

# Dr. Ambedkar Institute of Technology, Bangalore - 56

Department of Electronics & Instrumentation Engineering

The attached documents are valid and approved.

Prof. & Head 5 11 22

Professor & Francisco Department of Electron
Instrumentation Engine.
Dr. Ambedia: houltute of Technology
Bangalore - 500 056.

Dr Ambedkar Institute of Technology, Bangalore - 560056 (An Autonomous Institute Affiliated to VTU Belgaum) Department of Electronics & Instrumentation Engineering

		1.100	Industry expert	year	Semester	Participants	Participants state/National
1 No	SI No Activity	Title	monard framework				/International
	Finishing school	Design and Development of IOT based Embedded system using Raspberry	Mr. Thejas, Loginware Softtec Pvt. 25 <sup>th</sup> to 29 <sup>th</sup> 7 <sup>th</sup> semester Ltd. Hassan , September 2018	25th to 29th September 2018	7 <sup>th</sup> semester	09	state
7	Finishing school	Smart Sensors and Analytical Instrumentation in Industrial MSPC and Business Analytics	Mr. Bhanu Praksh R, Scientific Advisor, Science4u Analytics and research solutions Pvt. Ltd., Bangalore	27 <sup>th</sup> and 28 <sup>th</sup> March 2018	8th semester	20	state
ri .	3. Finishing school	Finishing school on "Industrial and Mr. Venugopal, process Automation" Venjay Automat Bangalore	Mr. Venugopal, Venjay Automation, Bangalore	17 <sup>th</sup> & 18 <sup>th</sup> feb 2017	8 <sup>th</sup> semester	09	state

### Dr.Ambedkar Institute of Technology, Bangalore Department of Instrumentation Technology

# Report on Two days (16th & 17th) finishing school training program on

# "Industrial and Process Automation" By Venjay Institute of Automation Program Schedule

### Session **Topics** Resource Person/Trainer Day 1(16<sup>th</sup> February) 1.Introduction of Automation • Evolution of Automation • Needs of Automation • Automation Process and Steel plant, Missile manufacturing **Morning** automation Technology in session Industries. 2. Input Output Modules. Mr. Venugopal 3. Types of Motor. 4. PLC programming Standards. 1. Practical knowledge of Hardware components like AC Drives, MCB, Contacter, MPCB, OLR, Relay board. 2. Wiring of the power circuit and control circuit. • Latching Circuit Afternoon Mrs. Jayashree & • Inching Circuit 3. Working of Motor after wiring the Mr. Arun Kumar session circuits.

	Day 2(17 <sup>th</sup> February)	
Morning Session	<ol> <li>Introduction to PLC kit.</li> <li>PLC architecture and Historical data.</li> <li>Explained the components of PLC board.</li> <li>Specification of the PLC board.</li> <li>PLC programming with examples.</li> </ol>	Mrs.Jayashree & Mr.Arun Kumar
Afternoon Session	<ul><li>1.Introduction of SCADA</li><li>2. Brief explanation about Power SCADA and Human Machine Interface.</li><li>3.Project Activity</li></ul>	Mr. Venugopal



(An Autonomous Institute, Affiliated to VTU, Belgaum) Outer Ring Road, Mallathalli, Bangalore-560056.



# **CERTIFICATE OF PARTICIPATION**

This is to Certify that Mr/Missa student of
sem has attended Two Days Finishing school Training program on "Industrial and
Process Automation" held on 16th & 17th Feb 2017, organized by the Department of
Instrumentation Technology under TEQIP-II.

Prof G.Devaraju
Dept. of IT
Coordinator

Prof. Soumya B.S

Dept. of IT

Coordinator

Dr. M. Meenakshi
Prof & Head, IT
Chief Coordinator

Dr. C. Nanjundaswamy Principal





#### **Chief Patrons**

Sri. S. Mariswamy, Chairman, PVPWT

Sri. A. R. Krishnamurthy, Managing Trustee / Secretary, PVPWT

Sri. P. L. Nanjundaswamy, Treasurer, PVPWT

Dr. S. Chinnaswamy, Trustee, PVPWT

Sri. S. Shivamallu, Trustee, PVPWT

Dr. M. Mahadeva, Trustee, PVPWT

#### **Patrons**

Dr. C. Nanjundaswamy, Principal.

Dr. M.N. Hegde, Dean Academic.

