INSTITUTION PROFILE

PSG COLLEGE OF TECHNOLOGY

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PSG & SONS' CHARITIES TRUST

Shri P.S.Govindaswamy Naidu, the Founder Trustee, a Legendary Man of Vision, Faith and Integrity gave the initials "PSG" its immortal glory. The 82 year old legacy of the PSG Institutions founded by Shri P.S. Govindaswamy Naidu has been handed down through several generations. Each time the baton was handed down to the successor of the Trust, the golden words,

"Let there be charity, so others can share my family's prosperity"

are embedded firmly and hence the Founder's vision has only grown richer and more profound. Education, one of the most treasured clauses in the Trust deed, attained sharper focus each growing year while each succeeding Trust head, carried the dreams of the Founders on their shoulders towards fulfillment of the Vision and the betterment of the future. At present there are 25 institutions under the Trust catering to the development of 25,000 individuals.

PSG & SONS' CHARITIES TRUST

OUR COLLEGE VISION

PSG College of Technology aspires to be recognised as one of the leaders in engineering education, research and application of knowledge to benefit society.

OUR COLLEGE MISSION

Provide world-class Engineering Education, Foster Research and Development. Evolve innovative applications of Technology. Encourage Entrepreneurship. Ultimately mould young men and women capable of assuming leadership of the society for the betterment of the Country.

PSG College of Technology was established in the year 1951 by the PSG & Sons' Charities Trust (1926), one of the oldest charitable organizations in the country, dedicated entirely to the growth and development of education, training, industry and social upliftment. PSG College of Technology, fondly known as PSG Tech is an educational landmark of Coimbatore and has been ranked 33 among Enginnering Colleges in the Country under the National Institutional Ranking Framework (NIRF), Govt. of India. PSG College of Technology an AICTE approved institution is affiliated to Anna University and ISO 9001 certified. Most of its programmes have been accredited by National Board of Accreditation (NBA). PSG Tech is an Autonomous institution since 1978 and has the authority to update its own programmes and curriculum, to devise and conduct examinations and to evaluate students' performance based on a system of continuous assessment.

ABOUT PSG COLLEGE OF TECHNOLOGY

One unique feature at PSG College of Technology is the close collaboration of educational institution and industry, resulting in the cross fertilization of theory with practice. The PSG Industrial Institute located in the same campus, is a pioneer in the manufacture of several engineering products, like process and agricultural pumps, industrial motors, high quality speciality castings; and enables students to study the actual production processes and gives them an opportunity to observe the working of industry. PSG Tech was ranked as the Institution with the best industry linkage by AICTE and CII consistently for the past three years.

PSG Tech has been continuously drawing the best of expertise in science, technology and management in order to train students effectively in various domains and to instill in them a spirit of entrepreneurship and innovation. The programmes of the college are recognized all over India and abroad. The student strength of PSG Tech is about 8518 with 15 engineering and technology departments besides the computer applications, management sciences, basic sciences and humanities departments. More than 505 research scholars are pursuing research programmes leading to Ph. D / M.S. / M. Tech degrees and the college is a recognized QIP centre for Postgraduate and Ph. D programmes.

The college maintains close interaction with several R&D Institutions and institutions of higher learning in India and abroad, through institutional network programmes and collaborative research programmes. Several advanced centres are also set up with financial support from the Ministry of Human Resources Development, Ministry of Textiles, Ministry of Steel, Ministry of Heavy Industries, Ministry of Science and Technology and other agencies. PSG Tech is extremely proud of its alumni, a considerable number of them being entrepreneurs or senior executives in industries both within India and abroad; and a few of them having established their own educational institutions. The growth and development of the college owes much to the untiring efforts of Dr. G.R. Damodaran, Founder Principal of PSG College of Technology. Presently Dr.R. Rudramoorthy is the Principal of the Institution.

PROGRAMMES OFFERED

Under Graduate Programmes

Bachelor of Engineering / Technology Programmes

- Automobile Engineering
- Bio Technology
- Civil Engineering
- Computer Science and Engineering
- Electrical and Electronics Engineering
- Electronics & Communication Engineering
- Information Technology
- Mechanical Engineering
- Metallurgical Engineering
- Production Engineering
- Mechanical Engineering (Sandwich)
- Electrical and Electronics Engineering (Sandwich)
- Production Engineering (Sandwich)
- Robotics and Automation Engineering
- Textile Technology
- Textile Technology (Part Time)
- Bio Medical Engineering
- Fashion Technology
- Instrumentation and Control Engineering

Bachelor of Science (Applied Science)

- Applied Science
- Computer System and Design

Post Graduate Programmes

Master of Engineering / Technology Programes

- Applied Electronics (Full Time)
- Applied Electronics (Part Time)
- Automotive Engineering
- Communication System
- Computer Science & Engineering
- Computer Integrated Manufacturing
- Control Systems
- Electrical Machines (Part Time)
- Engineering Design
- Embedded & Real Time System
- Energy Engineering
- Industrial Engineering (Full Time)
- Industrial Engineering (Part Time)
- Industrial Metallurgy
- Industrial Metallurgy (Part Time)
- Infrastructure Engineering
- Manufacturing Engineering (Full Time)
- Production Engineering (Part Time)
- Power Electronics & Drives
- Product Design and Commerce
- Structural Engineering (Full Time)
- Structural Engineering (Part Time)
- Software Engineering
- Infrastructure Engineering (Full Time)
- VLSI Design
- Virtual Prototyping and Digital Manufacturing
- Textile Technology (Full Time)
- Textile Technology (Part Time)
- Information Technology
- Bio-Technology
- Lean Manufacturing
- Nano Science and Technology
- Biometrics and Cyber Security
- Wireless Communications

Post Graduate Programmes in Science and Applications

- MCA [3 Years]
- Msc Applied Mathematics
- Msc Theoretical Computer Science [5 Years integrated]
- Msc Software Systems [5 Years integrated]
- Msc Data Science [5 Years integrated]
- Msc Fashion Design & Merchandising [5 Years integrated]

Bachelor of Science (Applied Science)

- MBA
- MBA (PART TIME)
- PGDM

Research Programmes

MPhil (Full Time & Part Time)

- Mathematics
- Physics

MS & PhD (Full Time & Part Time)

- OFFERED IN ALL DEPARTMENTS

The department was established in 1999 and offers NBA accredited undergraduate and post graduate programs in the field of automobile engineering apart from doctoral programs. These programs, designed and revised regularly with the inputs from leading industries, universities/ academic experts and other stake holders; and supported by very experienced faculty and internationally recognized faculties, lay the groundwork for innovative research, career opportunities in various avenues and entrepreneurship. The department is equipped with state of art laboratories and Centre of excellence which provide hands on education in testing and research of automobile systems. Practical exposure through participation in competitions such as SAE & PACE, student exchange programs with foreign universities and campus involvement like various association activities, provide a holistic educational environment for the students. Exposure to the state of art technologies, guest lectures from experts, participation in industry funded laboratories, consultancy projects and internships in industries are all part of the program and shape the students in to innovative and core engineering professional.

DEPARTMENT OF

AUTOMOBILE ENGINEERING

Programmes offered:
B.E. - Automobile Engineering
M.E. - Automotive Engineering

Laboratories for UG and PG programmes

- CAD & CAE Laboratory
- Automotive Research Laboratory
- Vehicle Servicing Laboratory
- PSG Motorsports Laboratory
- Electric Hybrid Vehicle Laboratory
- Engine Trouble Shooting Laboratory
- Vehicle Performance Laboratory
- 2 & 3 Wheeler Laboratory
- Automotive Steering System Laboratory
- Automotive Simulation Laboratory
- Automotive Electronics Laboratory
- Automotive Simulation & Manufacturing Laboratory
- Pace Laboratory

Facilities Available

Automobile System Simulation Lab

Modeling Softwares - ProE Wildfire 5.0, Solidworks Premium 2009, SolidEdge, CATIA FEA Softwares – Ansys 12.1, AdaqusV6.9.1, Dynaform 5.7.1, VPG 3.4, Ls-Dyna971, Star CCM+/CD, Systems Modeling Software – AMESim V7.0, Matlab 7 and Data Acquisition Software – Lab-View 8.0

Vehicle Performance Lab

Automatic gear box, Montana car chassis, Air brake and Hydraulic Brake systems, Front suspension system, Mobile automotive electrical system, Kinetic Honda (CVT), Leyland gear box, Maruti Transaxle gear box, Transfer case gearbox (jeep), Steering gear box (TATA & Leyland), Vanjax hydraulic jib crane, Santro Hyundai car (Frame assembly), Maruti -800 car, Headlamp aligner, Welding machine (8kVA), Drilling machine size (3mm- 12mm) and Growler tester.

Engine Troubleshooting Lab

Eddy current Dynamometer, Five gas analyzer & Smoke meter, Maruti Engine assembly, V - Type engine block, Hero Honda 100 cc Bike engine Cut section, Six cylinders TATA & Leyland engine assembly and Cielo engine assembly.

Hybrid and Electrical Vehicles Lab
Prototype Vehicles Developed

Plug-in hybrid electric four-wheeler prototype, Plug-in hybrid electric three-wheeler auto rickshaw with series hybrid powertrain, Plug-in hybrid electric three-wheeler auto rickshaw with wheel hub motor in the rear and Plug-in hybrid electric two-wheeler with wheel hub motor fitted in the front wheel.

CAD and CAE Laboratory

Autodesk Alias Automotive, Autodesk SketchBook Pro, Autodesk 3ds Max Design, Autodesk Showcase, Autodesk Maya, Autodesk Mudbox, Autodesk AutoCAD, Autodesk AutoCAD Inventor Professional and Autodesk Vault Professional

PSG Motorsports Laboratory

SAE BAJA-All Terrain Vehicle, SUPRA SAE-Formula Race Car and SAE EFFICYCLE - Electric 3 Wheeler.

Ongoing Projects

- Centre of Excellence on Industrial & Home Textiles (Ministry of Textiles, Government of India)
- ·Proton Exchange Membrane Fuel Cell (PEMFC) with Porous Flow Channels (DST)
- Non-Platinum Based Catalysts for Acid and Alkaline Fuel Cells - Indo-Mexican Scientific Technological Co-operation Programme
- Solar Power Assisted Electric Vehicle and Optimization of Solar Panel with Battery Pack (UGC)
- Protein Patterning on Reactive Substrates Using Inkjet Printing for Diagnostic Application (UGC)
- Vehicle Powertrain Testing.
- Automotive Electronics.
- Automotive Embedded systems

BE Automobile Engineering Curriculum

Mathematics

Calculus and its Applications, Differential Equations, Complex Variables and Transforms and Probability and Statistics

Science and Humanities

Material Science, Industrial Chemistry, Economics for Engineers, Environmental Sciences, Production Planning and Operations Research

Core courses

C programming, C++ and data structures, Automotive Systems, Basics of Electrical and Electronics Engineering, Enginering Mechanics, Production Technology, Mechanics of Machinery, Materials Engineering, Thermodynamics, Fluid Mechanics and Machinery, Automotive engines, Automobile Emission and NVH Control, Engineering Design, Heat and Mass Transfer, Vehicle Component Design, Automotive Electrical and Electronics Systems, Two and Three Wheelers, Vehicle Dynamics, Manufacturing of Automobile Components, Metrology and Quality engineering, Intelligent Vehicle Technology and Finite Element Analysis

Elective Courses

Materials for Automobile Industry, Process Planning and Cost Estimation, Aerodynamics of Road Vehicles, Automatic Transmission, Automotive Electronics, Automotive Control Systems, Automotive Product Development Strategies, Design for Manufacture and Assembly, Mechatronics, Special Vehicles, Vehicle Concept Styling and Design, Automotive Air Conditioning, Modelling and Simulation of Internal Combustion Engines, Electric, Hybrid and Fuel Cell Vehicles, Advanced Theory of Internal Combustion Engines, Alternate Fuels, Computational Fluid Dynamics, Commercial Fleet Operation, Quality Assurance and Reliability, Pneumatic Control for Automation, Automotive Embedded Systems, Vibration and Noise Engineering and Industrial Hydraulic and Pneumatic Systems

ME Automotive Engineering Curriculum

Core courses

Computational Mathematics, Automotive Sciences, Vehicle Development Process, Automotive Electrical and Electronic Systems, Automotive Chassis, Object Computing and Data Structures Laboratory, Automotive Power Train, Dynamics of Road Vehicles, Automotive Instrumentation and Testing, Electronic Engine Management System and Design of Automotive Systems

Elective Courses

Automotive Electronics, Modeling of Dynamic Systems, Automotive Infotronics, Automotive Ergonomics and Safety, Mechatronic System Design, Automotive Embedded Systems, Simulation of IC Engines, Finite Element Analysis for Automotive Engineers, Sketching and Geometric Modeling for Automotive Styling, Computational Fluid Dynamics, Automatic Transmission, Design for Manufacture and Assembly, Automotive Materials, Electric and Hybrid Vehicles, Electric Drives and Controls for Electric Drive Vehicles, Alternate Fuels and Technologies, Emission, Noise, Vibration and Harshness Control and Aerodynamics of Road Vehicles

The department of Biotechnology at PSG College of Technology was started in the year 2000 and it began its efforts by offering the B.Tech degree programme in Biotechnology. The activities of the department further expanded to offer M.Tech from 2006 and Ph.D programmes as well. An efficient team of highly qualified, trained and dedicated professionals is available to provide quality training and excellent research opportunities to the students enrolled. The research environment in the department is excellent due to its well equipped laboratories. The college has been able to produce well trained engineering graduates in biotechnology who are uniquely talented in analytical sciences.

