

Sardar Vallabhbhai Patel Institute of Technology, Vasad is located in the natural surroundings of the Mahi River in close proximity to Industrial areas of Vadodara and Anand. The Institute imparts quality education in eight engineering courses for undergraduate program. It also conducts postgraduate programs in Masters of Computer Applications, Environmental and Electronics Engineering.

The Institute managed by the New English School Trust, Vasad was established in 1997 with three branches with a total intake of 180 students. The intake over a period of time has increased up to 658 students annually. Today more than 4000 students are pursuing professional courses in the campus of this reputed Institute.

The Institute provides state of the art facilities to its students and boasts enviable possessions such as Pro-E, STADD-Pro, MATLAB, ANSYS and CFD soft wares, CNC and EDM machines, Photogrammetric Plotter, PG-3, SATCOM broadcast facilities.

The Institute has a highly qualified, experienced and motivated faculty. They are regularly sent to pursue academic excellence to premier national institutes like the IITs, IISc, and NITs etc. to pursue the QIP for PG/PhD programs.

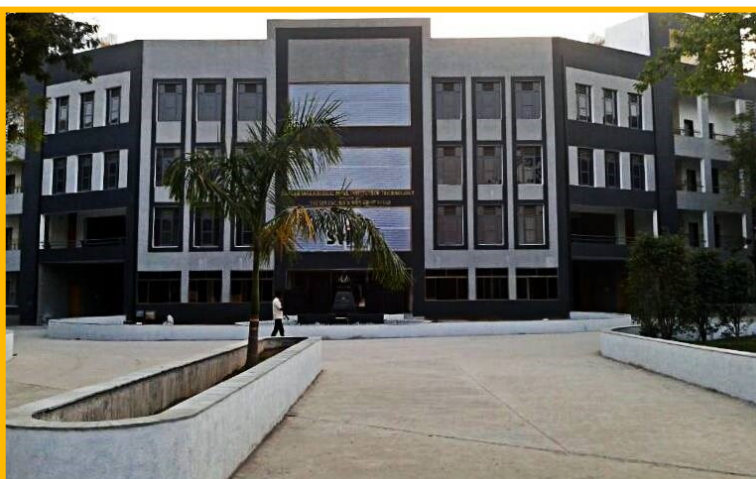
The Institute aims to provide quality educational facilities and infrastructure to excel in academics and research. In this regard, it is the only Institute to provide Aeronautical Engineering program in the state with support from the Indian Air Force, HAL and others.

The Institute produces university rankers in each semester that speaks volumes of the effort given. The Campus Placements have been increasing annually, with the placements before graduation being one of the largest in the University.

Institute Logo :



Glimpses of the Institute



Ongoing/Proposed Projects

Past Projects:

- ✎ Computational Flow Analysis of Wing with Different Winglet Configurations, in Collaboration with Suzlon Energy Ltd.
- ✎ Study of Aerodynamics of Insects, Received the “Most Innovative Project of the Year 2012”
- ✎ Design and Development of a Flapping Wing Micro Air Vehicle, sponsored by IEL, India.

Present Projects:

- ✎ Busemann Biplane extending the effect of different design parameters and operating.
- ✎ Comparison between single cavity and double cavity of trapped vortex combustors using cold flow analysis.
- ✎ Design and Development of a Two Seater Personal Utility Aircraft.

Future Projects:

- ✎ Experimental investigations and numerical predictions of aerodynamic characteristics on blunt body, biconvex airfoil and double wedge airfoil in supersonic regimes.

Thrust Areas

Department of Aeronautical Engineering has expertise in the following areas and is capable to do state-of-the-art research, development and consultancy in these fields.