Dr. B. Ravindra HOD, ME, TEQIP Coordinator.

#### **Chief Coordinator**

Dr.M.Meenakshi Prof. & Head, Dept. of EI

#### **Coordinators**

1.G Devaraju, Asso. Prof, Dept. of EI 2.B. S Soumya, Asst. Prof, Dept. of EI

#### **Organizing Committee**

Faculty Department of EIE

#### **Address for Communication/ Registration**

Dr.M.Meenakshi Prof. & Head, Dept.of EI Ph.no.9480494025 Email:meenakshi mbhat@yahoo.com

#### Resource Persons

- Mr. Bhanu Prakash R
   Scientific advisor
   Science4u Analytics And Research
   Solutions Pvt. Ltd
- 2. Ms Manjula J, software trainer Science4u Analytics And Research Solutions Pvt. Ltd

#### **Course Contents**

- In-depth discussion on a specific topic important to Industrial Analytical Instrumentation and their Data Analytics in general
- Concentrate on emerging research and current trends applied in the field of analytical techniques
- provide updated information on key issues that are concerned with Chemometrics to participants

Registration Fees: Nil

**Who can attend**: The final year students and faculty of department of electronics and Instrumentation engineering.

#### **Outcome of the program**

Participants will acquire knowledge about Chemometrics software and their use in Instrumentation and Electronics industries

#### Certification

Certificate of participation from the department of Electronics & Instrumentation Engineering Will be issued to all the participants. Attendance is mandatory for all the sessions on all days.

#### Dr. Ambedkar Institute of Technology

(An Autonomous Institute Affiliated to VTU)
Bangalore-560056



Two days finishing school training program
On

#### "Smart Sensors and Analytical Instrumentation in Industrial MSPC and Business Analytics"

26th and 27th March 2018

Under Technical Education Quality Improvement Programme (TEQIP-III)



#### **Chief Coordinator**

Dr. M Meenakshi

# Organized by Department of Electronics & Instrumentation Engineering

Dr. Ambedkar Institute of Technology Mallathahalli, Near Jnanabharathi Campus Bangalore, 560056, Karnataka, India

#### **Dr. Ambedkar Institute of Technology**

Mallathahalli, Near Jnanabharathi Campus Bangalore, 560056, Karnataka, India

Two days finishing school training program
On

"Smart Sensors and Analytical Instrumentation in Industrial MSPC and Business Analytics"

26th and 27th March 2018

Under Technical Education Quality Improvement Programme (TEQIP-III)

#### **Registration Form**

Name :	
Sex:M/F	
Semester:	
Institution	
Category (SC/ST/GM):	
TEQIP/NonTEQIP Institution	on
Address for communication:	:
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Pin code:	
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Email ID	
Dated:	
Signature of	Signature of the
Applicant	HOD/Principal

#### **About the Institution**

Dr.Ambedkar Institute of Technology was founded by Late Sri. M H Jayaprakash Narayan, in the year 1980 on the ideals of the great Bharatha Rathna Dr. B.R. Ambedkar, whose life was a saga of learning and uplifting the down trodden of the society. The Institution is one of the premier Government of Karnataka grant-in-aid, Managed by Panchajanya Vidya Peetha Welfare Trust, Branches (PVPWT) approved by AICTE, Autonomous Institution affiliated to VTU, Belagavi. The Institution offers ten undergraduate, eight postgraduate programmes (PG) of engineering, the PG Programmes MBA, MCA and MSc (Engg.) by research/Doctoral Programmes.

The institute is one of the beneficiaries of the World Bank Assistance under Technical Education Quality Improvement Programme (TEQIP III) through Government of India. The Institute has ISO 9001:2008 certification and all programmes are accredited by NBA, New Delhi.

#### Venue:

Seminar Hall A406 Computer lab, Dept. of EI, Dr. Ambedkar Institute of Technology, Bangalore – 560056

#### **About the Department**

Department of Instrumentation Technology was started in the year 1986 and has well equipped laboratories to meet the needs of curriculum as well as Research activities. The department is recognized as research center under VTU Belgaum. The department has well qualified and dedicated faculties to impart fundamental and applied knowledge in the field of controls, Instrumentation, Signal Processing, Biomedical, Embedded Systems etc

#### **About the Training Program**

The purpose of this program is to provide students with an opportunity for an in-depth discussion on a specific topic important to Industrial Analytical Instrumentation and their Data Analytics in general. It also helps to concentrate on emerging research and current trends applied in the field of analytical techniques. This workshop focuses on bridging the gap between the industry and academics and it also gives an idea about what is expected from the academicians by the industry.

