

**DEPARTMENT OF
INSTRUMENTATION**

Appraisal Report for NAAC Review

Presented By:

HIMANSHU KAPSE

Head of the Department



Year of Establishment: 2002

Salient Features:

- **Covers all the aspects of Instrumentation & Control systems**
- **Bridge the gap between Science and Engineering aspects**
- **The only Institution in Gujarat offering M. Sc. degree**

Looking into the need we have initiated to revise the name of course as

Instrumentation and Control

FACULTY PROFILE



Teaching staff = 4

Ph. D. = 2

TEACHING STAFF



Dr. H. N. Kapse
Assistant Prof. -Head
Ph. D. Electronics
11 yrs experience



Mr. H. N. Parikh
Assistant Prof.
M. Sc. Electronics
16 yrs experience



Dr. D. B. Patel
Assistant Prof.
Ph.D. Physics
4 yrs experience



Ms. R. B. Shah
Trainee Asst. Prof.
M.Sc. Instrumentation
2 yrs experience

SUPPORTING STAFF



Mr. J. V. Patel
Lab Asst. (7 yrs)



Mr. N. L. Vaghela
Peon (18 yrs)

CURRICULAR ASPECTS



Curriculum Planning

- In consultation with Sr. Faculty members
Industry Experts & Alumni

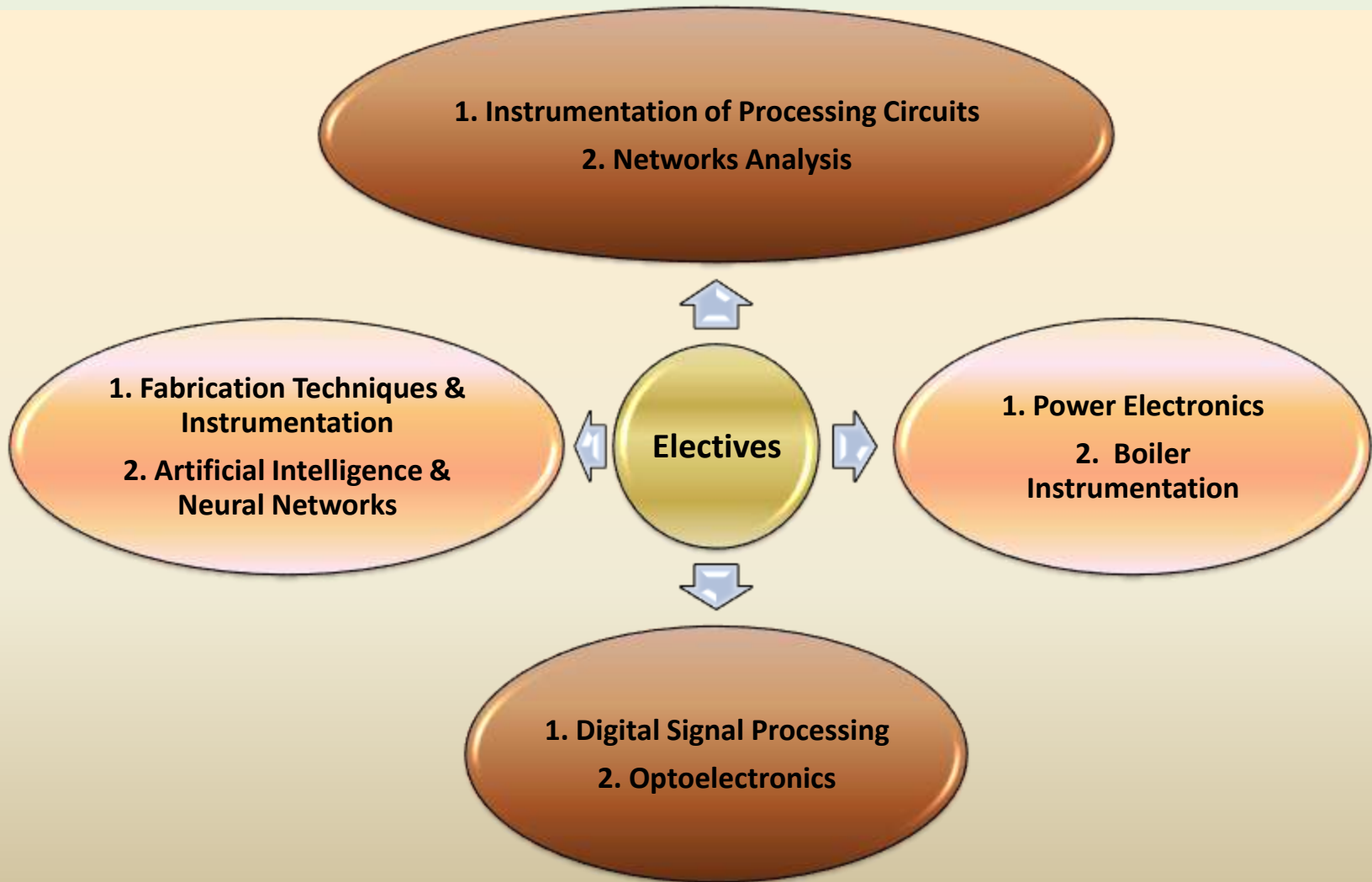
Dr. H. N. Kapse

Member, Adhoc Board of Studies , Sardar Patel
University
Instrumentation and
Applied Science

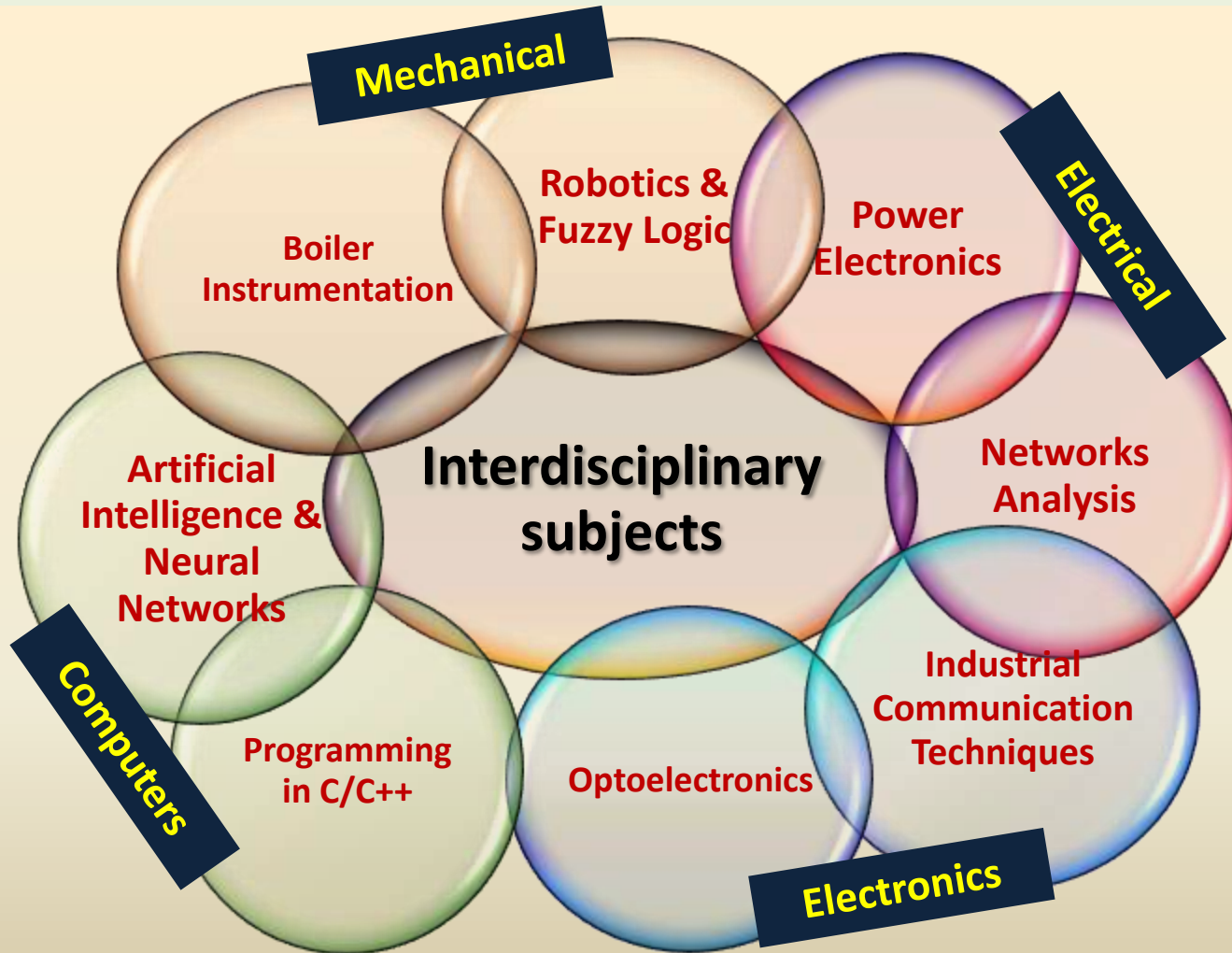
Curriculum Updation

- Introduction of CBCS in 2010
- Syllabus revised and implemented from 2010-11
- Next updation in 2015

CURRICULAR ASPECTS CONTINUES.....