DEPARTMENT OF BIOTECHNOLOGY

Programmes offered:
B.Tech - Biotechnology
M.Tech - Biotechnology

Laboratories for UG and PG programmes
Research Laboratories

- Plant Tissue Culture Laboratory
- Animal Tissue Culture Laboratory
- Genetic Engineering Laboratory
- Analytical Instrumentation Facility

Academic Laboratories

Microbiology Laboratory, Biochemistry Laboratory, Immunology Laboratory, Analytical Instrumentation Laboratory, Chemical Engineering laboratory, Bio process Engineering Laboratory, Downstream Processing Laboratory, Separation Technology Laboratory Bio informatics Laboratory, Genetic Engineering Laboratory.

Other Facilities

Animal House (at PSG Medical College)

Zebrafish House (under development)

Shade House.

Major Instruments

Biosaftey Cabinet, Bio reactors 14L/5 L, BOD incubator, Brook Field Viscometer DVI + Chemidocumentation System ,COD Analyser DO meter, ELISA reader, Fluorescent Microscopy, Gas Chromatography system, Gel Documentation System, Gradient PCR Growth Chamber, High Performance Liquid Chromatography (HPLC), High speed pump for external circulator, High speed refrigerated centrifuge, Liquid Chromatography System Lyophilizer, Multimode Detector (TRIAD) Multi parameter analyzer (Portable), Phase Contrast/ Dark Field Microscopes.

B.Tech - Biotechnology Curriculum

Mathematics

- Calculus and applications
- Complex Variables and Transforms
- Linear Algebra and Numerical analysis

Science and Humanities

- Bio Statistics
- Mathematical modeling in biotechnology

Core courses

Applied Physics, Analytical Chemistry, Environmental Sciences, Economics for Engineers.

Elective courses

- C programming
- C++ and data structures
- Bioinformatics
- Basics of Electrical and Electronics Engineering
- Biomolecules
- Biochemical Metabolism
- Cell and Tissue Biology
- General Microbiology
- Introductory Chemical Engineering
- Molecular Biology
- Industrial Biotechnology
- Fundamentals of Genetics
- Analytical Methods and Instrumentation

Research Projects in Progress

- An Integrated System for treatment of textile industry wastewater, Royal Academy of Engineering, UK (Newton Bhabha Fund)
- Rural Women Technology Park for Coimbatore District, Tamilnadu: sponsored by DST, GoI
- Ultrasound assisted biomass derived heterogeneous catalytic system for biodiesel production from non-edible oils; sponsored by SERB, GoI.
- Study on RAGE amyloid interactions with relavence to AD pathology and influence of G82S RAGE polymorphism on the above interaction; sponsored by DST, GoI
- Studies on Omega3 desaturase genes in Sesamum indicum Linn to improve oil quality; sponsored by DST, GoI
- Pilot scale demonstration of a novel water defluoridation unit for rural areas; sponsored by DST, GoI
- Vetiver based Treatment System for Textile industry Wastewater sponsored by DBT, GoI
- Development of porous scaffold for bone implant; sponsored by DST, GoI
- BIOMEMS device for separation of bioparticles; sponsored by DBT, GoI

- Unit Operations
- Enzyme Engineering and Technology
- Genetic Engineering
- Heat Transfer
- Thermodynamics of Biochemical Systems
- Immunology
- Bioprocess Engineering
- Bioinformatics
- Chemical Reaction Engineering
- Bioethics, IPR and Biosafety
- Genomics and Proteomics
- Down Stream Engineering
- Entrepreneurship and Biobusiness

Elective Courses

- Plant Biotechnology
- Environmental Biotechnology
- Biopharmaceutical Technology
- Food Science and Technology
- Animal Biotechnology
- Cancer Research
- Molecular Pathogenesis
- Developmental Biology
- Protein Engineering
- Immunotechnology

M.Tech - Biotechnology Curriculum

Core Courses

- Biostatistics
- Process Engineering Principles
- Genetic Engineering and Recombinant Products
- Tools and Algorithms in Bioinformatics
- Protein Chemistry and Engineering
- Recombinant DNA Laboratory
- Instrumental Methods of Analysis
- Bioprocess Engineering
- Separation Technology
- Technologies and Strategies in OMICs Research
- Tissue Engineering

Elective Courses

- Immunotechnology
- Metabolic Engineering
- Cellular and Molecular Mechanism of Neurodegenerative Disorders
- Membrane Separation
- Microfluidics
- Bioreactor Designs
- Biomaterials in Tissue Engineering
- Biofuels
- Industrial Waste Management
- Stress Tolerance in Plants
- Pharmacogenomics
- Advanced Topics in Plant Molecular Biology
- Techniques in Epidemiological Data Analyses
- Introduction to Pharmaceutical Sciences
- Techniques In Molecular Subtyping of Pathogens
- Chemical Engineering Design
- Quality Assurance, Industrial and Bio-Safety
- Metagenomics and Epigenomics
- Molecular and Cellular Biomechanics
- System Biology -Theory and Applications

The mission of the department established in the year 2006 is to provide world class graduate engineering education in Biomedical Engineering, foster research and development in biology and medicine to improve the quality and effectiveness of health care, encourage Entrepreneurship, mould young men and women to innovate new technologies for diagnostic or therapeutic applications. The precise curriculum augmented with industrial training prepares students to handle the challenges in the healthcare industry pioneering biomedical research. The facilities available at PSG College of Technology, PSG Institute of Medical Sciences & Research and PSG Institute of Advanced Studies are used for implementing the curriculum.

DEPARTMENT OF

BIOMEDICAL ENGINEERING

Programmes offered:
B.E. - Biomedical Engineering

Laboratory Facilities

Vision and Machine Learning Laboratory

- Soliton MP CMOS Area Scan Camera
- Line Scan Camera
- MOBIR Thermal Camera
- IP based Surveillance Camera
- NI LABVIEW

Biomedical Signal Processing & Assistive Technology Laboratory

- Emotiv BCI technology
- Epoch head set
- EMG Machine
- EEG Machine
- Pratt-Open source software

Computational Biomechanics Laboratory

- Three axis accelerometer
- Windows Kinect
- 3D printer
- SLA printer
- Cura software
- Solidworks software
- Sketchup software
- Kinovea software

Embedded Systems Laboratory

- CCS IDE
- Arduino
- Keil IDE
- ARM7
- Rudra PIC Development Board
- Sensor Interface Card
- Raspberry PI
- Beagle Bone
- Zigbee Module
- ASLK PRO Analog system design kit
- MSP 430 Launch Pads

Electronics and Instrumentation Laboratory

- Strain Measurement Trainer
- Measurement Modules: Pressure, Level Control, Temperature, Displacement, Angular
- Compact Rio Module with Accessories
- Digital Phosphorous Oscilloscope
- Image Acquisition and Machine Vision System
- Voice Recognition Kit

Medical Informatics Laboratory

- Cc3200 IOT kits
- PSoC Microcontroller
- COMSOL Software
- Labview
- Code Composer Studio
- Solid Works

PSG – TI Centre of Excellence for Medical Electronics

- Hyperthermia machine
- Medical meter portable tools
- Monitoring devices
- Wireless monitors (smart phone)

Research Projects in Progress

- Design and Development of low-cost wireless Polysomnograph; sponsored by DST.
- Design and Development of low-cost Non-Contact Palm Biometric System for health care establishments; sponsored by AICTE.
- Design and development of low-cost Intelligent Wheelchair for severely disabled/old people; sponsored by DST.
- Development of Biomagnetic Iron oride-Hydroxyapatite Nanoparticles for Hyperthermia and Biomedical applications, sponsored by DST.
- Design and Development of a novel multi-parameter pain monitoring system for children; sponsored by DST.
- Screening Tool for Sleep Related Breathing Disorder through assessment of Heart Rate Variability.

- Automated External Defibrillator
- Infusion pump
- CPAP machine
- Imaging solutions
- IDE code composer studio V5
- Schiller TS II
- Olex Nebulizer
- TI Evaluation modules for ECG & EEG
- Blood Glucose measurement
- Patient monitoring system Pulse Oximeter

BE - Biomedical Engineering Curriculum

Mathematics

- Calculus and its Applications
- Complex Variables and Transforms
- Linear Algebra and Numerical Analysis
- Biostatistics

Science and Humanities

- Biomaterials
- Biochemistry
- Professional Skills
- Communication Skills
- Economics for Engineers
- Environmental Sciences

Core courses

- Problem Solving and C Programming
- Electron Devices and Circuits
- C++ and Data Structures
- Network Theory
- Digital Electronics
- Physiology
- Mechanical Technology
- Biosensors and Transducers
- Linear ICs and their Applications
- Electromagnetic Fields
- Signals and Systems
- Medical Informatics
- Instrumentation and Control
- Biomedical Signal Processing
- ASIC Design
- Microcontrollers
- Image Processing
- Diagnostic Equipments
- Embedded Systems
- Medical Imaging Systems
- Therapeutic Equipments
- Biomechanics
- Pathology and Microbiology

Elective Courses

- Hospital Systems Management
- Healthcare and Information Systems
- Ultrasonic and Laser Applications
- Telemedicine
- ICU and Operation Theatre Equipments
- Clinical Engineering
- AI and Expert Systems
- Computer Networks
- Virtual Instrumentation
- Control System
- Biofeedback
- Rehabilitation Engineering
- Artificial Organs
- Communication Systems
- Database Management System
- Cell Biology and Tissue Engineering
- Modeling of Physiological Systems
- Advanced Biochemistry
- Data Compression Techniques
- Research Methodology and Bioethics
- Sensors in Medical Applications

The Department of Civil Engineering is one of the oldest departments of PSG College Technology. Established in the year 1953, the mission of the department is to strive and produce wholesome Civil Engineers who can tackle the multiple responsibilities of analysis, design and construction of traditional and modern structures. The department offers undergraduate, postgraduate and doctoral level programmes. The infrastructure facilities of the department are the best which add on to the development of students.

The curriculum has been designed to provide a solid foundation in all fields of Civil Engineering. The highly qualified and experienced faculty in teaching as well as in consultancy and design has been instrumental in bringing the institute to the fore front of academic and consultancy activities. Besides Civil Engineering faculty, the management courses in the programme are taught by the faculty of Management studies of the college.