- ✎ Aircraft Structures
- ✎ Computational Fluid Dynamics
- ✎ Vibration and Noise Control
- ✎ Aerodynamics
- ✎ Composite Materials and Structures
- ✎ Propulsion

Photographs



Aircraft manufacturing room



Wind Tunnel



FFT Analyzer/ Vibrometer

Ongoing/Proposed Projects

- Public Transport scenario in the Mid Size and Mega City of Gujarat - 24,00,000/-
- Evaluation of Response Reduction Factor considering Soil-Structure Interaction for Elevated RC Frame Water Tank using Pushover Analysis - 2,00,000/-

Thrust Areas

- Environmental Auditing and adequacy work, Material testing like soil, aggregate, concrete, cement, steel, brick etc.
- Civil Engineering Department is Schedule I Environmental Auditor authorized by Gujarat Pollution Control Board (GPCB), Gandhinagar and offers Environmental Audit/Adequacy work to various industries.
- The Department offers post graduate program in Structural Engineering and has a dedicated computing facility with license softwares related to Civil Engineering. The M.E. Dissertation work is carried out in seismic base-isolation, Passive, active and semi-active control of structure, Earthquake Engineering, Concrete technology etc.
- Six faculties of the department possess Doctorate Degree from IITs and reputed Universities. Three faculties are pursuing Ph.D and other faculties are ME/M.Tech.
- Civil Engineering Department is equipped with state-of-the-art laboratory facilities. The department has also received funding from AICTE under MODROB scheme to upgrade various laboratories.

Consultancy

- The department has conducted Environmental Audit work for the Industries like Gujarat industries Power Company limited (GIPCL), Lupin Limited, Gujarat Agrochem Limited, Adani Power Limited, Unique chemicals, Bundy India limited, Shri Ukai Pradesh Sahakari Udyog Mandali Ltd., Samvedna B.M.W. Incinerator etc.
- Environmental Adequacy work is also conducted for many industries like Gujarat Borosil Limited, Ramans Consultancy Services Pvt. Ltd., M/S Sterling Biotech Ltd., M/S Adani Power Ltd., M/S Amsal Chem Pvt. Ltd., Ishan Dyes & Chemicals Ltd., M/S Gail India Ltd, Gandhar Bharuch., M/S Gail India Ltd, Waghodiya Road, Vadodara etc.
- Concrete and soil testing work is also offered by the department.

Recognitions

- Civil Engineering Department is Schedule I Environmental Auditor authorized by Gujarat Pollution Control Board (GPCB), Gandhinagar and offers Environmental Audit/Adequacy work to various industries.
- The department has received a grant of 18,15,000/- from AICTE, New Delhi for the upgradation of following laboratories Strength of Material and Environment Engineering Laboratory under MODROB scheme (F.No.8024/RIFD/MOD/272/11/12 and F.No.8024/RID/MOD-121/2009-10).
- The department has signed MOU with (a) Institution of Civil Engineering (India), New Delhi, (b) The Institute of Engineers (India), Kolkata and several other organizations.

Ongoing/Proposed Projects

Past Projects:

- 3D Walkthrough with 6th Sense : about to launch
- Human Resource Management System: using for institute purpose

Proposed Projects:

- Glass free interactive 3D workbench

Thrust Areas

Department has competency in the following fields:

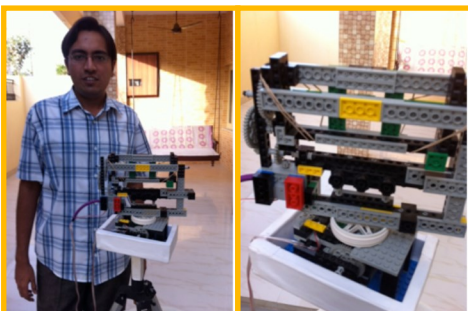
Image Processing, Networking, MANET, Security (data base, network, application, device, system...), Data Mining (Text mining, Web mining, clustering, classification...), Distributed Systems, Parallel processing, mobile computing, Neural Network, Artificial intelligence, Cloud computing (data privacy and security, ...)