CURRICULAR ASPECTS CONTINUES.....



TEACHING, LEARNING & EVALUATION



Students Enrolment

Programme	Year	Intake Capacity	Enrolled
M.Sc. Instrumentation	2010-11	60	11
	2011-12	60	40
	2012-13	60	34
	2013-14	60	10

Add on / Enrichment Courses

- Personality Development Programme-12 Hrs / semester
- Three day Certificate course on Sophisticated Analytical Instruments at SICART
(Spectrophotometer, GCMS, SEM, TGA)

SICART TRAINING



- Gas Chromatograph
- Spectrophotometer

- Scanning Electron Microscope
- Thermo-Gravimetric Analysis



TLE CONTINUE.....



Evaluation of Teaching Progress

- Departmental meeting
- Monthly course completion report from faculty

Marks Composition

- Internal exam = 30 marks (includes Quiz, Seminar & Test)
- University exam = 70 marks (Written Exam except Project)
- Total marks = 100 marks (each Theory, Practical & Project)
- Comprehensive Viva = 50 marks (only University exam)

University Exam Results

Academic Year	No. of students appeared	No. of Distinctions	No. of first class	Pass %
2011-12	11	5	3	100
2012-13	38	2	13	100
2013-14	32	11	15	100

FACULTY DEVELOPMENT



	Name	Events participation
1.	Dr. H. N. Kapse	International Workshop :2 State level Workshop :1 State level Seminars : 2
2..	Mr. H. N. Parikh	State level Workshop :1 State level Seminars :2
3.	Dr. D. B. Patel	International Conference :1 National Conference :4 State level Seminars :4
4.	Ms. R.B. Shah	State level Seminars :2
5.	Mr. J. V. Patel	Workshop :1

RESEARCH , CONSULTANCY & EXTENSION



Research papers	Citation	Range of h-index	Range of i10-index
08	45	1-2	1-2

Research Project Completed: 1 UGC (minor project)

“Development of Electronic devices based on Organic Semiconductors”

Worth Rs. 1,16,000/- by Mr. Harikrishna Parikh

RCE CONTINUE.....



Invited by other Institutes as Resource Person

H. N. Kapse

State Level Seminar on “Trends in Advanced Instrumentation”
at I&C Department of D. D. University, Nadiad

H. N. Parikh

Delivered 6- Lectures on “Instrumentation” at BISAG - SATCOM,
Gandhinagar

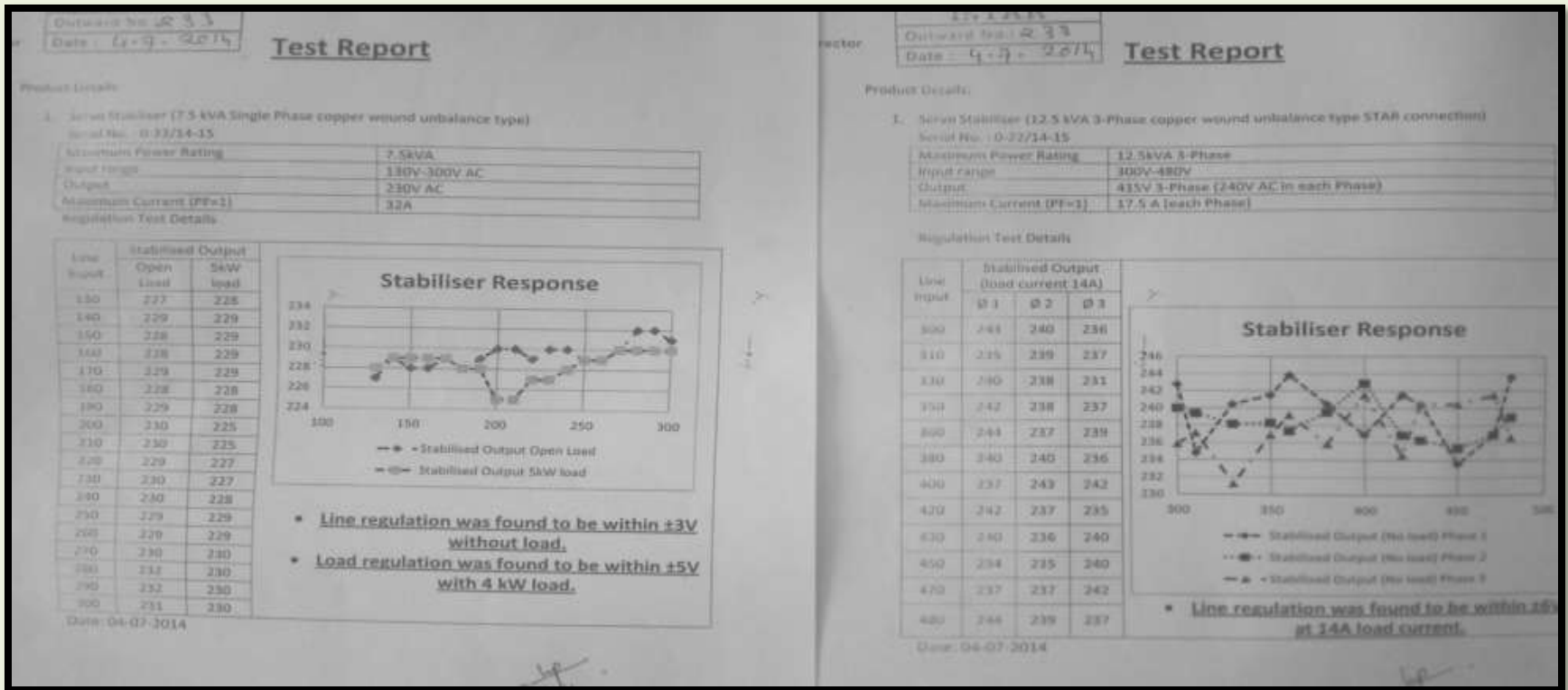
Faculty involved in Teaching other subjects