DEPARTMENT OF

CIVIL ENGINEERING

Programmes offered:
B.E. - Civil Engineering
M.E. - Infrastructure Engineering
M.E. - Structural Engineering

Laboratory Facilities for UG and PG programmes

Environmental Engineering Laboratory

- BOD Incubator
- COD Refluxing unit
- Electronic Balance
- Water Quality Analyser
- Flame Photometer
- Jar Test Apparatus for Optimum Dose of Coagulant
- Nephelometric Turbidity Meter
- Dissolved Oxygen Analyser
- Hot Air Oven
- Muffle Furnace
- U-V Visible Spectrophotometer
- Two bed water Demineraliser
- Turbidity meter
- Biological Microscope

Concrete Laboratory

Vcompression Testing Machine, Universal Testing Machine, Cement Testing Equipment with Vibrator, Concrete Permeability Apparatus, Blaine's Apparatus, Deval Abrasion Testing machine, Aggregate Impact Testing Machine, Longitudinal Compressometer, Rebound hammer, AcceleratedCuring Tank, Tile Abrasion Machine, Digital ten Channel strain meter, Lechatlier apparatus, Hot air Oven, Aggregate Impact Tester, VeeBee Consistometer, Compaction factor apparatus, Concrete VibratorLongitudinal Compressometer, Lateral extensometer, Hydraulic jacksUltrasonic concrete tester, Corrosion Analysing Instrument, Rebar locator, Accelerated Curing Tank, Autoclave for tiles, Autoclave for cement.

Materials and Structures Laboratory

Computer Controlled Universal Testing Machine, Compression Testing Machine, Torsion Testing Machine, Hardness Testing Machines, Impact Testing Machines, Tensile Testing Machine, Loading Frames, Cupping Tester, Wood Testing Machine, Strain Indicator Hydraulic Jacks, Proving Rings, Strut Tester, Digital Displacement Indicator,Ten Channel strain meter with 4.5 digital display and Loading frames.

Remote Sensing and GIS Laboratory

- Erdas Imagine,
- Arc View,
- Arc View Spatial Analyst,
- Arc View Network Analyst,
- Auto Desk Map 3D 2005,
- Micro station, Geographics,
- GRAMM++,
- LPS,
- Geomedia Professional with GRID,
- ArcPAD, Dataautomation kit,
- R2V.

Soil Mechanics Laboratory

- Computer controlled triaxial apparatus including pore pressure measurement,
- Standard Penetration Test (SPT) apparatus,
- Plate load test apparatus,
- Dynamic cone penetration test apparatus, Automatic compactor,
- Direct shear test apparatus, Loading frame of 50 kN capacity,
- Consolidation test apparatus,
- CBR test apparatus,
- Apparatus for field density by sand replacement method,
- Tri-axial cell, Spring type UCC tester, California Bearing Ratio Tester,
- Proctor Compaction Apparatus,
- Universal Soil Extractor,
- Direct shear test apparatus.

Survey Laboratory

- Advanced Total Stations
- Garmin GPS
- Standard Vernier Theodolites
- Stanley Theodolites
- Automatic Level
- Dumpy Level
- Digital Planimeter

Civil Engineering Computer Lab

- STAAD PRO
- SAP2000
- ETABS
- AUTO CAD
- ANSYS
- MATLAB
- ABACUS

BE - Civil Engineering Curriculum

Mathematics

- Calculus and applications,
- Differential Equations,
- Complex Variables and Transforms,
- Probability and Statistics,
- Numerical Analysis.

Science and Humanities

- Applied Physics
- Applied Chemistry
- Economics for Engineers

Core courses

Engineering Geology, Engineering Mechanics, Civil engineering Materials and Construction, Highway and Railway Engineering, Mechanics of Solidsm, Mechanics of Fluids, Surveying, Computer Aided Civil Engineering Drawing, Hydraulics and Hydraulic Machinery, Basic Structural Steel Design, Concrete Technology, Design of RC Elements, Mechanics of Soils, Design of Concrete Structures, Design of Steel Structures, Environmental engineering, Foundation Engineering, Construction Project Management, Finite element Analysis, Irrigation Engineering, Estimation and Costing, Design and Drawing (Concrete and Steel).

Elective Courses

Advanced Steel Design,Basics of Structural Dynamics and Earthquake Resistant Design,Bridge Engineering, Building Science, Disaster Management and Mitigation, Distress Monitoring and Rehabilitation of Structures, Industrial Structures, Prestressed Concrete Structures,Ground Water Engineering, Hydrology,Water Resource Engineering, Environnemental Impact Assessment, Industrial Waste Management, Solid Waste Management, Geosynthetics in Civil Engineering, Ground Improvement Techniques, Pavement Engineering, Airport, Docks and Harbour Engineering, Housing Planning & Management, Traffic Engineering Management, Cartography, Geographic Information System, Remote Sensing Techniques and Applications.

ME - Infrastructure Engineering Curriculum

Core Courses

Applied Statistics and Reliability, Concepts of Structural & Geotechnical Engineering,Pavement Analysis Design & Evaluation,Reinforcedconcrete Design,Computer Analysis of Structures, Concrete Technology and Structural Engineering Laboratory,Structural Steel Design,Construction Project Management, Traffic Engineering and Transport Planning,GeographicInformation Systems, Advanced Environmental Engineering Systems.

Research Projects and Consultancy Work in Progress

Determination of organic strength (BOD, COD etc.,) of industrial and domestic waste water, Characteristic study on industrial waste water, Ground water quality study, Ground water recharge methods, ground water yield test on wells, Physical and chemical analysis of drinking water, Test on water for finding its suitability for construction purpose, Air pollution study using high volume sampler in an industrial environment and ambient air, Electrochemical treatment of textile dyeing wastewater, Pollution study on water resources water storage tanks in the, Coimbatore City, Palani town and Noyyal River, Evaluation and development of new or improved equipment and procedures for assessing the properties and performance of materials and composites, including materials selection, Mix Design, casting and testing of concrete test specimens, Investigation and evaluation of the properties and performance of, building materials based on Indian Standard Codes, Investigation by conducting specialized tests, field visits and quality control tests on building materials to assist State departments, private organizations and other departments and divisions within the State Administration, Rocks and Mineral Identification Ground Water Investigation Moh's scale of hardness testing Suitability test on rocks for commercial granite, Determination of bearing capacity of soil using Standard Penetration Test (SPT), Suitability of soil for making bricks and suitability of sand for filter medium.

Elective Courses

- Environmental Impact Assessment
- Bridge Engineering
- Foundation Structures
- Advanced Concrete Technology
- Prestressed Concrete Structures
- Infrastructure Management
- Optimization Techniques
- Maintenance and Rehabilitation of Structures
- Modern Materials for Construction
- Experimental Techniques and Instrumentation
- Financial Management and Accounting
- Prefabricated Structures
- City Planning and Urban Design
- Organization Behavior
- Modern Surveying
- Geosynthetics
- Corrosion Engineering
- Remote Sensing

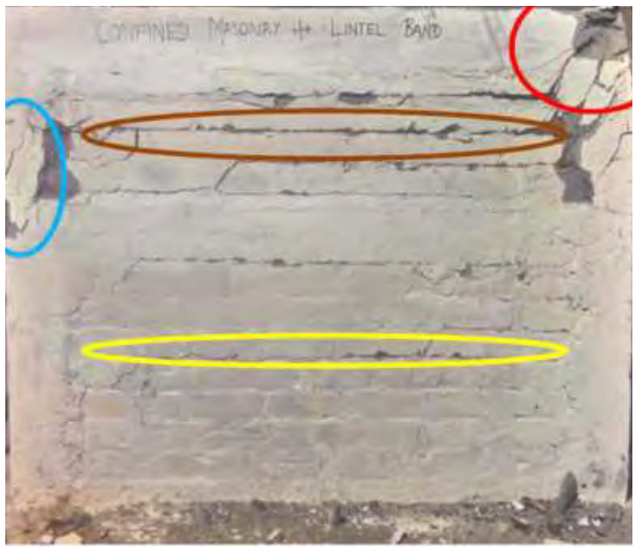
ME - Structural Engineering Curriculum

Core Courses

Environmental Impact Assessment, Bridge Engineering, Foundation Structures, Advanced Concrete Technology Prestressed Concrete Structures, Infrastructure Management, Optimization Techniques, Maintenance and Rehabilitation of Structures, Modern Materials for Construction, Experimental Techniques and Instrumentation, Financial Management and Accounting, Prefabricated Structures City Planning and Urban Design, Organization Behavior Modern Surveying, Geosynthetics, Corrosion Engineering, Remote Sensing, Applied Statistics and Reliability, Concepts of Structural and Geotechnical Engineering, Advanced Concrete Technology, Reinforced concrete Design, Computer Analysis of Structures, Concrete Technology and Structural Engineering, Laboratory, Structural Steel Design Structural Dynamics, Applied Elasticity and Plasticity, Foundation Structures, Prestressed Concrete Structures

Elective Courses

- Bridge Engineering
- Finite Element Method
- Aseismic Design of Structures
- Behaviour and Design of Tall Buildings
- Structural Stability
- Optimization Techniques
- Maintenance and Rehabilitation of Structures
- Shell and Spatial Structures
- Experimental Techniques and Instrumentation
- Soil Structure Interaction
- Theory of Plates
- Industrial Structures
- Mechanics of Composite Materials
- Soft Computing In Structural Engineering
- Geotechnical Earthquake Engineering
- Reliability Analysis and Performance based Design



The Department with its dedicated body of well qualified faculty, technical staff and students is committed to be an international, multi-disciplinary centre of excellence in Computer Science and Engineering through education and research. It has partnerships with leading academic institutions, Government and industrial sectors. It has acquired generous grants from global organizations like the World Bank, Swiss Development Co-operation for Manpower Development, Department of Electronics, VSSC, AICTE and Ministry of Information Technology. The department offers a UG programme and two PG programmes.

DEPARTMENT OF

COMPUTER SCIENCE AND ENGINEERING

Programmes offered:

B.E. - Computer Science and Engineering

M.E. - Computer Science and Engineering

M.E. - Software Engineering

Laboratory Facilities available for UG and PG programmes

GRD Computing Lab

- Intel Core 2 and i5 processors -75 nos
- End Systems connected to IBM servers for File and Telnet Service
- Application Software includes Code Blocks
- .Net Professional, Java, Star UML and lab Software

Programming Lab I

- Intel Core i5 and i3 processors - 55 nos
- End Systems connected to IBM servers for file and Oracle-database Service
- Applications Software includes Code blocks
- Java, Oracle, .Net Professional

Software Programming Lab

- Intel Core i5 and Core 2 processors- 51 nos.
- End Systems connected to IBM Servers for files and Telnet service.
- IAR Embedded Workbench
- Windows, Ubuntu OS.
- Applications Software includes java, Wega
- Net Professional,NS2

Open Source Software Laboratory

- Server with Open V configuration
- Ozone Cloud Controller
- C1 hypervisor for cloud project
- Intel core i3 and Workstations -20 nos.
- Open Source software

AICTE Sponsored Software Architecture Lab

Intel Core i5 /Core 2 duo Processors-32 nos, End Systems connected to IBM Servers for file service, IBM Rational suite architect and conventional lab software.

TEQIP II Sponsored Hardware Lab

8085,8086 microprocessor/ 8051 trainer kits, Traffic light controller, interface cards, embedded application development system, Intel core i5/core 2 duo processors-12 nos and lab Software.

Programming Lab II

Intel Core, Dual and i3 Processors - 40 Nos. End Computing systems connected to Dell servers, Rational Rose, lab software.

PSG-Nokia / PSG-Yahoo Sponsored Research

Dell Power Edge 2970 Servers - 11 Nos, VMware Tower server with Vmware, Dell server with Tesla card for GPGPU, R210 Rack servers, Open Stack Cloud, Hadoop cluster.

