



**Department of Electronics**  
**Sardar Patel University**  
**Established : 1988**



**Vision**

**To Generate the Scientific Manpower with Technical background in the field of ELECTRONICS to bridge the gap between Science and Engineering .**



**Mission**

**The Department places a great stress on the Social Relevance on Higher Education and remains committed to fulfill its social obligations.**



# Programmes Offered



## Academic Programmes

## Curriculum Design & Development

- Focus on Employability (E), Skill Development (SD) & Entrepreneurship (ET)
- Continuous Evaluation through Internal (30%) and External (70%) Exams
- Seminars, Quizzes, Tests, Attendance, Assignments
- Project Internship

### For More Details

<https://www.spuvvn.edu/academics/departments/electronics/academic-programmes/>

### COURSE

### INTAKE OF STUDENTS

M.Sc. Electronics	30 GIA + 10 SF
Ph.D. Electronics (Full Time and Part Time)	As per University rules
Certificate Course : Programmable Logic Controller(PLC) and Industrial Automation	5 SF
Skill development course on “Understanding Repair and Maintenance of Home Appliances”	10 SF

### Credits Per Semester

Course Type	Credits (Per Course)	Total Credits (Each Semester)
Theory (4) [Core(3), Elective(1)]	4	16
Practical (1)	4	4
Project(1)	4	4
Viva-voce (1)	1	1
<b>TOTAL</b>		<b>25</b>
<b>Total Credit for a program</b>		<b>25 × 4 = 100</b>



# Fees Structure

Programs	Programme Type	Intake	Fees				
			1 <sup>st</sup> Sem	2 <sup>nd</sup> Sem	3 <sup>rd</sup> Sem	4 <sup>th</sup> Sem	PS/PY
<b>Master of Science (Electronics)</b>	Grant In Aid	30	Rs.3430	Rs.2510	Rs.2530	Rs.2510	<b>PS</b>
	Self-Finance	10	Rs.26600	Rs.26600	Rs.26600	Rs.26600	<b>PS</b>
<b>Certificate Course on Programmable Logic Controller and Industrial Automation</b>	Self-Finance	5	Rs. 3000 Minimum 30 Hours Duration	-----	-----	-----	<b>PS</b>
<b>Skill Development Course on “Understanding Repair and Maintenance of Home Appliances”</b>	Self-Finance	10	Rs. 1000 Minimum 30 Hours Duration	-----	-----	-----	<b>PS</b>
<b>Ph.D. (Electronics)</b>	Grant In Aid	As per University Rules and Regulations	As per University Rules and Regulations				<b>PS</b>



## Current Faculty Members

Faculty Member	Designation	Academic Qualification	Experience in Years
Dr. Shahera S.Patel	Professor (CAS)	M.Sc (Electronics) Ph.D. (Electronics)	32 Years 6 Months
Dr. Vibha S.Vaishnav	Associate Professor (CAS), Honorary Director (CSC)	M.Sc (Electronics) Ph.D. (Electronics)	30
Mr. Divyang B.Dave	Associate Professor (CAS)	M.Sc (Electronics)	32 Years 8 Months
Mr. Paresh B.Patel	Associate Professor (CAS)	M.Sc (Electronics)	30
Mr. Yatrik S.Patel	Adhoc Teaching Assistant	M.Sc (Electronics) Ph.D. (Electronics)[Pursuing]	1 Year 8 Months
Mr. H. Premchand Singh	Adhoc Teaching Assistant	M.Sc (Electronics)	8 Months

### Faculty Link:

<https://www.spuvvn.edu/academics/departments/electronics/faculty/#1553800953134-d0e34ced-2462>



# Curricular Aspects



Courses focusing on Employability (E), Skill Development (SD) & Entrepreneurship (ET)

## Core Courses

- Applications of ICs and Fuzzy Electronics (E), Microprocessor and Microcontroller systems (E,ET), Programming in C / C++ (E, SD), Principles of Control Systems (E), Microprocessor and Real Time Systems (E,ET), Computer Hardware and Networking (E, SD,ET), Digital and Microwave Communication Systems (E), Fiber Optics and its Applications (E)

## Elective Courses

- Network Analysis (E), Industrial Electronics (E, SD,ET), Advance Electronic Science & Devices (E, SD), Thin Film Technology (E, SD), Digital Signal Processing (E, SD), ARM Programming and Embedded Communication Protocol (E, SD,ET), Design of VLSI Systems (E, SD,ET), Advanced Digital Systems Designed with HDL (E, SD,ET), CMOS Technology and VLSI Design (E, ET)

## Inter-disciplinary Courses

- Semiconductor Science and Devices(E), Electromagnetism and Antenna Theory(E), IC Fabrication Technology (E,ET), Sensor Technology (E,ET), Analytical and Biomedical Instruments(E,ET), Computer Based Industrial Control (E, SD,ET), Principles of Nano Electronics (E)

## Thrust Areas of Research

Microcontroller / IoT Based Design & Development of Control Instrumentation

Thin Film Semiconductor Electronic Devices, Nano Materials Growth and Characterization

Sensor Technology : Gas Sensor, Biosensors, Chemical Vapour Sensors and e Nose

Science and Spirituality : Cognitive Analysis of the Stakeholders



# Infrastructure & Facilities

02	ICT Enabled Class Rooms, Wi-Fi and UPS backup facility	06	Practical & Project Laboratories
05	Cabins For Faculty With ICT Facility and Intercom	01	Research Laboratory
03	Instrument Room	01	Ladies Room
01	Auditorium with ICT facility (Capacity : 92 seats)	01	Library / Reading Room
01	Store Room	02	Head and Administrative Office
01	Central RO System, Pantry Room	01	Audio Video Store Room
01	Etching Room / Dark Room	12	Wash Room