Recognitions

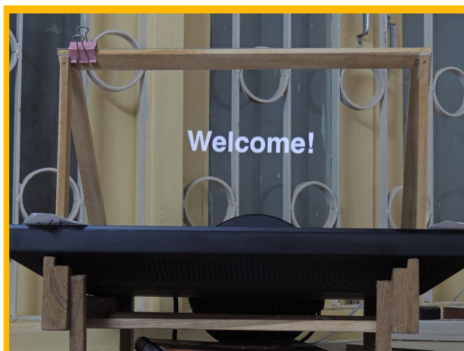
MOUs with following companies:

- Zen Softech Pvt. Ltd., Vadodara
- Jagtap Infotech Pvt. Ltd., Vadodara
- DotNet Xpert Web Solutions, Vadodara
- OM Infosolutions, Vallabh Vidyanagar (Dist: Anand)
- Shreeji Infosoft, Vadodara
- Mind Zone IT Services, Ahmedabad
- Matrix Telecom Solutions, Vadodara
- TOPS Technologies Pvt. Ltd., Ahmedabad
- Helios Solutions, Vadodara

Photographs



3D Walkthrough with 6th Sense



Glass Free Interactive 3D Workbench



Glass Free Interactive 3D Workbench

Ongoing/Proposed Projects

- Android Based Wind Turbine Control System
- A Portable Glove Based Sign Language Translator With LCD Display
- Citizens Biometric Benefit Smart Card (CBBS) With Cashless & E-Transaction
- Smart Sensenavigator
- Embedded HD Camera System With An Intelligent OS

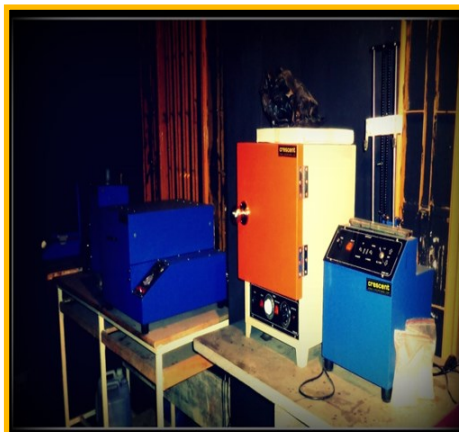
Thrust Areas

- Design and Development of Embedded Systems
- System Development using Microcontroller/PIC Controllers/Micro-Processors/ARM processors
- Wireless and wired communication systems
- PCB Design and Development
- Calibration of Analog/Digital Devices
- Repairing of CROs
- Professional training in various domains.

Recognitions

Dr. Kiritkumar Bhatt has received a meritorious award for the year 2013, felicitated by The Society of Power Engineers (India) for his noticeable contribution in the field of Low- Power Designs.

Photographs



Ongoing/Proposed Projects

Ongoing Projects

- Development of Linear Induction Motor (LIM) based train
- Development of Power Generation System using Wind Energy

Proposed Projects

- Maximum utilization of solar energy using Solar Tracking System for Electricity Generation (Gujcost, Gujarat)

To be proposed Projects

- Analytic Support For Real Time Implementation Of Wide Area Measurement\ System (WAMS) For Monitoring And Control Of Gujarat Power Grid With Voltage Stability As Main Aspect. (GETCO, Vadodara)
- Wind forecasting (GETCO, Vadodara)

Thrust Areas

Thrust Areas

- Power System
- Power Electronics
- Microprocessor

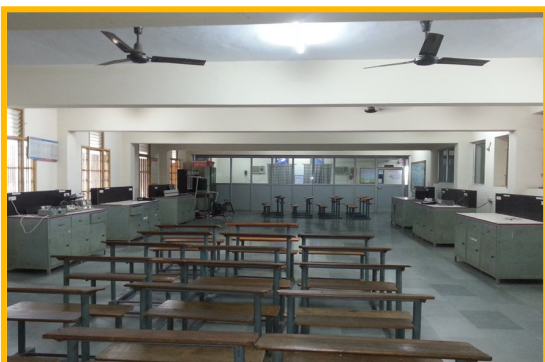
Areas for consultancy

- Power System study
- Renewable Energy – PE Interface
- C. T. Testing

Recognitions

- Takalkar Power Consultants Pvt. Ltd., Vadodara
- Atlanta Electricals Pvt. Ltd., V.U.Nagar