The topics will be delivered by recognized experts who are well versed in the latest developments of analytical field. The workshop will provide updated information on key issues that are concerned with Chemometrics to participants

An Autonomous Institute, Affiliated to VTU, Belgaum, Aided by Govt. of Karnataka Near Jnanabharathi Campus, Mallathalli, Bangalore-560056.



Cordially Welcomes the Participants of 8<sup>th</sup> semester students to the TEQIP-III Sponsored



# Two Days Finishing School Training Program on "Smart Sensors/Analytical Instrumentation in Industrial MSPC and Business Analytics"

Science4u Analytics and Research Solutions Pvt. Ltd.

Date: 27th & 28th March 2018

Time: 9:00AM - 4.30 PM

**Coordinators** 

G.Devaraju Assoc. Professor Dept. of EIE Soumya B.S Asst. Professor Dept. of EIE

Venue: Seminar Hall-A406,

Dr.AIT

**Chief Coordinator** 

Dr. M. Meenakshi
Professor & Head, Dept. of EIE



(An Autonomous Institute, Affiliated to VTU, Belgaum) Outer Ring Road, Mallathalli, Bangalore-56.



## **CERTIFICATE OF PARTICIPATION**

Prof G.Devaraju Prof. Soumya B.S Dr. M. Meenakshi Dr. C. Nanjundaswamy Dept. of EIE Prof. & Head, EIE Principal

**Coordinators** 

**Chief Coordinator** 



(An Autonomous Institute, Affiliated to VTU, Belgaum) Outer Ring Road, Mallathalli, Bangalore-56.



#### **CERTIFICATE**

Dr. M. Meenakshi Prof. & Head, EIE

**Chief Coordinator** 

Dr. C. Nanjundaswamy Principal



(An Autonomous Institute, Affiliated to VTU, Belgaum) Outer Ring Road, Mallathalli, Bangalore-56.



#### **CERTIFICATE**

Dr. C. Nanjundaswamy
Principal





# LOGINWARE GLOBAL LEARNING

(A learning initiative by Loginware Softtec Pvt.Ltd)

Proposal for on campus workshop

ON

# "Design and Development Of IOT Based Embedded System Using Raspberry Pi"

#### Organized by

Loginware Softtec Pvt. Ltd.

#40/163, 1st Floor, Opp. Bharathi Associates,

Boovanahalli , BM Bypass Road

Hassan , Karnataka

573201

25th to 29th September 2018

#### **Contact Details:**

**Web**: www.loginwaresofttec.com **Email:** info@loginwaresofttec.com



#### A little about us:

Loginware Sofftec Pvt. Ltd. (A registered private limited company under Ministry of Corporate Affairs, Govt. of India) is knowledge-driven company that values cutting edge technology practices and provides comprehensive solutions to help our customers achieve their goals. Loginware is changing the world by changing the way knowledge can be shared. Loginware has the dedicated young minds striving to connect individuals with each other and with technology. We offer a wide array of solutions for a range of key verticals and horizontals with its excellent domain competencies in verticals such as Hardware, Firmware, Embedded and system software development and training. Our learning programs, whether designed for a global organization or an individual professional, help businesses close skills gaps and foster an environment of continuous talent development.

#### Loginware Global Learning :( A learning initiative by Loginware Softtec Pvt .Ltd)

LGL is our flagship program to share the knowledge and build the vibrant learning network. We focus on sharing the knowledge and connecting the knowledge seekers with technology. The aim of this workshop is to provide a platform to the students to explore the cutting edge developments in the embedded domain and exchange ideas, information techniques and applications in the field of Real Time Embedded Systems. It provides Academic-Industry interaction and fosters collaborative research.

#### **Contact Details:**

**Web**: www.loginwaresofttec.com

Email: info@loginwaresofttec.com



#### Overview and Highlights of the workshop

#### **Overview of the workshop:**

"IOT (Internet of things) is a computing concept that describes the idea of everyday physical objects being connected to the internet and being able to identify themselves to other devices".

This workshop aims at design and development of IOT based embedded system using an ARM architecture based embedded platform "Raspberry Pi".