Dr. H. N. Kapse	PG Diploma Geo-Informatics B. Sc. Instrumentation (Voc)
Mr. H. N. Parikh	B. Sc. Instrumentation (Voc) B. Sc. Home Science
Dr. D. B. Patel	PG Diploma Geo-Informatics

TESTING



Facility Extended to Advance Electronics, Anand, for Servo Stabilizer



In-House Repairing Support: Water Level Controller of Salt Spray apparatus housed in SCT Department

INFRASTRUCTURE & LEARNING RESOURCES



Class Room & Capacity

One (40)

**With LCD projector
Wi-Fi facility**

Laboratory & Capacity

One (20)

**Internet facility
Practical kits = 150
Project tools
Testing equipments**



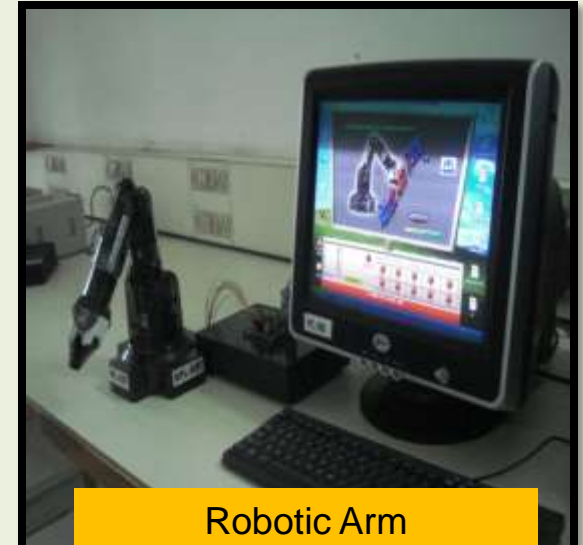
LAB FACILITIES



PLC-Temperature Control



Robotic Programmer



Robotic Arm



PID- FlowControl



HMI



PLC-Level Control



Biomedical Kits

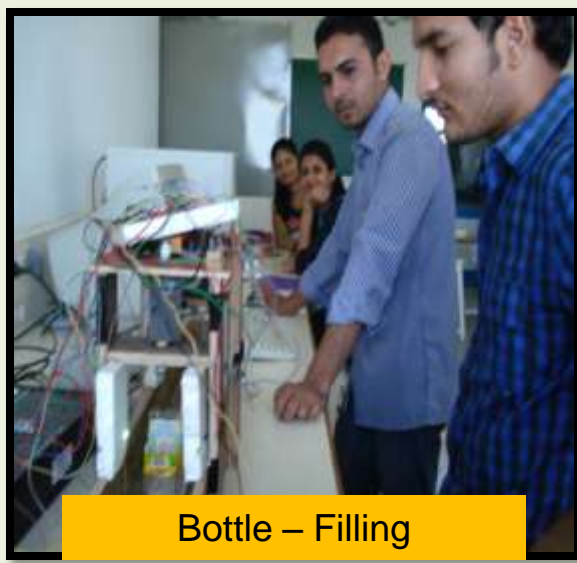


Motor Control



Communication Kits

In-House Student's Projects



Bottle – Filling



Robot



Liquid Mixing

STUDENT SUPPORT & PROGRESSION



Student Support

- One month Industrial Training during Summer Vacation
- Web Seminars on advanced topics from NI, Bangalore
- Moodle Online Support- <http://istarmoodle.co.in>
- Various Scholarship Schemes
- Organize Conference, Workshops & Events
- Industrial Visits
- Participation of students in various Competitions

Student Mentoring

- Counseling & Open House

SSP CONTINUE.....