PG Project Lab

- IBM Server
- Intel Core i5 processors and High end systems - 84 Nos.

BE- Computer Science and Engineering Curriculum

Mathematics

Calculus and applications, Linear Algebra, Complex Variables and Transforms, Probability and Queuing Theory.

Research Projects in Progress

- PSG- Nokia Research on Big Data Analytics and Cloud Computing.
- UGC sponsored project on Sustainable Agriculture through crop disease resistance using bioinformatics on hybrid CPU-GPU clusters
- AICTE sponsored project on Cloud Based Dynamic Service Discovery for Emergency and Management
- The Green Cloud Project: Innovative
- Product Lifecycle Management Solutions through Energy Efficient Cloud Computing for SMEs; sponsored by AICTE and Siemens.

Science and Humanities

- Material Science
- Applied Electrochemistry
- Environmental Sciences
- Economics for Engineers

Core courses

Problem Solving using C, Object oriented programming using C++, Data Structures, Computer Architecture (I and II), Design and Analysis of Algorithms, Theory of Computing, Operating Systems, Database management systems, Computer Networks, Software Engineering, Compiler Design, Data Mining, Data Analytics, Mobile Systems Engineering, Object Oriented Analysis and Design, Artificial Intelligence, Distributed Operating Systems, Cryptography and Network Security.

Elective Courses

Advanced Data Structures, Advanced Algorithms, Cloud Computing Programming Paradigms, Service Oriented Architecture, XML and Web Technology, Semantic Web Technology, Internet of Things, Parallel Programming, Open Source Systems, Software Project Management, Software Testing and Quality Assurance, User Interface Design Storage Management, Soft Computing, Evolutionary Computing,Machine Learning, Computer Graphics, Basics of Digital Signal Processing, Unix Internals, Wireless Networks, Advanced Computer Networks, Information Security.

ME - Computer Science and Engineering Curriculum

Core Courses

Mathematical Structures and Stochastic Processes, Data Structures, Database Design and Management, Software Engineering Methodologies, Advanced Computer Architecture, Enterprise Computing Laboratory, Advanced Data Structures and Algorithms, Operating Systems, Theoretical Computer Science Advanced Computer Networks, Embedded Systems.

Elective Courses

Data Mining, Big Data Analytics, XML and Web Services, Semantic Web Technology, Compiler Design, Machine Learning, Evolutionary Computing Techniques, Information Retrieval, Natural Language Processing, Advanced Databases, Virtualization, Cloud Computing, Programming Paradigms, Cryptography and Network Security, Mobile Computing, Wireless Sensor Networks, Software Testing and Quality Assurance, Internet of Things, Professional Ethics.

ME - Software Engineering Curriculum

Core Courses

Applied Statistics and Reliability, Data Structures, Database Design and Management, Analysis and Design of Software Systems, Software Requirements and Estimation, Enterprise Computing Laboratory, Advanced Data Structures and Algorithms, Software Testing and Quality Assurance, Software Engineering Management, Advanced Software Engineering, Software Architecture.

Elective Courses

User Interface Design, Open Source Systems, Computer Networks, Data Intensive Computing Systems, Systems Engineering, Software Reliability, Agile Software, Development, Software Metrics, Formal Methods in Software Engineering, Design Patterns, Software Agents, Decision Support Systems, Program Analysis, Professional Ethics, Operating Systems.

The Department of Electrical and Electronics Engineering was one of the first two disciplines started since the inception of the college. The Department offers the following programmes: BE (E.E.E), Sandwich BE (E.E.E), ME (Applied Electronics), ME (Electrical Machines- PT), ME (Power Electronics and Drives- FT), and ME (Embedded & Real time Systems- FT). The Department is a recognized Quality Improvement Programme (QIP) Centre for Post-Graduate and Doctoral Programmes.

DEPARTMENT OF

ELECTRICAL AND ELECTRONICS ENGINEERING

Programmes offered:

B.E. - Electrical and Electronics Engineering

B.E. - Electrical and Electronics Engineering (Sandwich)

M.E. - Applied Electronics

M.E. - Power Electronics and Drives

M.E. - Embedded and Real-Time Systems

Laboratory Facilities available for UG and PG programmes

Electrical Machines Laboratory

- DC Machines
- Transformers
- Induction Machines
- Synchronous Machines
- Special Machines
- Small Machines

Instrumentation and Control Laboratory

- Bridge Circuits
- Trainer Kits for LVDT, Strain Gauge, Capacitive Transducer, Temperature
- AC Servo Motor with Loading Arrangement
- AC Servo Position Control System
- Synchro Setup
- Linear System Simulator
- Digital LUX Meter
- Earth Resistance Meter
- Pressure Measurement Trainer Kit

Power Electronics Laboratory

Inverter Fed v/f controlled Induction Motor Drive, DSP Controlled IM Drive, Single & 3 Phase IGBT Based PWM Inverter, 3 Phase SCR Four Quadrant Chopper, Single & Three Phase Diode Bridge Rectifier, Single and Three Phase Thyristor Bridge Converter, Differential Module, Three Phase AC Voltage Controller, DSO, Programmable Power Supply, PSpice 9.2, MATLAB, PSIM 6.0.

Analog Electronics Laboratory

Single Trace Cardiac Monitor and ECG Simulator, LCR Meter, Decade Resistance Box, Decade Inductance Box, Decade Capacitance Box, Power Meter, Digital Multimeter, Analog IC Trainer, Linear IC Tester, DSO, CRO, DCPower Supply , Function Generator , Analog System Lab Kit.

Digital Electronics Laboratory

- Digital IC Tester
- Digital Trainer Kit
- Digital Multimeter

Microprocessor & DSP Lab

PCs, 8085 Microprocessor Kit, 8051, 89S52, 68HC11 Microcontroller Kits, Universal 8051Project Development Boards with Interfacing Accessories ,Universal PIC Embedded Trainer Kit , Universal Programmer , TMS320C50 DSP Starter Kit & FunctionGenerator , TMS320C50 DSP TrainerKit, TMS PCC DSP 25 Card, Xilinx Spartan -3 FPGA Kit, PC1-02 ADC/DHC/Timer Digital I/O Card, 3MHz Function Generator, 30MHz CRO, DAC, ADC.

UG Computer Centre

- Intel Xenon Server, P4 PCs
- Switches

Electrical CAD Centre

MATLAB, PSCAD (V 4.2), PSPICE 9, LABVIEW (V 8.6), EPLAN (1.8.5).

Project Laboratory

Keysight 1052 2 channel, 70 MHZ DSO, GW Instek make 30 MHz CRO,2 Channel Analog CRO,Function Generator, Dual Regulated Power Supply, UV Programmer- Smart Prog Elnec make. Analog IC Tester- Minimax Type Keysight U1733C 100Hz/ 120Hz/ 1kHz/ 10kHz, 100kHz, 20000 Count, Dual Display Handheld LCR Meter,Keysight True RMS Multimeter, MSP 430 Mixed SignalProcessor Launch pads G2., C 2000 Piccolo Launch pad Evaluation Kit , Tiva C Series TM4C123G Launch pad Evaluation Kit, Capacitive Touch Booster Pack , Sensor Hub Booster Pack for TIVA C- Series Launch Pad , STEPS Experimenter Board : MSP430 Interface with Peripherals , Arduino UNO, Atmega328 microcontroller, PIC Development Board, GSM MODEM :SIM 900, UART, I2C Compatible , ZIG BEE XBEE Series 2 , CC 110L AIR Module Booster Pack for MSP430, TI Spin Motors Drive Booster pack DRV 8301, TI Analog System lab Kit.

Applied Electronics Laboratory

LPC 2378 ARM Development Board,Spartan 3E FPGA Board, Basys2 FPGA Board, (Xilinx Spartan 3-E FPGA, 100K Gate), Virtex 2 Pro FPGA Development System, Add on board to Virtex 2 Pro FPGA Xc2VP30, 512 MB Compact Flash, Add on board to Virtex 2 Pro FPGA Xc2VP30, 512 SD RAM, Add on board to Virtex 2 Pro FPGA Xc2VP30, Video Decoder Board, Agilent 100MHz 4 Channel DSO, Pcs, IAR Embedded Workbench Software, Mentor Graphics HEP Category - I (Backend tools for IC design), Xilinx ISE Foundation Software, MATLAB 5.1, PSPICE 9.0, LabVIEW 9.0.1.

Power Converters Laboratory

3-PH IGBT Based Inverter, 3-Ph Diode rectifier + Brake Chopper + 3-PH IGBT based Inverter, DSP Processor Experimenter Kit, DSP Processor with Voltage and Current Sensor Interfacing Board, Digital Storage Oscilloscopes Single and Three Phase Diode Bridge Rectifier Module with heat sink, Handheld LCR Meters, True RMS Digital Multimeter, Single and Three Phase Auto Transformer Regulated Power Supply, Function Generator, MATLAB Software, PSPICE Software, PSIM Software.

Embedded and Real-Time Systems Laboratory

8051 Microcontroller Development Kit with Keypad, RTC Display Board, Analog I/O Board, RS232 Transceiver, ARM 7 Microcontroller Development Kit, PIC Controller Development Kit, PC2378 Development Board ARM Kit, 8031 Microcontroller Kit

Special Electrical Machines Lab

BLDC Motor with controller, Switched Reluctance Motor with Drive, Permanent Magnet Synchronous Machine, Linear Induction Motor, MotorPro 5.2 software, MATLAB software, Rm Expert software, ANSYS Maxwell software.

PG Computer Centre

Smart Grid Laboratory

Power Quality Analyzer, Pulse Centralizer (LM25) - 25 INPUTS, Pulse Centralizer LM50TCP+ (LM50)- 50 INPUTS, Relay Output Module - 24 OUTPUTS, Smart Grid Management Software , Maximum Demand Predictive Controller, Single Phase Power Analyzer,3 Phase Compact Power Analyzer with CT, 3 Phase Comfort Power Analyzer with CT, With Lighting Loads and Inductive Loads for demand control Direct Current Three Phase Net Meter, With Lighting Loads and Inductive Loads for Loss Simulation, Dynamic Power Controller with Demand Management, Motorized Circuit Breakers, Motorized Circuit Breakers with ELR, Self Reclosing Circuit Breakers, Touch Screen Monitor, Filter Bank - 150 kVAr in 6 Stages - Thyristorized @ 440 V, Efficiency Data Server, Electric Vehicle Recharging Box

Centres of Excellence in the Department

- L & T Centre for LV Switch Gears
- LAPP Cable Centre
- Audio Processing Centre
- PSG - DANFOSS Centre
- Centre for Renewable Energy
- Pro-Sun Centre of Excellence for Solar PV Systems.

BE & BE(Sandwich) - Electrical and Electronics Engineering Curriculum

Mathematics Courses

Calculus and its applications, Complex Variables and Transforms, Linear Algebra and Numerical Analysis, Probability, Statistics and Random Processes.

Science and Humanities

Physics,Chemistry, Professional Skills, Communication Skills, Economics for Engineers, Environmental Sciences.

Core courses

C programming, C++ and data structures, Data Structures and Algorithms, Operating Systems Basics of Civil Engineering, Electric Circuits, Electronic Devices Applied Mechanics, Digital Electronics, Network Theory Electronic Circuits , Electro Magnetic Fields Linear Integrated Circuits and Applications, Measurements and Instrumentation, DC Machines & Transformers, Microprocessors and Micro-controllers, Computer Architecture, Induction and Synchronous Machines, Generation, Transmission and Distribution, Control Systems Digital Signal Processing, Power Electronics, Computer-aided Power Systems Analysis, Power System Protection and Switchgears,Electric Drives and Controls, Electrical Machine Design.