**Common facilities such as Health Centre, Swimming Pool and Gymnasium, Hostels at University level, Canteen, Gyanodaya Pariksha Bhavan**

**Wheel Chair Facility at the Department**



# Library Resources



## Departmental Library Facilities

**Number of Books : 3047,  
Journals : 02, Magazines : 7**

- **Access to more than 100 journals through UGC (INFLIBNET)**
- **Library Committee: For Planning and Purchase**
- **Wi-Fi and Internet Facility.**



# Research Output



## Research Activities by Faculties :

1. Participation in International/National Conferences/Seminars
2. FDP/Workshop/Orientation course Attended
3. Major/Minor Research Projects
4. Research Paper Publications in Reputed Journals
5. Invited Talks from Faculties
6. e-Journal /e- Magazines /e-Zine Edited
7. e-Publications of Science Enhancement Series
8. Publications of Creative Articles
9. National Workshop/Seminar Conducted
10. MOU with SPEC, GTU
11. MOU with ITC, Mogri

Publications in Journals

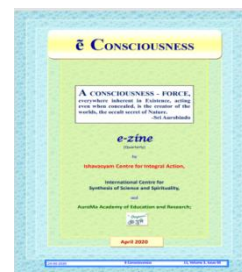
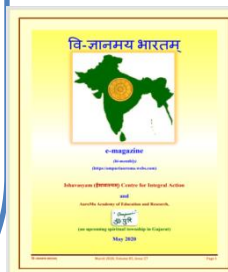
Impact Factor Range :  
0.676 to 9.965

**Number of Patents : 11**

Reviewers for 11  
different Reputed  
Journals

**Best Paper  
Presentation/Innovation  
Awards : 5**

Multidisciplinary  
research in area of  
Science & Spirituality



Number of Citations : 1561

Members of Editorial Board of National  
and International Journals

Life Fellows of various professional  
societies

## Research Collaborations

- Nanomaterials Research Lab, Rani Laxmibai College, Parola, Jalgaon
- Natubhai V. Patel College of Pure and Applied Sciences, Vallabh Vidyanagar
- Department of Physics, Sardar Patel University, Vallabh Vidyanagar





# Major Equipments and Facility



**Electro Meter/High Resistance Meter**



**Pulsed Laser Deposition System**



**High Temperature Tube Furnace**



**High Temperature Rotary Tube Furnace**



**Vacuum Coating Unit**



**Double Beam UV-VISIBLE Spectrophotometer**



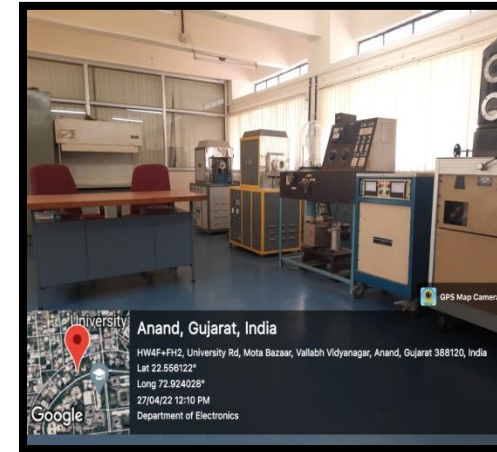
**Workbench**



# Laboratory Facilities



( Thin Film Laboratory, VLSI Laboratory, Computer Laboratory, Project- Practical Laboratory, Research Laboratory)





# Academic Activities

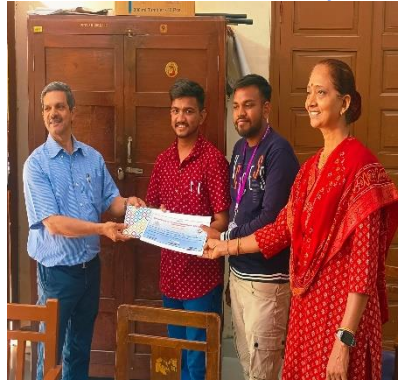
(Expert lectures, National Seminar, Training Programs, Alumni Lectures, Industrial Visits)



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388120, GJ, India  
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388120, GJ, India  
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# Co-Curricular Activities





# Student Support & Progression



## Student Progression

**Last 3 Years**

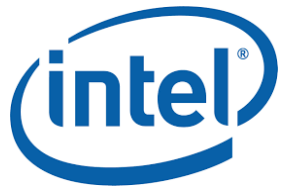
**Ph.D., B.Ed., M.Tech. : 6**

**Placement : 35**

**Scholarships Received by  
PG Students : 21**

## Students Performance at State and National Level Exams

Name of Examination	Year
	2018-2023
GATE	2
IELTS	4
NET	1



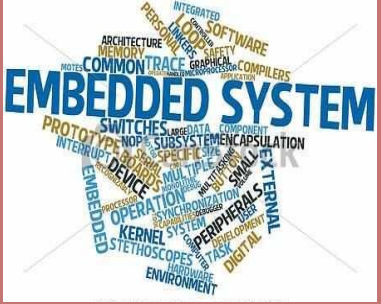
## Career building areas

Dhaval Parikh  
Nikunj Jani  
Mehul Rathide  
Mitesh Patmar  
Sithansh Vagela



**VLSI**

Kishan Dubal  
Jigar Shah  
Hardik Joshi




**EMBEDDED SYSTEM**

Dharmesh Mistry  
Ashish Ray  
Pratik Patel  
Pulin Panchal



**PLC/SCADA**

Sandip Parekh  
Mitul Patel  
Nihar Joshi  
Daxesh Joshi



**COMMUNICATION**