Open House

13-10-12
5-10-13



Industry Visits

31-08-13
6-02-14



SEMINARS/ WORKSHOPS ORGANIZED



State Level
Conference
“Frontiers in
Instrumentation”
18-02-2012



Chief Guest: Shri Nilesh Desai, Group Director , ISRO, Ahmedabad
Around 150 participants from state – Oral, Poster & Project competition



STUDENTS PARTICIPATION IN CO-CURRICULAR ACTIVITIES



	Activity (No. of students)	Duration	Topic	Organizer
1.	Seminar (One)	Two days	Trends in Advanced Instrumentation,	I & C Dept. Darmsinh Desai University, Nadiad
2.	Workshop (Five)	Five days	Maintenance of Opto-Analytical Instruments	A.R.I.B.A.S, New Vallabh Vidyanagar, & Western Regional Instrumentation Centre, Mumbai
3.	Workshop (One)	Three days	International Workshop on Sensor Network and Wireless Communication	Electronics & Communication Engineering Department of A.D. Patel Institute of Technology, New Vallabh Vidyanagar

STUDENT'S ACHIEVEMENT



ANVESHAN-VIGYANAN USTAV

Organized by Community Science Centre, SPU, 11th Feb, 2014

Speedo cum Odometer project

- Received 2nd prize
- Selected for the exhibition in Science Carnival at Science city, Ahmedabad



OUTREACH PROGRAM



- **Organized two-day workshop on PLC for B. Sc. (Electronics, Physics) students and faculty of different colleges**
 - **First day sessions at their respective college**
 - **Second day sessions at ISTAR**

Purpose: To aware them about the utilities and applicability of PLCs and explore the opportunity to work practically.

This type of course is conducted by private firms for Electronics / Electrical Engineers / students .

Whereas we have included it as CORE subject in our syllabus and students are trained for programming.

OUTREACH PROGRAM CONTINUE....



Science Colleges in A'bad - C. U. Shah , M. G. Institute, R. G. Shah

Science Colleges in V.V.Nagar – NVPAS, VP & RPTP



EXPERT TALKS



Mr. J. Shukla – Director, Servilink Systems, Vadodara



Mr. Nilesh Bera – Regional Head, Emerson Process Management



**Mr. H. B. Sharma
Sub. Div. Engineer, BSNL**



**Mr. Arvindam Sarkar
Engineer, Prolific Systems**

PLACEMENT



Broad sectors: Analytical , Automation, Process Plants, Biomedical etc.



GOVERNANCE, LEADERSHIP & MANAGEMENT



Contribution of Staff in Governance of Institute

	Name of Staff	Position
1	Dr. H. N. Kapse	Vice-President: <ul style="list-style-type: none">• Central Committee of Institute Coordinator: <ul style="list-style-type: none">• Instrument Purchase Committee &• Counseling Member: <ul style="list-style-type: none">• Institute- Industry Interface Committee
2	Mr. H. N. Parikh	Member: Alumni Committee
3	Dr. D. B. Patel	Member: Personality Development Program

INSTITUTIONAL SOCIAL RESPONSIBILITY



In collaboration with **University Rojgar Kendra** organized PLC programming workshop for Unemployed Registered Diploma Holders during 23 – 25 June 2014
Purpose: To enhance skill for professional career



SWOC

STRENGTHS	OPPORTUNITIES
<ul style="list-style-type: none">▪ Young & Dynamic Faculty▪ Diverse Expertise	<ul style="list-style-type: none">▪ Liaison with reputed Institutes & Associations▪ Consultancy
WEAKNESSES	CHALLENGES
<ul style="list-style-type: none">▪ To attract more students	<ul style="list-style-type: none">▪ To build brand image

Future Plan



- Certificate course on Programmable Logic Controller**
- Certificate course on Embedded Systems**
- Subject relevant enrichment for faculty from time to time**
- More enrichment programs for registered students**
- Strengthen Social Outreach Activities**



Thank you