Elective Courses

HVDC and Flexible AC Transmission Systems, Special Machines and Controllers, Renewable Energy Sources, Utilization of Electrical Energy, Advanced Control Systems, Smart Grid, VLSI Design, Communication Systems, Neural Networks & Fuzzy Systems, Advanced Microprocessors and Microcontrollers, Advanced Data Structures, Computer Networks, Software Project Management and Quality Assurance, Advanced Computer Architecture and Personal Computer Systems.

BE - Electrical and Electronics Engineering (Sandwich) Salient Features

The syllabi and the grading system of the Sandwich programme are identical to those of the 4-year BE programme. The students are provided industrial training for about 10 hours every week in PSG Industrial Institute. To accommodate intensive industrial training, the BE Sandwich programme is spread over 5 years. Further, the students must also undergo a three-month compulsory internship in an industry immediately after the third year of study. A total of 2000 hours industrial training is provided during the entire duration of the programme.

ME - Applied Electronics Curriculum

Core Courses

- Systems Engineering Mathematics
- Fundamentals of Linear Systems and Signal Processing
- Microcontrollers and Applications
- Digital System Design and Testing
- Circuits and Systems Simulation Laboratory
- Analog VLSI Design
- Object Computing and Data Structures
- Computer Architecture and Parallel Processing
- Advanced Digital Signal Processing
- Embedded System Design

Elective Courses

Virtual Instrumentation Systems, RF Circuits and Measurements, Industrial Drives and Controls, Algorithm for VLSI Design Automation, System on Chip, ASIC Design,Operating Systems, Real-TimeEmbedded Systems, Linux Architecture, Advanced Microprocessors, Electronic Product Design, Digital Image Processing, Digital Video Processing,Wavelets and Applications, Bio medical Signal Processing, Medical Instrumentation Systems, Internet Working and its Applications, Soft Computing.

Research Projects in Progress

- Development of Interactive Hydraulic Activated Device for Chronic Post Stroke Therapy; sponsored by DST
- Design & Development of Wireless Embedded Microcontorller Based Portable Nano Scale Toxic Gas Sensor System; sponsored by UGC
- Design and Development of Pneumatic Actuated Wearable Hand and Forearm Device for the Rehabilitation of Recovering Stroke Patients; sponsored by DST
- Solar Energy based Desiccant loop Air-Conditioning; sponsored by DST.
- Design & Development of Smart Microgrid using Renewable Energy Sources; sponsored by AICTE.
- Design and Development of a Humanoid; sponsored by AVON Corporation.

ME - Power Electronics and Drives Curriculum

Core Courses

Systems Engineering Mathematics, Fundamentals of Power Semiconductor Devices and Electrical Machines, Power Converters and Analysis, Micro controllers and Applications, Object Computing and Data Structures, Power Converters Laboratory, Linear Systems, Modeling and Analysis of Electrical Machines, Electric Drives and Control, Simulation of Power Electronic Systems, Switched Mode Power Converters.

Elective Courses

- Power Electronics in Wind and Solar Power Conversion
- Special Machines and Controllers
- Digital Controllers In Power Electronic Applications
- Advanced Control of Electric Drives
- Soft Computing Techniques for Renewable Energy System
- Flexible AC Transmission system
- Power Quality Management
- Power Electronics Applications to Power Systems
- Advanced Topics in Power Electronics
- HVDC Transmission
- Optimization Techniques
- Digital Signal Processing
- Advanced Virtual Instrumentation
- Wavelets and Applications
- Personal Computer Systems
- Smart Grid Technologies
- Distributed Generation and Micro grids
- Hybrid Electric Vehicles

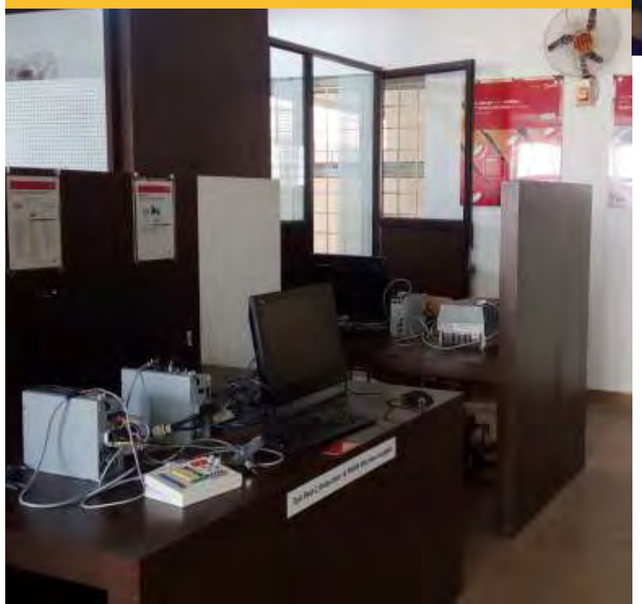
ME - Embedded and Real-Time Systems Curriculum

Core Courses

- Systems Engineering Mathematics
- Fundamentals of Embedded Software
- Microcontrollers and Applications
- Real-Time Concepts for Embedded Systems
- Digital System Design and Testing
- Microcontrollers Laboratory
- Real-Time Operating Systems
- Embedded System Networks
- Object Computing and Data Structures
- Linux Architecture and Device Drivers
- Computer Architecture & Parallel Processing
- Real-Time Systems Laboratory

Elective Courses

- Advanced Embedded Controllers
- Automotive Embedded Systems
- Robotics and Factory Automation
- Industrial Networking & Standards
- Advanced Digital Signal Processing
- Digital Image Processing
- Soft Computing
- Cryptography And Network Security
- Graph Theory And Applications
- Personal Computer Systems
- Advanced Virtual Instrumentation
- Wavelets And Applications
- System On Chip
- Wireless Sensor Networks
- Wireless And Mobile Communication
- Medical Instrumentation Systems
- Digital Controllers for Power Electronics Applications



The Department of Electronics and Communication Engineering came into existence in the year 1968.The department offers B.E Programme in Electronics and Communication Engineering and PG Programmes include M.E Communication Systems, M.E VLSI Design, M.E Wireless Communications and M.Tech Nanoscience and Technology offering high class technical and innovative experience to the students. The department offers doctoral and M.S by research Programmes in both part time and full time mode. The department has produced around 73 Ph.Ds. The AICTE-CII Award for the Best-Industry linked Institute for the Electronics & Communication Engineering subject stream for the year 2013 strengthened the department's industry-institute relations. BE ECE program of 2012 has been accredited for 5 years by the National Board of Accreditation (NBA). ME VLSI Design Course was Accredited for 5 years with effect from September 2016.ME Communication Systems course was Accredited for 5 years with effect from April 2017.

DEPARTMENT OF

ELECTRONICS AND COMMUNICATION ENGINEERING

Programmes offered:

B.E. - Electronics & Communication Engineering
M.E. - Communication Systems
M.E. - VLSI Design
M.E. - Wireless Communication
M.Tech - Nanoscience and Technology

Laboratory Facilities for UG and PG programmes

Circuit and Devices Laboratory

- 30 MHz 2 channel CRO
- Function Generator, Multiple Power Supply
- TEXAS Instruments ASLk Starter Kit

Digital Signal Processing Laboratory

TMS family Starter Kits, TMS family Evaluation Boards, TMS family Trainer kits, MSP family Experimenter Kits, TMDX28069USB C2000 Microcontrollers DEV. Tools, Altium Nano Board NB3000 (Xilinx Spartan), Stellaris Family Development Kit, TMS Based, Advanced DSP Trainer Kit, CCD and Basler Machine Vision Camera.

GRD Computer Centre

PCs, Windows, Ubuntu OS, Mat lab, C++, QualNet Network Simulator, NetSim Network Simulator, ADS - RF Circuit Design& Analysis Software, Ns2 Network Simulation Software,

Cognitive Radio and Sensor Networks Laboratory

Cc3200 simple link wifi [IoT] Wireless MCU, Telos B Mote with humidity, temperature and light sensors,Mica Z Mote IEEE 802.15.4 complaint,Iris/MICS date Acquistion Board, Iris PC nterface board, Telos B Mote Zigbee complaint, WARP V3-Pro-SDR KIT, ETTUS USRPB210 SDR. Kit

Integrated Circuits Laboratory

PCs, TI Analog system Lab Starter kit, Texas ASLK V2010 Starter kit, Agilent 6014A 100MHz MSO, Function Generator, Power Supplies, Digital IC trainer kit - DTK 14

RF Microwave Laboratory

PCs, Microwave Test Bench with accessories Spectrum Analyzer, Agilent Vector network analyzer, Agilent Vector Signal Generator and Analyzer, Agilent Handheld RF Power meter, Dream Catcher Digital RF Commn. Kit, ATTEN instruments RF Power meter TechniLab Instruments, Microwave Signal Source 2.0- 3.0 GHZ, GB Technology Microwave Signal Generator , RFID Development Kit, GPS/GSM Development Module

PSG-Agilent Centre of Excellence in Wireless Technology

33250A Arbitrary Waveform Gen, 80 MHz,N5182A MXG RF Vector Signal Generator,N5106A PXB Baseband Generator, Channel Emulator,EXA Signal Analyzer N9010A,MSO7104b Mixed Signal Oscilloscope, E5062A ENA-L RF Network Analyzer, WARP MEMO V3, USRP Instant SDR, UERT 900 Antenna, EMPro 3D EM Simulation Software, SystemVue Electronic System-Level Design Software, Advanced Design System (ADS).

National MEMS Design Centre

- COMSOL Multiphysics
- IntelliSuite
- Coventor Ware
- Tanner EDA

Synthesis & Characterisation of Nanomaterials Laboratory

Magnetic stirrer with hot plate 1 MLH, Horizontal Single Distillation unit , UV-Vis Spectrophotometer, Omnicant® Nano sniff-Piezoresistive cantilever sensor, Nitrogen gas cylinder, Electronic Weighing Balance,Hot Airoven, High temperature High pressure Autoclave, High temperature tubular furnace, Fume hood, Digital pH meter, Heating Mantle 500 mL capacity, Pulsed Digital Ultrasonicator,Remi Micro centrifuge RM-12C.

Keysight Baseband Communication and Advanced Embedded Systems Laboratory

MSO with Deep Memory and GPIB, USB and LAN Interfaces, Digital multi meter with GPIB & RS232C Interfaces, DAQ Units, Function/Arbitrary Waveform Generator with GPIB, USB & LAN Interfaces, Triple output DC Power supply with GPIB & RS232C Interfaces, Agilent U3000A Electronic Instrumentation Training Kit, Agilent 20 Channel Armature Multiplexer Agilent 20 Channel Actuator/GP Switch Agilent Multifunction Module, Agilent Technologies 82357B USB/GPIB Interface USB2.0, Analog & Digital communication Kits, 16801A &16802A Logic Analyzer, Keysight Advanced Design System Software, Keysight Vector Signal Analyzer Software, Agilent VEE Pro Automation Software , MATLAB

PSG Infineon Embedded Systems Laboratory

- Keil XC167 Microcontroller Boards
- Infineon XC167 Microcontroller Boards
- Infineon XC164 Microcontroller Boards
- Ulink Debugger

Advanced Communication Centre

MATLAB, Exata Network emulator,QualNet & Netsim Network simulator, ANSYS Academic Teaching HF (Antenna/Microwave/RF design tool), Keysight Vector Signal Analyzer , Wiresharkopen source protocol analyzer, Intel Atom Processor, PS Boards , Mica Mote Development Kits.

Freescale Embedded Systems Laboratory

16 and 32 Bit Microcontroller Boards, Smart Car - 16 bit, 32 bit, ARM versions, 89S52 Project Trainer Boards, ARM Development Kits, 8051 Development Boards, USB - UART Boards

VLSI Design Centre Software

- Cadence Tools
- Synopsys Tools
- Xilinx Tools - Vivado, SDSoc
- Mentor Graphics Tools

Hardware Boards

XILINX Zybo Boards, XILINX Basys3 Boards, XILINX Analog Discovery kit, XILINX Nexsys4-DDR Boards, XILINX FPGA Boards-Zed Board, Altera - ICB HSMC,DE2115,Video and Embedded kit, Altium Nano Board 3000 Series, SPARTAN 3E FPGA Boards, Virtex II Pro FPGA Boards.