Photographs













Ongoing/Proposed Projects

-  Real-Time Bus Arrival Information through SMS - 1,00,000/-

Thrust Areas

Department has competency in the following fields:

-  Security
-  Network Forensics
-  Cyber Forensics
-  Data Mining
-  Distributed Systems
-  High Performance Computing
-  Grid Computing
-  Cloud Computing
-  Image Processing
-  DBMS




Recognitions

MOUs with following companies:

-  Zen Softech Pvt. Ltd., Vadodara
-  Jagta Infotech Pvt. Ltd., Vadodara
-  DotNet Xpert Web Solutions, Vadodara
-  OM Infosolutions, Vallabh Vidyanagar (Dist: Anand)
-  Shreeji Infosoft, Vadodara
-  Mind Zone IT Services, Ahmedabad
-  Matrix Telecom Solutions, Vadodara
-  TOPS Technologies Pvt. Ltd., Ahmedabad

Ongoing/Proposed Projects

Past Projects:

-  Advance technology for village automation
-  Automation in drip irrigation system
-  Internal Model Control of liquid level tank using LabVIEW

Proposed:









-  Wireless Sensor Networks Application in Drip Irrigation System

Thrust Areas


Major strengths

-  Four faculties are pursuing PhD and other faculties are M.E./M.Tech.

Research area











-  Automation
-  Calibration
-  Testing and measurements
-  Controller tuning
-  Advance control techniques
-  Robotics
-  Microcontroller based project
-  PLC and SCADA design and development

Consultancy

-  Training/workshop on DCS, DSPs and PLC

Recognitions

MOUs with following companies:

-  Nisus Microtech, Ahmedabad
-  Gururaj Engineers, Vadodara
-  System Engineers, Vadodara
-  Servilink System Ltd., Vadodara
-  Precise Automation & Control(P) Ltd., Vadodara
-  Measurement and Control, Vadodara
-  Smar Tec Solutions, Vadodara
-  Sai Technologies, Vadodara
-  United Insurment Services, Vadodara
-  Open Circle Solution, Vadodara

Photographs



Mechanical Engg. Dept.

Ongoing/Proposed Projects

- 🔍 Investigation of Erosion Resistance of High Velocity Oxy-Fuel (HVOF) Sprayed Ni-20Al Coatings on Boiler Steels.
- 🔍 Development and Investigation of High Temperature Behavior of Nickel Aluminide coatings on Boiler Steels.

Thrust Areas

- 🔍 Non Destructive Testing by Ultrasonic, Magnetic particle & Dye penetrant method.
- 🔍 CFD simulations and Heat exchanger design, Alternative Energy Sources.
- 🔍 Electro-Discharge Machining facility, Surface roughness measurements, etc.
- 🔍 Biodiesel testing facility in our I C Engine Laboratory.
- 🔍 Friction welding process parameter optimization and analysis.
- 🔍 Dynamic analysis of rotor-shaft system and fault diagnosis of bearing.
- 🔍 Characterization of metal matrix composite material.
- 🔍 High temperature protective coatings in gas turbines, steam turbines, boilers etc.
- 🔍 The Department offers post graduate program in CAD/CAM Mechanical Engineering and has a dedicated computing facility with license softwares AutoCAD, ProE, ANSYS, MasterCam, LabView, etc. The M.E. Dissertation work is carried out in Computer aided design and analysis, finite element analysis, optimization, nontraditional machining, material characterization, computational fluid dynamics, computer aided manufacturing, casting process, etc.
- 🔍 One faculty possesses Ph D in Mechanical Engineering from IITM Chennai. Eight faculties of the department pursuing Doctorate Degree from IITs and reputed Universities. All other faculties are ME/M.Tech from various renowned institutes.
- 🔍 Mechanical Engineering Department is equipped with state-of-the-art laboratory facilities. The department has also received funding from AICTE under MODROB scheme to upgrade Refrigeration and Air conditioning laboratory.

