



# Gujarat Council of Vocational Training Gandhinagar



कौशलम बलम

1. Name of Course:

**Industrial Automation - PLC Wiring**

N.C.O. No. for Skills Covered:  
(Please refer National Classification of Occupants -2004 available on www.dget.nic.in)


2. Engineering OR Non-Engineering:

**Engineering**

3. No. of Students per Batch:

**20**

4. Duration in Hours:

**40**

5. Duration in Month Theory :

**0.25 Months@ 26 hours/week = 1 x 26 = 26 Hours**

Duration in Month Practical:

**0.25 Months@ 14 hours/week = 1 x 14 = 14 Hours**

6. Examination Scheme:

No.	Name of Subject	Teaching Hours During full course	Maximum Marks (Excluding Sessional)	Minimum Marks required for passing (Excluding Sessional)	Sessional Marks If any.
Subject-1	<b>Theory</b>	<b>26</b>	<b>100</b>	<b>40</b>	
Subject-2	<b>Practical</b>	<b>14</b>	<b>100</b>	<b>60</b>	

7. Educational Qualification for Trainee:

Minimum Entry Qualification (Essential):	<b>12<sup>th</sup> Pass or ITI (Electrician/Wireman)</b>
Desirable:	<b>Understanding of Basic Electrical</b>

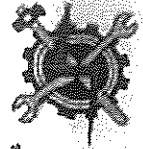
8. Minimum qualification of Trainer:

Minimum Qualification (Essential):	<b>Diploma/Degree in I&amp;C, EE, E&amp;C or M.Sc. Instrumentation</b>
Desirable:	<b>Min 1 year Experience in field of Industrial Automation</b>





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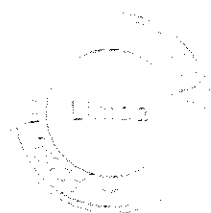
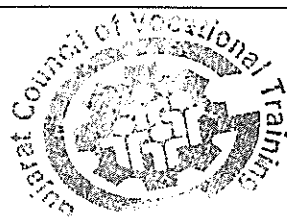
### 9. Syllabus Committee Member:

No.	Name	Organization	Designation	Tech Qualification	Experience in Years	Signature
1.	MOHAMMAD TANVEER SAIYED	Apollo Tyres LTD.	GROUP MANAGER, -HR	MASTERS IN HRM	10	
2.	MR. M. RAVIKOMAR	APOLLO TYRES LTD.	Divisional Head	B.E. Electrical	33	
3.	MR. P. G. PARMAR	ITI Waghodia	Principal	Diploma in Plastic ENGR.	30	
4.	MR. B. R. VYAS	RPP Vadodara	Technical Officer	Diploma in Tools Engg.	33	
5.	JATIN TRIVEDI	Apollo Technical Edu. Fou.	Regional Manager	B.S.C, MBA	17	
6.	MR. H. G. SINDHA	ITI Waghodia	Supervisor, Instructor	B.E. Electrical	02	
7.	MR. J. S. BERDIYA	ITI Waghodia	Supervisor, Instructor	B.E. Electrical	01	

### 10. Terminal Skills of Trainee: (Should be well defined and having reference to NCO):

The Trainee, after successful completion of training, will have following skills:

1. Will be able to understand the control wiring scheme
2. Will become confident in industrial wiring of control system
3. Will be able to work in the Control panel with automation components
4. Upgraded Interfacing skill between field & System





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11 . Approximate cost of Tools  
/Equipment/Machinery for  
starting one batch of the course:

1 lakh (Approx)

2015

12 . Area required for practical/ workshop for one batch:

12000mm x 5000mm

13 . Minimum Power Connection required:

5 KVA

14 . No. of Items in Standard List of Machinery:

14.1. Page No from 04 to 04

3 Items

15 . No. of Items in Standard List of Shop Outfit:

15.1. Page No from 04 to 04

5 Items

16 . No. of Items in Standard List of Trainee Toolkit:

16.1. Page No from 04 to 04

2 Items

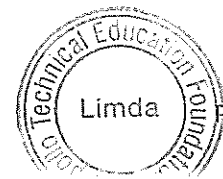
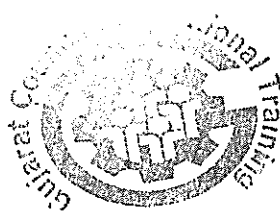
\*\*\*\*\* FOR OFFICE USE \*\*\*\*\*

Approved by GCVT in Governing Body meeting on

21-9-2015

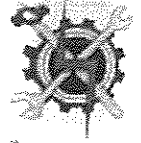
Syllabus implemented w.e.f. admission session

Next Session





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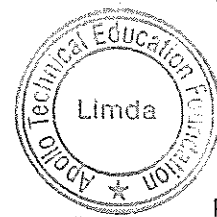
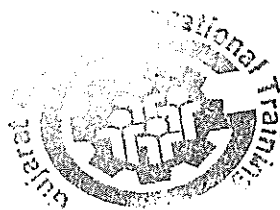
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Revision History : 1. Revision No..... Revision Date.  
2. Revision No..... Revision Date.  
3. Revision No..... Revision Date.

### Standard List of Machinery – Equipment/ Shop outfits/ Trainee Toolkit

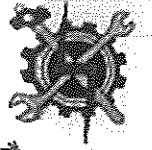
#### for Trade of Industrial Automation - PLC Wiring

No.	Item with Specification	Item Type (Machinery, Equipment, Shop Outfit or Trainee Toolkit)	Quantity for One Batch	Quantity for One batch for Instructor	Total Quantity required
1	PLC	Equipment	2	-	2
2	Relays	Equipment	5	-	5
3	Contactors	Equipment	5	-	5
4	Input/ Output Wiring cables of 0.75/1.5 sq. mm	Shop Outfits	4 Coils	-	4 Coils
5	Wire Stripper	Trainee Toolkit	20	1	1
6	Tester/ Screw Driver Kit	Trainee Toolkit	20	1	1
7	Push buttons for Inputs	Shop Outfits	5	-	5
8	Lamps for Output Indications	Shop Outfits	5	-	5
9	Proximity Sensors	Shop Outfits	5	-	5
10	Potentiometers	Shop Outfits	4	-	4





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SYLLABUS FOR SPECIALISED MODULE

NAME OF MODULE : INDUSTRIAL AUTOMATION - PLC WIRING  
DURATION : 1 Week (40 HOURS)  
ELIGIBILITY CRITERIA : 12<sup>th</sup> Pass, ITI (Electrician, Wireman)

Week	Theory	Practical
1	Electrical Basics & Measurement Control panel layouts (IGA/OGA) Power & Control Wiring Scheme Stickering & Ferruling In Control panel Understanding Industrial Wiring Electrical Symbols & wiring studies Single Line Diagram Concept Relay logic & Wiring Contactor Logic & Wiring Starters - Power & Control Circuits PLC wiring - Digital & Analog	Automation Component Identification & Usage Basic Wiring with voltage & current measurement Relay Wiring Exercises Contactor wiring exercises

1.

2.

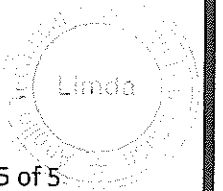
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