BE - Electronics and Communication Engineering Curriculum

Mathematics

- Calculus and its Applications
- Complex Variables and Transforms
- Linear Algebra and Numerical Analysis
- Probability, Statistics and Random Processes

Science and Humanities

- Material Science
- Applied Chemistry
- Professional Skills
- Communication Skills
- Economics for Engineers
- Environmental Sciences

Core courses

C programming, C++ and data structures, Principles of Electrical Engineering, Electron Devices, Network Theory, Analog Electronics, Digital Electronics , Electromagnetic Fields, Measurements and Instrumentation, Linear Integrated Circuits, Signals and Systems, Transmission Lines and Wave guides, FPGA Based System Design, Antennas and Wave Propagation, Analog Communication, Computer Networks, Microprocessors and Micro controllers, Control Systems, Digital Signal Processing, Statistical Theory of Communication, Embedded Systems, VLSI Design, Microwave Engineering, Digital Communication, Wireless Communication .

Elective Courses

Satellite Communication, Telecommunication Switching Systems, Fiber Optic Communication, Advanced Digital Communication, Radio Frequency Integrated Circuits, Microwave Integrated Circuit Design, Radio Frequency MEMS, Radar Engineering, Digital Image Processing, Speech Signal Processing, Multimedia Compression Techniques, Wavelets and its Applications, Digital Audio Engineering, Broadband Networks, Wireless System and Standards, Wireless Sensor Networks, Network Security, Analog VLSI Circuits, Low Power VLSI Design, Nano Electronics, Digital Signal Processing System Design, Vehicular System sand Networks, Network Design using Network Processors, Advanced rocessor Architectures.

ME - Communication Systems Curriculum

Core Courses

Applied Mathematics, Baseband Communication, Information Theory and Error Control Coding, Communication Networks, RF Passive Circuit Design, Communication Networks Laboratory, Advanced Digital Communication Systems, Advanced Digital Signal Processing, Radiating Systems, Wireless

Communications, FPGA Based Communication System Design, Advanced Digital Communication Laboratory.

Elective Courses

RF Active Circuit Design, Modeling and Simulation of Communication Systems,Cooperative Communication and Cognitive Radio, RF MEMS, VLSI Signal Processing, Radar Communication, Computer Vision, Advanced Wireless Communication , Detection and Estimation, Multi User Detection, Data Compression, Wavelets and Subband Coding, Optical Networks, Smart Antennas, Adaptive Signal Processing, Software Radio Architecture.

ME - VLSI Design

Core Courses

Graph Theory and Optimization Techniques, Digital Design Principles, Device Modeling, Digital IC Design, Designing with FPGAs, Low Power VLSI Design, Analog VLSI Circuits, Testing and Testability, Computer aided design of VLSI systems, VLSI Signal Processing, VLSI Design Laboratory, Advanced VLSI Design Laboratory, High level verification and Testing Laboratory.

Elective Courses

Mixed Signal VLSI Design, Hardware Verification Techniques, Semiconductor Memory Design and Testing, VLSI Technology, RF Circuit Design, VLSI for Wireless Communication, System level Hardware Software Co-design, System on Chip Design, Synthesis and Optimization of Digital Circuits , High Speed Digital Design, Micro sensors and MEMS, Nano Scale Devices, Advanced Computer Architecture and Parallel Processing, Biomedical Signal Processing, Genetic Algorithms for VLSI Design, VLSI for Biomedical Applications, Hardware security Network-on-Chip, Electronic packaging Technologies, FPGA Based Implementation of Signal Processing Systems, RF Circuits and measurements. Wireless Technologies and Measuring Tools, Embedded System Design.

ME - Wireless Communication

Core Courses

- Applied Mathematics
- Baseband Digital Communications
- Wireless Networking
- Wireless Communication Systems

Research Projects in Progress

- Indigenous Design and Development of Digitally Secured Smart Padlock for the Rural and Economically Backward Community People of India, AICTE Sponsored Project under Unnat Bharat Abhiyan Scheme.
- Design and Development of Wireless Embedded Microcontroller based Portable Nanoscale Toxic GAS Sensor system; sponsored by UGC.
- Design and Development of Indigenous Phased Array RF Volume Coil for 1.5 Tesla Magnetic Resonance Imaging; sponsored by DST.
- Special Manpower Development Programme for Chip to System Design (SMDP - C2SD); sponsored by MeitY.
- Design and Development of GSM Emergency communication Network Base station based on universal software radio Peripheral; sponsored by UGC.
- Design and development of intelligent secret image recovery techniques using visual cryptography and heuristic optimization techniques for Healthcare application; sponsored by UGC.
- Design & Development of CAP Based Wireless System for Multichannel EEG Recording ; sponsored by DST.
- Test Bed Architecture for authentication, Confidentialiy integrity of sensitive DICOM images, sponsored by AICTE.
- Visual Intuition and scene categorization for MAV Navigation; sponsored by DARO/DST.
- Fabrication of Nanoscale Biosensor for cholesterol detection; sponsored by UGC.
- Design and Development of Multi-parameter Pain Monitoring System for Children; sponsored by DST.

- RF Passive Circuit Design
- Wireless Technology Laboratory
- Advanced Digital Signal Processing
- RF Active Circuit Design
- Radiating Systems
- Wireless Sensor Networks
- Space Time Wireless Communication
- RF System Design using EDA Tools Laboratory
- Wireless System Design Laboratory

Elective Courses

- FPGA Based Wireless System Design
- Software Radio Architecture
- Wavelets and Sub-band Coding
- Wireless Security
- Cooperative Communication and Cognitive Radio
- Embedded Systems
- Advanced Processor Architecture
- Optical Networks
- Wireless Multimedia Communication
- Radar Communication
- Free Space Optics
- Radio Frequency Integrated Circuit Design
- RF MEMS
- Multiuser Detection
- Smart Antennas
- Adaptive Signal Processing
- 3G and 4G Wireless Communications
- Long Term Evolution Design
- Spread Spectrum Communication
- Wireless Ad Hoc Networks
- Computational Electromagnetics
- Wireless Technologies and Measuring Tools
- RF Circuits and Measurements
- Embedded System Design
- FPGA Based Implementation of Signal Processing Systems

M.Tech - Nanoscience and Technology

Core Courses

- Computational Mathematics
- Fundamentals of Nanoscience
- Quantum Mechanics
- Synthesis of Nanomaterials
- Materials Science
- Synthesis of Nanomaterials Laboratory
- Characterization of nanomaterials
- Nanolithography
- Micro and Nano Electro Mechanical Systems
- Nanoelectronics
- Nanosensors and Device
- Nanofabrication laboratory
- Nanodevice design laboratory

Elective courses

- Nanophotonic
- Biomaterials and Tissue Engineering
- Polymer Electronics
- Nanobiomaterials
- Nanotoxicology
- Nanotechnology in Textiles
- Nanotechnology for Energy systems
- Nanostructures in Medicine
- Nanocomputing
- Nanobiotechnology
- Modelling of Nano CMOS
- System on chip design
- Product Design, Management Techniques and Entrepreneurship

The Department of Fashion Technology offers B.Tech - Fashion Technology, a 4 years undergraduate programme accredited by National Board for Accreditation (NBA). The department has well qualified, experienced, competent and committed faculty members. They regularly involve in organizing conferences, workshops, publishing books, research papers and funded projects. This programme is structured with core and elective subjects to meet the technological and managerial needs of the fashion industry and to take care of the needs of placement, career growth and personal aspiration of the students. After a good foundation in communication skills, applied maths & science and textile technology, strong emphasis is given to apparel technology, management and computer application, keeping in pace with the revolution in information technology. While the industrial training imparted offers the students the much needed exposure to the industrial practice and current trends, the project work gives a capstone experience to improve their technical acumen, analytical skill, research oriented approach and problem solving capability.

DEPARTMENT OF FASHION TECHNOLOGY

Programmes offered:
B.Tech. - Fashion Technology

Infrastructure Facilities

The department is equipped with state of art laboratories such as Pattern Engineering Laboratory, Garment Manufacturing Laboratory, Fashion CAD Laboratory, Apparel Resource Centre, Surface Ornamentation Laboratory, Apparel Machinery Laboratory and Apparel Quality Evaluation Laboratory , The facilities available include.

Pattern Engineering laboratory

- Cork Top Tables
- Mannequins
- Dress Forms

Garment Construction Laboratory

- Single needle lock stitch machines
- Over lock machines
- Flat lock machine
- Button holing machines
- Button fixing machines
- Computerized embroidery machine

Fashion CAD Laboratory

- Adobe Photoshop
- Corel Draw

Apparel Resource Centre

- Fabric Swatches
- Accessories
- Trimmings
- Garments

Surface Ornamentation Laboratory

Accessory attachments - sequence attaching, Beads attaching of multi head embroidery machine with fifteen needles per head, Computerized design punching

Apparel Quality Evaluation Laboratory

Fabric testing Abrasion, Pilling, Sublimation fastness, Drape, Perspiration fastness. Mechanical properties testing Tearing strength, Bursting strength Garment safety and accessories testing Snap pull, Zip endurance, Button impact testing.

Centres Of Excellence

PSG - LECTRA APPAREL CAD CENTRE equipped with state of the art LECTRA CAD softwares like Modaris, Diamino for digital pattern design developments.

It has the first of its kind 3D FIT analysis and rendering software Modaris 3D FIT. It also possesses fabric CAD softwares like kaledo Weave, kaledo Knit and kaledo Print. The centre helps the students to augument their skills in the area of Fashion Design Creation, Fabric Design Development & Simulation, Computerized Patten Making Grading and Maker Planning.

PSG - SIRUBA MEHALA Apparel Machinery And Equipments Centre

Established in collaboration with M/s, Siruba, Taiwan and M/s. Mehala Machine works, Tirupur is equipped with different types of industrial Sewing Machines. The students are well exposed to these machines, their mechanisms and components.

B.Tech - Fashion Technology Curriculum

Mathematics

Calculus and its Applications, Differential Equations, Complex Variables and Transforms, Probability and Statistics

Science and Humanities

- Properties of Materials and Measurements
- Applied Physics
- Applied Chemistry
- Professional Skills
- Communication Skills
- Economics for Engineers
- Environmental Sciences

Research Projects in Progress

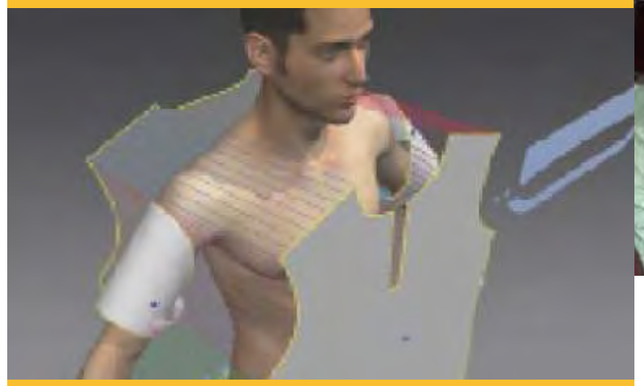
- Development of new designs, prints and colours in promotional bags including beach, wine and shopping bags; sponsored by National Center for Jute Diversification, Kolkata.
- Development of instructional materials for vocational training in Textile sector; sponsored by National Instructional Media Institute (NIMI), Chennai.
- Design and development of skin – fabric friction tester and measurements of in vivo and in vitro friction properties of human skin sponsored by University Grant Commission, New Delhi.