The **Raspberry Pi** is a low cost, credit-card sized computer that plugs into a computer monitor or TV, and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like Scratch and Python. It's capable of doing everything you'd expect a desktop computer to do, from browsing the internet and playing high-definition video, to making spreadsheets, word-processing, and playing games.

This five days workshop helps the students to understand and work with Raspberry Pi and various hardware peripherals, devices and sensors to create an embedded application.

This workshop includes both brainstorming and hands on experience to get more insights of IOT and embedded systems.

This workshop enhances the technical competency of the students required to work in the real time projects on going in the embedded industry.

#### **Contact Details:**

**Web**: www.loginwaresofttec.com

Email: info@loginwaresofttec.com



#### DAY 1

Module Name: Embedded Systems in a Nutshell	
Morning Session	
Session 1:	Speaker: Mr. Thejesh P
1) Fundamentals of embedded systems and its Signif	icance.
2) Layered Architecture and Design of embedded sys	tems.
<ul><li>Hardware</li><li>Firmware</li><li>System software</li><li>Application Software</li></ul>	
3) Building blocks of embedded systems.	
<ul> <li>□ Central Processing unit</li> <li>□ Memory (RAM and ROM)</li> <li>□ I/O Devices</li> <li>□ Communication Interfaces</li> </ul>	
Session 2:	Speaker: Mr. Darshan S
1) Getting familiar with Programming tools like termin	nal emulator.
2) Introduction to Python language and hads-on on python	basic and advanced concepts on

#### **Contact Details:**

Web: www.loginwaresofttec.com

Email: in fo@loginware soft tec.com



#### **Afternoon Session**

Session 1: Speaker: Mr. Vinay Kumar

- 1) Introduction to Raspberry Pi ARM Microprocessor based system.
- 2) Introduction to Ports and GPIO Pins of Raspberry Pi.
- 3) Installing Raspbian operating system on Raspberry Pi
- 4) Working with Indicators with RPI
- 5) Experimenting various patterns with number of LED's

DAY 2

Module name: Embedded Systems : A Practical approach

**Morning Session:** 

Session 1: Speaker: Mr. Thejesh P

- 1) Introduction to IO Pins of Raspberry Pi and Various IO Peripherals.
- 2) Interfacing Push button Switch, Relay, Buzzer with Raspberry Pi.

Session 2: Speaker: Mr. Darshan S

- 1) Interfacing Seven Segment Display with RPi.
- 2) Experimenting various patterns with Seven Segment Display with Switch.

#### Afternoon Session

Session 1: Speaker: Mr. Vinay Kumar

- 1) Introduction to DC motor and its principle of operation.
- 2) Interfacing DC motor and L293D DC motor driver.

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**Email**: info@loginwaresofttec.com



#### DAY<sub>3</sub>

**Module name: Embedded Systems: A Practical Approach** 

**Morning Session** 

Session 1: Speaker: Mr. Thejesh P

1) Introduction to Display Devices and its principal of operation.

2) Interfacing Display Device (LCD) to Raspberry Pi.

Session 2: Speaker: Mr. Darshan S

1) Displaying Custom characters on LCD display

2) Working on different patterns on LCD Display.

**Afternoon Session** 

Session 1: Speaker: Mr. Vinay Kumar

- 1) Introduction to Sensorsonics.
- 2) Interfacing digital sensors like fire sensor, IR sensor, float sensor, LDR sensor to raspberry Pi. and LCD Display

#### **Contact Details:**

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#### DAY 4

**Module Name: Embedded Systems: A Practical Approach** 

**Morning Session** 

Session 1: Speaker: Mr. Thejesh P

1) Introduction and Interfacing of analog sensors like Temperature sensor, humidity sensor, and Ultrasonic sensor to Raspberry Pi.

2) Introduction to SPI Interfacing SPI based RFID device

Session 2: Speaker: Darshan S

- 1) Introduction to Serial Communication.
- 2) Interfacing various serial communication devices like bluetooth.

**Afternoon Session** 

Session 1: Speaker: Mr. Vinay Kumar

- 1) Introduction to GSM and GPS
- 2) Interfacing of GPS and GSM devices to RPi.

#### **Contact Details:**

Web: www.loginwaresofttec.com

**Email:** info@loginwaresofttec.com



**DAY 5 Module Name: Internet of Things** 

**Morning Session** 

Session 1: Speaker: Mr. Thejesh P

1) Introduction to Internet of things.

