Basics of Digital & Analog Input & Output devices.
- Basics of PLC components, Special cards, Communication ports & Technologies.
- Types of PLC's, Working cycle – I/O Mapping, Configuration building & building hardware structure.
- Different type of programming languages
- Data registers, Bits rising & Falling, Output devices, Timers, Counters, Set reset bit and Different blocks.
- Programming tools basics, Logic writing, Programming timers & Counters.
- Functions – Call, Jump, Return, If, Else, Maths and Comparison blocks.
- Analog systems, Voltage and current measurements, RTD & Thermocouples.
- Powering of PLC, Field wiring concept, Emergency OFF, Sourcing & Sinking.
- Configuring PLC with other devices, Time stamp Simulator, Practical's on ladder logic.
- Practical training sessions by creating programs, simulating programs.

Who can apply:

- Faculty members with Electrical, Electronics, Mechanical and Mechatronics
- Industrial persons and Consultants.
- Research Scholars, UG and PG students.

Speakers:

Experts from MANIT Bhopal, Delta Electronics & AME Consultants.

Registration Details:

Students/ Research scholars	Rs. 1000/-
Institute/ College Teachers	Rs. 2000/-
Delegates from industries	Rs. 3000/-

Account Name: Director MANIT

Account Number: 10020150107

State Bank of India, MANIT, Branch, Bhopal

IFSC Code: SBIN0001608

Swift Code: SBININBB268

For **MANIT** Faculty & Students: **No Registration Fee**

Registration Link”

Registration link for MANIT:

<https://forms.gle/95KL4wMN2qj3Qgk1A>

Registration link other then MANIT:

<https://forms.gle/JKto8tLKvsQA4aWx9>

Address for Communications:

Prof. (Dr.) Arvind Mittal,

M: 9425302600, Mail: am1970nit@gmail.com

Dr. Amit Ojha

M: 9826028251, Mail: ojha.amit@gmail.com

Dr. Shailendra Kumar

M: 9716379527, Mail: er.dwivedi88@gmail.com

Nickhill S Kaushik

M: 9229258299, Mail: info@amecons.com

Venue

ONLINE

Over Google Meet Platform