Core courses

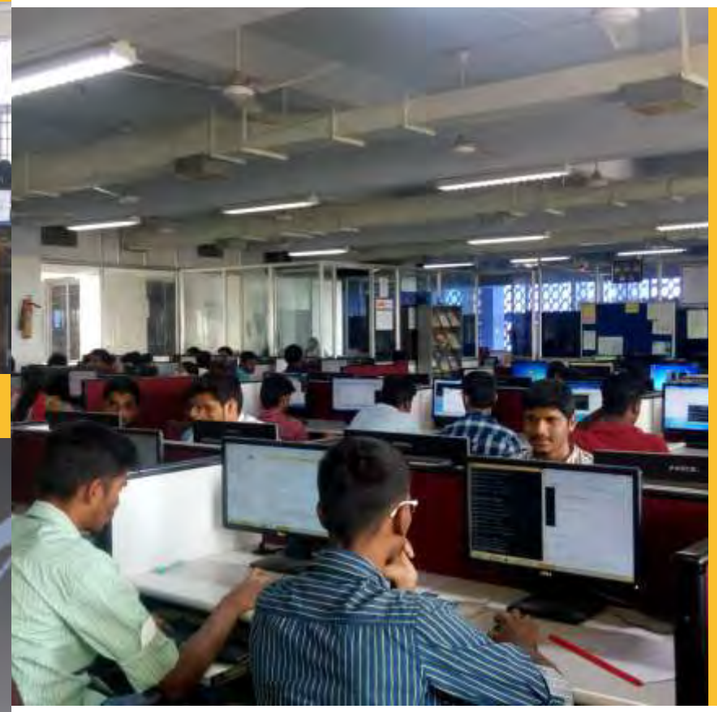
- Problem Solving and C Programming
- Basics of Textile Engineering
- Yarn Technology
- Fabric Technology
- Fashion Evolution
- Visual Dress Design
- Pattern Engineering
- Fabric Structure and Design
- Textile Chemical Processing Technology
- Apparel Machinery and Equipments
- Garment Construction
- Textile Finishing and Garment care
- Textile and Apparel Quality Evaluation
- Knitwear Design and Technology
- Industrial Engineering
- Apparel Marketing Management
- Apparel Costing
- Clothing Science and Comfort
- Apparel Production Planning and Control
- Speciality Fabrics and Technology
- Fashion Trends and Visualization
- Green Textiles and Environment Protection
- Visual Merchandising
- Apparel Merchandising
- Fashion Retail Management

Elective Courses

- Functional Apparels and Clothing
- Home Textiles
- Protective Clothing
- Recycling of Textile Products
- Apparel Size andFit Analysis
- Lean Manufacturing of Apparels
- Apparel Work Measurement
- Leather Apparel Technology
- Operations Research for Apparel Industry
- Colour Science
- Fashion Photography
- Fashion Dynamics
- Garment Trims and Accessories
- Interior Designing
- Intimate Apparels
- Footwear Designing
- Apparel Logistics and Supply Chain Management
- Total Quality Management
- Brand Management and Advertising
- Strategic Management
- Global Trade Management
- Apparel Entrepreneurship



The Department of Information Technology (IT) was established in the year 1999. The mission is to develop quality engineers to meet the current trends in the emerging world of IT, to undertake research at the frontiers of computing technologies, and to serve the community and the profession. The well-structured curriculum enables the students to take up a broad spectrum of courses, while laying emphasis on the desired areas of specialization. The department offers excellent facilities for students to learn and acquire the necessary skills demanded by the industry. A wide range of research activities undertaken in the department allow the students to gain contemporary knowledge about real-life problems in the industry. The department offers an undergraduate programme in IT and post graduate programs in Information Technology & Biometric and Cyber Security.



DEPARTMENT OF INFORMATION TECHNOLOGY

Programmes offered:
B.Tech. - Information Technology
M.Tech. - Information Technology
ME. - Biometrics and Cyber Security.

Laboratory Facilities for UG and PG programmes

Computer Laboratory

- High-End IBM and DELL Servers
- VMwarevSphere Hypervisor 5.5
- Sophos Firewall
- Microsoft SQL server 2015
- Oracle 11G, Microsoft Visual Studio
- Matlab, IBM rational suite, QualNet

Hardware Laboratory

- Microprocessor & Microcontroller trainer kits
- DSP & LAN Trainer kits

IoT Security Research Lab

- Mobile Check suite,
- Net Force Suite,
- Arduino & Raspberry pi boards

Biometrics Lab

- Philips Page Writer(ECG), Palm Reader, Iris Scanner
- Forensic Tool Kits, FPGA Boards

Centre of Ekalavya

- MHRD sponsored remote center for distance learning.

PG Laboratory

- Project lab for PG students.

Juniper Laboratory

- Networking training centre for students and faculty

Research Laboratory

- Research centre for students and faculty

B.Tech - Information Technology

Curriculum

Mathematics

Calculus and its Application, Linear Algebra and Numerical Analysis, Complex Variables and Transforms, Probability and Queuing Theory.

Science and Humanities

- Material Science & Applied Electrochemistry
- Professional & Communication Skills
- Economics & Environmental Sciences

Core courses

Basics of Electrical, Electronics and Communication, C, C++ and Java Programming,Computer Architecture, Computer Communication Networks, Data Structures & Advance Data Structures, DigitalSignal Processing, Database ManagementSystems, Design and Analysis ofAlgorithms, Data Mining, Information Security, Internet of Things, Object OrientedModeling and Design, OperatingSystems, Software Engineering, Theory of Computing, Microprocessors and Interfacing, Mobile Communication and Computing, Web Technologies.

Elective Courses

- Artificial Intelligence
- System Software
- Embedded Systems
- Soft Computing
- Information Storage and Management
- Digital Image Processing
- Multi-core Computing
- Semantic Web Technologies
- Client Server Computing
- Enterprise Resource Planning
- Network and Internet Security
- Information Ethics
- Total Quality Assurance
- Wireless Adhoc Networks
- Cloud Computing
- Web Services and Service Oriented Architecture
- Compiler Design
- Graphics and Multimedia
- Information Retrieval
- TCP / IP and Socket Programming
- Big Data Analytics

Research Projects in Progress

- Deep learning for Health Informatics.
- Semantic integration of Biomedical Ontologies.
- Sentiment Analysis using Artificial Intelligent Techniques
- Improving QoS in wireless LAN.

One credit courses with Industry Experts

- Virtualization
- Next Generation IP Networks
- Android Application Development
- Software Quality and Automated testing
- Multicore Technology
- Ontology Engineering
- Machine to Machine Communication

ME - Biometrics and Cyber Security

Core courses

- Number Theory and Quantitative Techniques
- Object Oriented Programming
- Data Structures and Algorithms
- Networking Technology
- Biometric Technologies
- Applied Cryptography
- Biometric Image Processing
- Cyber Security and Investigations
- Digital Forensics
- Pattern Recognition
- Biometric Image Processing Laboratory
- Security and Penetration Testing Laboratory

Elective Courses

- Computer Vision
- Cryptography Algorithms on Reconfigurable Hardware
- Modern Learning Techniques
- Data Mining Techniques
- Information Ethics and Laws
- Soft Computing and Speech Processing
- Information Theory and Coding
- Security in Cloud Computing
- Digital Watermarking and Steganography
- Distributed Systems and Security
- Database Design and its Security
- Security in Internet of Things

M.Tech - Information Technology

Core courses

- Number Theory and Quantitative Techniques
- Object Oriented Programming
- Data Structures and Algorithms
- Networking Technology
- Database Technologies
- Data Structures Laboratory
- Operating Systems
- Data Warehousing and Data Mining
- Cloud Computing
- Software Engineering Methodologies
- Mobile Computing
- Software Development Laboratory
- Application Development Laboratory

Elective Courses

- XML and Web Services
- Service Oriented Architecture
- Cryptography and Network Security
- Information Storage Management
- Machine Learning
- Evolutionary Computation
- Big Data Analytics
- Social Network Analysis
- Agent Based Intelligent Systems
- Network design
- Wireless Networks
- Semantic Web
- Internet of Things
- Distributed Systems

The department of Instrumentation and Control Systems Engineering was established in the year 2007. The department offers an under graduate programme in Instrumentation and Control Engineering and a post graduate programme in Control Systems. Instrumentation and Control Engineering play a vital role in any modern industry. The department aims to prepare students for productive careers in the discipline of Instrumentation and Control and to produce graduates who accept responsibilities for leadership roles in their profession, community, and global society. It is involved in providing quality education to students with a dynamic curriculum that caters to the ever-improving industrial and research needs.

DEPARTMENT OF INSTRUMENTATION AND CONTROL SYSTEMS ENGINEERING

Programmes offered:

B.E. - Instrumentation and Control Engineering

M.E. - Control Systems

Laboratory Facilities for UG and PG Programmes

Instrumentation and Control Laboratory

- Linear Variable Differential Transformer (LVDT)
- Strain Gauge
- Temperature Measurement System
- Sound Level Meter
- pH Measurement Setup
- Dead Weight Measurement System
- Smart Transmitter
- AC and DC Servomotor Setup

Process Control Laboratory

Interacting and Non-Interacting Systems, Pressure Control Station, Level Control Station, Flow Control Station, Temperature Control Station, Pneumatic Control Valve Setup, Multi-Process Trainer.

Embedded Systems Laboratory

Altera DE2 Development Board, Cyclone II 2C35 FPGA, TMS320C6416T-DSK, TIOMAP Processor, Atmel AT91SAM9263- EK, Atmel SAM ICE, Atmel AT91SAM7x-EK, Logic Analyser, Atmel AVR, Microcontroller, Vernier Biomedical Sensors Kit.

Distributed Control Systems Lab

Differential Pressure/Level Transmitter, Gauge Pressure Transmitter, Discrete Wireless Transmitter, Temperature Transmitter, Smart Valves with Positioners, Electromagnetic Flow Transmitter, Coupled Tank to Demonstrate Level, Flow and Temperature Control, Continuous Stirred Tank Reactor Setup, Conical Tank Setup, Delta V MD plus Controller, Delta Simulation Software, Foundation Fieldbus Module, HART Interface Module, Profibus Interface Module.

Control and Drives Laboratory

Linear Inverted Pendulum, Magnetic Levitation System,Rotary Servo Plant,PMSM Drive Setup, PLC Based Induction Motor Drive,2 DoFHelicopter System, Ball Balancer System,

PSG-NI Virtual Instrumentation Centre

LabVIEW Software ,Data Acquisition Systems, Image Acquisition Systems, Motion Control System, Signal Conditioning Systems, NI ELVIS, NI Compact RIO, PXI module with CAN and FireWire Interface, Smart Camera Evaluation Kit, DSP Kit with SPEEDY-33.

PSG Rockwell Centre for Industrial Automation

Programmable Automation Controllers, Distributed I/O Module, Integrated Architecture (IA) Modules, Drives and Motion Control Systems, Safety Integrated System, HMI Systems.

Signal Processing Laboratory

TMS320C6416 - DSK, Code Composer Studio,Biopac, MP45 Two Channel Biomedical Acquisition System,Keysight Function Generator and CRO

BE - Instrumentation and Control Engineering Curriculum

Mathematics

- Calculus and its Applications
- Complex Variables and Transforms
- Linear Algebra and Numerical Analysis
- Probability and Random Processes

Research Projects in Progress

- Design and Development of Embedded Vision Based Therapy System for Yoga Therapy; sponsored by DST SERB.
- Sensor Development for the Detection of Oil Debris in Gas Turbine Applications, (Collaborative Project with the Department of Instrumentation and Control Engineering, National Institute of Technology, Tiruchirappalli), Sponsored by Gas Turbine Research Establishment, DRDO, Bangalore.

Science and Humanities

Material Science, Applied Electrochemistry, English Language Proficiency, Economics for Engineers, Environmental Science and Engineering.