2) Introduction to IOT architecture, various IOT levels and IOT Platforms.

Session 2: Speaker: Mr. Darshan S

- 1) Introduction to UBDOTS.(A Cloud IOT Platform).
- 2) Experiencing IOT with UBDOTS and controlling of embedded peripherals.

#### Afternoon Session

Session 1: Speaker: Mr. Vinay Kumar

- 1) A group event to present a solution to a real time problem using learnt/used res23ources and technologies.
- 2) Creating a working prototype to present a solution to real time problem using Raspberry pi and various hardware peripherals and IOT Concept.
- 3) The main aim of this event is to make the budding engineers think out of the box to find a solution to the problem using the cutting edge technologies.

#### **Contact Details:**

**Web**: www.loginwaresofttec.com

Email: info@loginwaresofttec.com



#### **TAKE HOME**

Amenities provided from the company for the students:

SL No.	Materials
1	Study Kit ( File , Notepad and a Pen)
2	Loginware Global Learning Certificate

#### Who can attend the Workshop?

Students of ECE, EEE, CSE, ISE, IT and TCE branch can attend the workshop.

#### NOTE:

All the modules are designed according to the trending technology standards. Any modifications in the course contents are appreciated and redesigned accordingly.

#### **Contact Details:**

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Email: info@loginwaresofttec.com







An Autonomous Institute, Affiliated to VTU, Belgaum ,Aided by Govt. of Karnataka Near Jnanabharathi Campus, Mallathalli, Bangalore-560056

# Cordially Welcomes you for the Inauguration of TEQIP-III Sponsored Workshop on

# "Embedded Systems and Its Applications on Robotics"

From 29<sup>th</sup> January to 2<sup>nd</sup> February 2019

Date: 29-01-2019 Venue: Seminar Hall-A406, Dr.AIT Time: 9:30AM

Organised By Department Of Electronics & Instrumentation Engineering

**Cordinators:** 

Shubha.P Dr.Ganapathi V Sagar Dept. of EIE **Chief Coordinator:** 

Dr. M.Meenakshi Professor & Head, Dept. of EIE Dr. Ambedkar Institute of Technology, Bangalore – 5600056
Department of Electronics & Instrumentation Engineering
TEQIP-III Sponsored Five Days Training Program on
"Embedded Systems and Its Applications on Robotics"
29<sup>th</sup> Jan to 2<sup>nd</sup> Feb 2019

# **Attendance Sheet:**

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Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:1

An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.



# Elite

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

#### ARPITHA G

for successfully completing the course

# Great Experiments in Psychology

with a consolidated score of

Online Assignments | 16.67/25 | Proctored Exam

54/75

Total number of candidates certified in this course: 140

Prof. G P Raja Sekhar Dean, Continuing Education IIT Kharagpur

Sep-Oct 2020 (4 week course) Prof. Debjani Chakraborty Coordinator, NPTEL IIT Kharagpur



Indian Institute of Technology Kharagpur





#### **GREAT EXPERIMENTS IN PSYCHOLOGY**

#### PROF. RAJLAKSHMI GUHA

Department of Humanities and Social Sciences IIT Kharagpur

PRE-REQUISITES: None – but preferably with a background in Psychology

**INTENDED AUDIENCE**: Psychology, Humanities and Social Sciences, Management, Computer Science **INDUSTRIES APPLICABLE TO**: Any company has to manage its services. Hence, any company will recognize/value this online course.

#### **COURSE OUTLINE:**

Psychology as a subject interests many but what is popularly known are the common views that humans hold about their race. Over the century, the subject's endevour to establish itself as a science through various experiments remains unknown to many.

The present course attempts to share the most important experiments in the history of Psychology that has helped shape its identity. It aims to aid students' understanding of how to design experiments with human subjects and assist the student to understand Psychology with a scientific eye.

#### **ABOUT INSTRUCTOR:**

Prof. Rajlakshmi Guha is an Assistant Professor in the Centre for Educational Technology, IIT Kharagpur. Her areas of interest are Perception, Attention, Memory processes, Physiological basis of emotion, student mental health.

#### **COURSE PLAN:**

Week 1: History and genesis of Psychology as a Science

Week 2: Classic studies in Cognitive and Social Psychology

Week 3: Famous studies in Clinical and Health Psychology

Week 4: Experiments in Individual differences and cultural diversity