Department of Electronics and Instrumentation

KIET Group of Institutions, Ghaziabad

Summary Report

PLC Training is also designed to help delegates keep abreast of the latest PLC technologies and techniques available in this area, this tutorial offers an excellent opportunity for delegates to ask specific questions and exchange ideas relating to their own applications. The Programmable Logic Controller has evolved over the years and this course will provide the information required to make knowledgeable decisions about PLC applications in their individual manufacturing environments and allow for students to make well-informed decisions about existing control applications and to determine what is required for future applications. The **Department of Electronics and Instrumentation** organizes Online Summer School on Industrial Automation. This PLC training course will also allow students to determine if plant personnel are prepared to meet the new challenges of the ever-changing plant manufacturing environment or if personnel require additional training to meet these challenges.

COURSE OBJECTIVE

1. To understand the generic architecture and constituent components of a Programmable Logic Controller.
2. To develop a software program using modern engineering tools and technique for **PLC** and SCADA.
3. To apply knowledge gained about PLCs and SCADA systems to real-life industrial applications. PLC Training is designed to instruct control professionals on how to successfully integrate a PLC into actual day-to-day industrial electrical processes. It not only deals with the hardware and software, but all the surrounding systems that must be compatible to achieve a safe and reliable control system. This training is generic in nature and applies to all types and manufacturers.

COURSE OUTCOME

1. Students will be able to describe typical components of a Programmable Logic Controller.
2. Students will be able to explain the basic concepts of a Programmable Logic Controller.
3. Students will be able to state basic PLC terminology and their meanings.
4. Students will be able to explain and apply the concept of electrical ladder logic, its history, and its relationship to programmed PLC instruction.
5. Students will be able to explain the concept of basic digital electronics and data manipulation.
6. Students will be able to use timer, counter, and other intermediate programming functions.
7. Students will be able to design and program basic PLC circuits for entry-level PLC applications.
8. Students will be able to design and program a small, automated industrial production line.

HoD Sign

Online Summer School on Industrial Automation							
S.No	**University Roll No**	**Student Name**	7/6/2020	7/7/2020	7/8/2020	7/9/2020	7/10/2020
1	1702932010	AVINASH KUMAR	P	P	P	P	P
2	1702932013	DANISHTA MAQSOOD	P	P	P	P	P
3	1702932014	DEEKSHA RANA	P	P	P	P	P
4	1702932015	DEEPANSHU GARG	P	P	P	P	P
5	1702932016	FRUITESH SAXENA	P	P	P	P	P
6	1702932017	HARSH KUMAR SANGAL	P	P	P	P	P
7	1702932018	KARTIKEY SRIVASTAVA	P	P	P	P	P
8	1702932019	MAYANK TRIPATHI	P	P	P	P	P
9	1702932020	MOINAK KUMAR MOITRA	P	P	P	P	P
10	1802932005	HARSH	P	P	P	P	P
11	1802932006	HARSH TYAGI	P	P	P	P	P
12	1802932007	JATIN GOEL	P	P	P	P	P
13	1802932008	JAYA DUBEY	P	P	P	P	P
14	1802932009	KANISHK KHURANA	P	P	P	P	P
15	1802932010	KASHISH KARNWAL	P	P	P	P	P

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Summary Report

Academic research and development usually encompasses discovery, innovation, experimentation, and creation; however, in today's highly competitive and global economy, it also involves patents, licensing, technology transfer, and partnerships with industry. Virtual instrumentation is the combination of user-defined software and modular hardware that implements custom systems ("virtual instruments") with components for acquisition, processing/analysis and presentation. The **Department of Electronics and Instrumentation** organizes school on LabVIEW and Arduino (online mode). National Instruments introduced the concept of virtual instrumentation more than 25 years ago and now offers an extensive platform of hardware and software for creating virtual instruments.

COURSE OBJECTIVE

1. Define dataflow and what is meant by 'Graphical Programming Language'.
2. Work with and manipulate SubVIs, along with their icons and connectors.
3. Demonstrate good LabVIEW project management techniques.
4. Describe what is meant by 'data acquisition'.
5. Input algebraic formulas via 'Formula Nodes' and 'Expression Nodes'.
6. Utilize Error Clusters and Error Handling functions.
7. Implement both single and multiple plot waveform graphs.
8. Troubleshoot broken VIs.
9. To understand the basic concepts of Virtual Instrumentation and application of LabVIEW for measurement and control applications.
10. Data Acquisition using Arduino.

