

DIPLOMA PROGRAM IN **INDUSTRIAL AUTOMATION**

Program Code:

2275917

Course Duration:

1 Year

Course Fees:

Rs. 25,000/- & \$450



PARUL UNIVERSITY

Parul University is an intellectual and a creative quest for all its stakeholders viz. Indian and International Students, Parents, Alumni, Faculties, Industry & Academic partners as well as society at large. We believe in proliferating our efforts towards quality education and environment. Every year we advance our targets to make headway to our scholarly endeavors.

Our University brings to everyone the best of all worlds. Be it its ethics, global exposure, contemporary educational practices, innovation and growth, PU outshines in all of these. We aim to make successful academic pursuits through entrepreneurship, research, modernization and partnerships with educationally inclined organizations, thus enhancing our position as the finest education destination.

We have been pioneers in accepting various interdisciplinary programs and have included them to our ideal and promising higher education curriculum. Starting with this decade it's our collective effort to empower more youth towards the pursuit to continuously learn, enhance skills, generate better employment opportunities and become competent entrepreneurs. For this very purpose, we are initiating a plurality of short term courses.

CENTRE FOR CONTINUING EDUCATION & ONLINE LEARNING

In this present day world, each year creates a generation gap which leads to change in the demand of job skills by the employers. Parul University has embarked on filling this gap by enlightening students and working professionals with the most updated skill based education and to transform them into adept industry professionals and talented entrepreneurs.

Parul University is introducing multiple programs under Centre for Continuing Education & Online Learning which are developed as per industry requirements and in compliance with the changing market needs.

DUAL DEGREE PROGRAM - LETS YOU EARN TWO CREDENTIALS IN DISTINCT DOMAINS

With the ever increasing knowledge and skills in today's competitive world, Parul University's Dual Degree opportunities allow you to pursue two degrees at the same time. Pursuing dual degrees will provide you with the most competitive advantage, and will give you diverse knowledge in multiple fields and disciplines. Undergraduate and Postgraduate students can undergo two degree programs in distinct fields. All programs offered by Parul University under Dual Degree are designed in line with NEP 2020 and guidelines suggested by University Grants Commission (UGC).

Surprising Benefits of Graduating with a Dual Degree

- Enhancing Employability and Entrepreneurship Skills
- Increase in Knowledge Base
- Diverse Career Options
- Enhancement of Multi-disciplinary Talent
- Saving of Time and Money

PREAMBLE

Industrial Automation is a blend of engineering and science that includes mechanical, electrical and computer science engineering. The automation sector is constantly expanding and can lead to potential career opportunities in manufacturing, oil and gas, mining and metals, pharmaceuticals, and automotive industries. This program is designed to meet the growing need of engineers in these various fields. This course helps the student to basic and advance idea of Industrial Automation. Concepts like the basics of industrial field instrumentation and controllers, automation system design, HMI, and SCADA are integral topics of the program. Advances concepts like distribution control system and data communication, industrial networking and industrial IoT, and project management and quality standards are integral topics of the program.

Program Name: Diploma Program Industrial Automation

Program Type: Diploma

Program Duration: 1 Year

For Whom: Individuals with 10+2 education or relevant education

Program Fees: The program fee is Rs. 25,000/- for Indian Candidates and \$450 for International Candidates.

PROGRAM HIGHLIGHTS:

- Diploma Program in Industrial Automation
- Hands-on Practice in Automation Field.
- Hands-on practice in programming for Siemens ET-200S PLC.
- Project Work using Industrial Instruments/Drives/Robotics/IoT.

CAREER OPPORTUNITIES

A candidate by undergoing this program shall have the following career opportunities:

1. Automation Engineer

2. PLC Programmer

3. Instrumentation Engineer
4. Automation Project Manager

5. Quality Control Engineer

6. HMI Developer
7. SCADA Engineer

PROGRAM OBJECTIVES AND OUTCOMES

Program Objectives	Program Outcomes
Define the concept of Industrial Automation, basic principles PLC, HMI, and SCADA.	Recall principles of PLCs for industrial process control, enable human interaction through HMIs in automated systems, and employ SCADA for real-time monitoring and control in industry.
Explain the fundamentals of Industrial Networking and IIoT on system efficiency and data management in industrial automation projects.	Recognize the fundamental principles of Industrial Networking and IIoT underpin data flow within industrial environments.
Demonstrate programming and configuring industrial drives and robotics, crafting adaptable automation programs for precise control in dynamic production environments.	Implement skill in programming and configuring industrial drives and robotics through automation program creation, fine-tuning, and implementation for precise control in changing production scenarios.
Analyze the performance and reliability of DCS and Data Communication networks in complex industrial environments.	Examine DCS and Data Communication network performance in complex industrial settings, using advanced analytics to pinpoint areas for enhancement and optimization.
Evaluate Automation System Design concepts to craft innovative, efficient solutions for complex industrial processes, addressing reliability, scalability, and ethical considerations.	Judge the efficacy of advanced Automation System Design concepts through critical analysis, leading to efficient solutions for complex industrial processes.
Develop project management methods, integrating advanced quality standards to promote ongoing enhancement in organizational project execution.	Investigate project management methods with advanced quality standards, demonstrating their capacity to innovate and drive efficiency, excellence, and continuous improvement in organizational projects.

COURSE CURRICULUM:

Semester – I					
Sr. No.	Subject Name	Teaching Scheme (Contact hrs/week)			Credit Assigned
		Theory	Practical/Tutorial	Total	
1	Industrial Automation	3	2	5	4
2	Industrial Field Instrument and Controllers	3	2	5	4
3	Automation System Design	3	2	5	4
4	Industrial Drives and Robotics in Automation	3	2	5	4
5	Project: I	0	8	8	4
TOTAL					20

Semester – II					
Sr. No.	Subject Name	Teaching Scheme (Contact hrs/week)			Credit Assigned
		Theory	Practical/Tutorial	Total	
1	HMI and SCADA	3	2	5	4
2	Distribution Control System and Data Communication	3	2	5	4
3	Industrial Networking and Industrial IoT (IIoT)	3	2	5	4
4	Project Management and Quality Standards	3	2	5	4
5	Project: II	0	8	8	4
TOTAL					20