Consultancy

- ☐ The department has made an agreement with GERMI, Gandhinagar for conducting “Feasibility study and site assessment for development of a geothermal energy based power generation system at Dholera, Gujarat”. In this connection the department has submitted a proposal amounting Rs. 2,75,000/- .

Recognitions

- ☐ The department has received a grant of Rs. 50, 000/- from GUJCOST, Gandhinagar for organizing a national conference ITMAE-2014.
- ☐ The department has received a grant of Rs. 6, 45, 000/- from AICTE, New Delhi for the up gradation of Refrigeration and Air conditioning laboratory under MODROB scheme.
- ☐ The department has association with (a) Indian Society of Heating, Refrigeration and Air-conditioning Engineers (ISHRAE), New Delhi, (b) The Institute of Engineers (India), Kolkata and several other organizations.

List of MOUs (MoU has been signed with the following industries for industry/institute interaction)

- ☐ Specialised Components Pvt.
- ☐ Rajnil Forgings
- ☐ Pratap Engineers
- ☐ Gisoline Industries
- ☐ Panchmahal Dies & Tools
- ☐ Press Stampings Industries
- ☐ Capiq Engineering Pvt. Ltd.
- ☐ NRG Technologists Pvt. Ltd.
- ☐ Gujarat Energy Research and Management Institute

Photographs



Ongoing/Proposed Projects

- Analysis of Evolutionary Algorithm Approach for Students Group Formation in Higher Educational institute: An approach to develop an conceptual framework for design
- E-Learning on Conceptual Database Design using Natural Language Interface: The research work is aimed to develop a conceptual framework for designing the systems where all the persons involves in implementing the system can get graphical view of the system which can be aid to understand easily the client needs.
- CASE Tool for Relational Database Logical Design: This project is aimed to developing CASE tools which are intended to help in normalization aspects of a given relational database design.
- Mobile Application for Monitoring of Factory Automation Systems: Future ready control rooms that will be used for disseminating control room data on wireless devices.

Thrust Areas

- Data Mining
- Natural Language Processing
- Genetic Algorithm & Neural Networks

Consultancy

- Past Projects: Worth Rs. 2,50,000/- with medepage.com, Australia
- On Going Projects: Nil
- Proposed Projects: 1 (Future Ready Control Room) under process of designing prototype for it

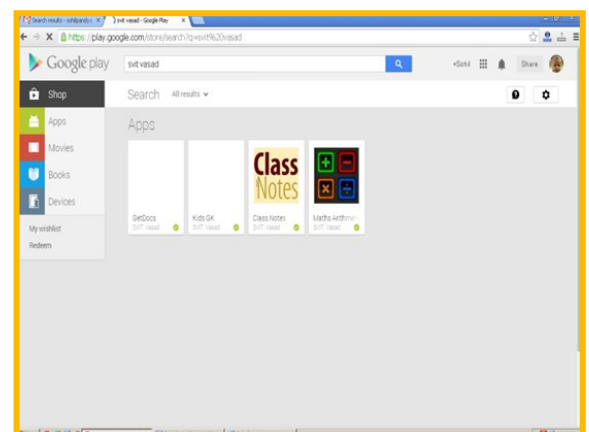
Recognitions

Awards:

- GTU Pedagogical Innovation Award 2014
- Best Research Paper Award in National Conference

MOUs

- NetWeb Software Pvt. Ltd., Vadodara
- .net Expert Web Solutions, Vadodara
- Matrix Telecom Pvt. Ltd., Vadodara
- Jagtap Infotech Pvt., Ltd., Vadodara
- Mind Zone, Ahmedabad
- Zen Softech Pvt. Ltd., Vadodara
- Helios Solutions, Vadodara



Screen showing Android projects over Google Play Store



SVIT Glimpses