COURSE OUTCOME

1. Understand the basics of virtual instrumentation concept and dataflow programming.
2. Understand various functions available in LabVIEW for engineering applications.
3. Understand various functions of Arduino for engineering applications.
4. Design projects using the functions available in LabVIEW.
5. Understand the interfacing of DAQ devices and customized user designed hardware with LabVIEW
6. Write the Certified LabVIEW Associate Developer (CLAD) exam, administered by National Instruments, for the certification and leading to placements in core companies

HoD Sign

Summer School on LabVIEW and Arduino (online mode)												
S.No	**University Roll No**	**Student Name**	7/13/2020	7/14/2020	7/15/2020	7/16/2020	7/17/2020	7/20/2020	7/21/2020	7/22/2020	7/23/2020	7/24/2020
1	1702932007	ANAS ALI	P	P	P	P	P	P	P	P	P	P
2	1702932008	ANUPAMA MANDAL	P	P	P	P	P	P	P	P	P	P
3	1702932009	AVIJEET SINGH	P	P	P	P	P	P	P	P	P	P
4	1702932010	AVINASH KUMAR	P	P	P	P	P	P	P	P	P	P
5	1702932013	DANISHTA MAQSOOD	P	P	P	P	P	P	P	P	P	P
6	1702932014	DEEKSHA RANA	P	P	P	P	P	P	P	P	P	P
7	1702932015	DEEPANSHU GARG	P	P	P	P	P	P	P	P	P	P
8	1702932020	MOINAK KUMAR MOITRA	P	P	P	P	P	P	P	P	P	P
9	1702932021	OM PRAKASH SRIVASTAVA	P	P	P	P	P	P	P	P		P
10	1702932022	PRABAL PRATAP SINGH	P	P	P	P	P	P	P	P	P	P
11	1702932023	ROHAN MALIK _	P	P	P	P	P	P	P	P		P
12	1702932024	ROHIT KUMAR PANDEY	P	P	P	P		P	P	P	P	P
13	1702932025	ROHIT YADAV _	P	P	P	P	P	P		P	P	P
14	1802932004	EKANSH AGARWAL	P	P	P	P	P	P	P	P		P
15	1802932005	HARSH	P	P	P	P	P	P		P	P	P
16	1802932006	HARSH TYAGI	P	P		P		P	P	P	P	P
17	1802932007	JATIN GOEL	P	P	P	P		P		P	P	P
18	1802932008	JAYA DUBEY	P	P	P	P	P	P	P	P		P
19	1802932009	KANISHK KHURANA	P	P		P		P	P		P	P

20	1802932010	KASHISH KARNWAL	P	P	P	P	P	P		P	P	P
21	1802932011	KRISHNA KANT GAUR	P	P	P	P	P	P		P	P	P
22	1802932012	KRITIKA SINGH	P	P	P	P	P			P	P	P

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HoD Sign

Certified LabVIEW Associate Developer (CLAD) training							
S.No	**University Roll No**	**Student Name**	6/8/2020	6/9/2020	6/10/2020	6/11/2020	6/12/2020
1	1702932017	HARSH KUMAR SANGAL	P	P	P	P	P
2	1702932025	ROHIT YADAV	P	P		P	P
3	1702932024	ROHIT KUMAR PANDEY	P	P	P	P	P
4	1802932013	LAVISH CHANDANI	P	P	P	P	P
5	1802932014	MANSI KUSHWAHA	P	P		P	P
6	1802932015	MEGHA JAIN	P	P	P	P	P
7	1802932016	MOHMAD ASIF LONE	P	P	P	P	P
8	1802932018	NIKHIL PARASHAR	P	P	P	P	P
9	1702932020	MOINAK KUMAR MOITRA	P	P	P	P	P
10	1702932021	OM PRAKASH SRIVASTAVA	P	P	P	P	P