Core courses

Problem Solving and C Programming, Electric Circuits, Electronic Devices and Circuits, Transducer Engineering, Electrical and Electronic Measurements, Electrical Machines, Thermodynamics and Fluid Mechanics, Digital Electronics, Linear ICs and Applications, Data Structures and Algorithms, Control Systems, Industrial Instrumentation, Microprocessors and Microcontrollers, Digital Signal Processing, Principle of Communication Systems, Analytical Instrumentation, Process Control, Robotics and Automation, Computer Networks, Virtual Instrumentation, Logic and Distributed Control Systems, Embedded System Design,

Elective Courses

- Biomedical Instrumentation
- Fiber Optics and Laser Instruments
- VLSI Design
- Product Design and Development
- Instrumentation System Design
- Computer Architecture
- Internet Tools and Java Programming
- Industrial Chemical Process
- Digital Image Processing
- Operating Systems
- Power Plant Instrumentation and Control
- Instrumentation and Control in Petrochemical Industries
- Power Electronics and Drives
- Advanced Digital Signal Processing
- MEMS and Nanotechnology
- Optimal and Adaptive Control Systems
- System Identification
- Intelligent Controllers

ME - Control Systems Curriculum

Core Courses

Systems Engineering Mathematics, Measurement Systems, Linear Systems Theory and Design, Principles of Feedback Control, Advanced Virtual Instrumentation, System Identification, Advanced Digital Signal Processing, Nonlinear Control, Advanced Process Control, Optimal Control.

Elective Courses

- Logic and Distributed Control System
- VLSI System Design
- Adaptive Control System
- Robust Control
- Industrial Drives and Control
- Applied Soft Computing
- Robotic Systems
- Building Automation Systems
- Machine Vision
- State Estimation
- Optimization Techniques
- Embedded Systems
- Wavelets and Applications

The Department of Mechanical Engineering was one of the first two disciplines started since the inception of the college and has evolved a comprehensive student centric-learning approach, designed to add significant value to the learner's understanding in an integrated manner through workshops, laboratory sessions, assignments, IT training, seminars, internships, projects, and independent study. The department also offers post graduate programmes in Computer Integrated Manufacturing, Engineering Design, Industrial Engineering, Energy Engineering and Lean Manufacturing.

DEPARTMENT OF MECHANICAL ENGINEERING

Programmes offered:

B.E. - Mechanical Engineering
B.E. - Mechanical Engineering (SW)
M.E. - Engineering Design
M.E. - Industrial Engineering
M.E. - Computer Integrated Manufacturing
M.E. - Energy Engineering
M.E. - Lean Manufacturing

Laboratory Facilities for UG and PG programmes

Dynamics Laboratory

- Universal Vibration Apparatus
- Whirling of Shafts Apparatus
- Journal Bearing Apparatus
- Shaft Alignment Test System
- Cam Analysis System
- Static & Dynamic Balancing of Rotating Mass
- Motorized Gyroscope

Engineering Design Centre

- PTC CreO
- Catia
- Solidworks
- Autodesk Inventor Professional
- Autocad Mechanical
- Ansys
- Abaqus
- Franc 3d
- Fe-safe
- Mathcad

Fluid Mechanics Laboratory

Centrifugal self priming pump, Reciprocating pump, Gear oil pump, Jet on vane apparatus, Axial flow fan, Centrifugal blower, Wind tunnel, Mouth piece & orifice, Cavitation apparatus, Pelton turbine, Submersible pump, Pitot tube apparatus, Reynold's apparatus.

Heat Power Laboratory

Pin Fin Apparatus, Natural Convection Apparatus,Forced Convection Apparatus, Stefan - Boltzmann Constant Apparatus, Emissivity measurement Apparatus, Heat Exchanger, Air Conditioning tutor, Refrigeration Tutor, Boiling and Condensation Apparatus, Morse test on multi cylinder petrol engine, Constant speed 4 - stroke diesel engine, Multi - cylinder petrol engine, 4 - stroke diesel engine, Constant speed single cylinder petrol engine, High pressure two stage reciprocating air compressor, IC engine Test Rig

Machine Tool Research Centre

Stone Crusher Sieving, Hydraulic compression Machine, Dynamic Shaker,Auto Clave,Static Load test setup,Epoxy- concrete Mixer Machine,Compact Laser Vibrometer,NI-96 Channel DAQ Card for vibration, Strain and Temperature measurement,Non-Contact Eddy Current Sensors,Non-Contact Laser Sensors

Material Testing Center

Rockwell Hardness Tester, Brinell hardness tester, Vickers hardness tester, Impact testing machine, Torsion testing machine, Fatigue testing machine, Spring testing machine, Universal testing machine.

Metrology Laboratory

Tool Maker's Microscope, Optical Profile Projector, Surface Finish Measuring Instrument, Gear Roll Tester.

PSG-FESTO Centre of Excellence in Pneumatic Automation Hardware

Basic and Advanced Pneumatic Set, Basic and Advanced Electro-Pneumatic Set, trainer kits for Pneumatics & Electro - Pneumatics, Rotary actuator with gripper, Proportional Flow and Pressure Control Valves, Anemometer for airflow measurement , Screw Compressor , 4 Cylinder Electro Pneumatic Demo Kit, Air Receiver , Rotary Actuator with parallel Gripper attachment, Festo and Siemens PLC, Festo Hydraulic Trainer Kit

Software

- Directsoft
- Automation Studio
- CBT
- KV Ladder

PSG-RANE CoE in Manufacturing Systems

- Desktop Trainer Kit for Conveyer Station, Handling Station, Stacking Station
- Modular Production Systems for distribution, testing, processing and handling
- Quanser HVAC Trainer Kit
- Quanser DC Motor Control Kit
- Closed loop pneumatic trainer kit

Sensorics Laboratory

Data Acquisition Cards, IEPE Accelerometer, Electro-Dynamic Vibration Shaker, NI-FPGA based Reconfigurable I/O board, LVDT, Load Cell, Temperature and Air Flow Sensing systems, Proportional Flow Control and Pressure Control Valves, Anemometer FFT Analyzer, Surface Roughness Tester, Sound Level Meter, J - Type Thermocouple - with cold junction compensation, Digital Contact Type Tachometer, Passive Infrared Sensor Capacitive Sensor ,Inductive Sensor ,Optical sensor, Programmable Robots.

Workshop

- Welding
- Foundry
- Sheet Metal
- Plumbing
- Carpentry and Fitting Section
- Lathe and Special Machines Section

CNC Machines Laboratory

- CNC Trainer Lathe,
- CNC Trainer Mill,
- Portable Surface roughness tester ,
- KELLER Symplus Software.

Noise and Vibration Laboratory (CoE sponsored by DST-FIST)

Sensors - Piezoelectric Charge Accelerometer, Miniature Tear-Drop IEPE Accelerometer, Charge to Deltatron Converter, Reaction Torque sensor, Load sensor, Data Acquisition Systems, Vibration Measurement - Electrodynamic Shaker, Classical Shock software, Impacthammer, Free-fall shock machine, Acoustic Sensing - Handheld analyser with sound level meter and frequency analysis software, ½" free field microphone, Sound calibrator.

Industrial Engineering Laboratory

eVSM, 3D SSP, Timer Pro, Reliasoft Weibull , Hyper Lingo , SAP , Arena, SYSTAT , iGraphics Flow Charter, Witness Software, MS Project, Minitab, Flexsim.

Lean Manufacturing Lab

Learning Factory, Lean games: Plug factory simulation, Torch Factory Simulation, 5S game, eVSM and Igrafix, Systat , Timer Pro Witness, Arena , Reliasoft Weibull, XFMEA.

PG CAE Laboratory (CoE for Simulation) Modeling Software

- I-Deas, Unigraphics,
- Wildfire,
- Solidedge,
- Catia

Mechanism Analysis Software

- Keller Turning and Milling Simulation
- Visual Mill

Manufacturing Simulation Software

MSC.ADAMS, Finite Element Analysis Software, Ansys, Hyper Works, Solidcast

Tribology Laboratory

Reciprocatory friction monitor, Fourball tester, Pin on disc wear test rig, Rubber wheel abrasive wear test rig, Ultrasonicator

Computational Fluid Dynamics Laboratory

Work Station (128GB RAM), ANSYS, MATLAB, Minitab, Turbo Design Software.

Energy Engineering Laboratory

Wind Energy Training System, Boundary layer thickness measurement setup., Thermal mixer experimental setup. Bio digester

BE and BE (Sandwich) - Mechanical Engineering

Core courses

Manufacturing Processes, Engineering Mechanics, Industrial Metallurgy, Concepts of Engineering Design, Fluid Mechanics, Mechanics of Materials , Kinematics of Machinery , Engineering Thermodynamics , Basics of Electrical and Electronics Engineering , Computer Numerical Control and Robotics , Turbo machinery , Dynamics of Machinery , Metrology and Instrumentation , Fundamentals of Internal Combustion Engines , Design of Machine Elements , Thermal Engineering , Tool Design , Design of Transmission Systems, Heat and Mass Transfer , Operations Research , Design for Manufacture and Assembly , Industrial Engineering and Management , Power Plant Engineering , Finite Element Analysis.

Elective Courses

Computer Aided Design, Advanced Strength of Materials, Failure Analysis and Design, Vibration and Noise Engineering, Mechanics of Composite Materials, Precision Machine Design, Computer Integrated Manufacturing, Manufacture and Inspection of Gears, Hydraulic and Pneumatic Systems, Non-Traditional Machining, Rapid Prototyping, Flexible Manufacturing Systems, Computational Fluid Dynamics, C Engine Design, Refrigeration and Air-conditioning, Automobile Engineering, Automotive Electronics, EE analysis, Lean Manufacturing, Supply Chain Management, Industrial Design and Applied Ergonomics, Optimization Techniques for Engineering Systems, Quality Engineering, Project Engineering.

BE - Mechanical Engineering (SW)

The BE Mechanical Sandwich Programe was started in the year 1983. The curriculum is the same as that of the four year mechanical engineering programme but spread over a span of five years to accommodate intensive industrial training. PSG Industrial Institute serves as an educational centre as well as an industrial production centre. The students undergo three hours of training everyday for a period of five days a week at three major divisions' viz. Heavy Engineering Division, Rotating Machinery Division and Foundry Division

ME - Engineering Design

Core courses

Applied Numerical Analysis, Concepts of Engineering Design, Machinery Vibration and Diagnostics, Mechanisms and Robot Kinematics, Mechatronics System Design, Vibration and Noise Engineering Laboratory, Industrial Tribology, Applied Elasticity and Plasticity, Advanced Finite Element Analysis, Design and Failure Analysis, Design for Manufacture and Assembly, Computer Aided Engineering Laboratory, Sensor Interface and Robotics Laboratory,

Elective Courses

Design of Mechanical Drives, Modeling of Dynamic Systems , Mechanics of Composites and Smart Materials, Geometric Modeling, Product Development and Reverse Engineering, Design of Automotive Systems, Design and Analysis of Thermal Systems, Micro Electro Mechanical Systems, Nanomaterials and Nanotechnology, Production Tool Design, Computational Fluid Dynamics, Creativity and Innovation Management, Artificial Intelligence and Expert Systems, Advanced Strength of Materials.

ME - Industrial Engineering

Core Courses

Statistics, Quality Control and Reliability Engineering, Manufacturing Engineering and Industrial Management, Engineering Economic Analysis, Simulation Modeling and Analysis, Operations Management Industrial Engineering Laboratory Advanced Optimization Techniques, Quality Engineering and, Ergonomics Supply Chain Management, Modeling and Analysis of Advanced, Manufacturing Systems, Project , Management Operations Research Laboratory Manufacturing Systems Design Laboratory.

Elective Courses

Total Productive Maintenance, Enterprise Resource Planning, Safety and Environment anagement System, Flexible Manufacturing ystems, Industrial Scheduling , Lean Six Sigma in anufacturing and Service , Integrated Product esign and Development trategies, Product nalysis and Cost Optimization, Design for anufacture and Assembly, Human Resource Management , Service and Operations anagement, Marketing Management, Financial and Cost Accounting.

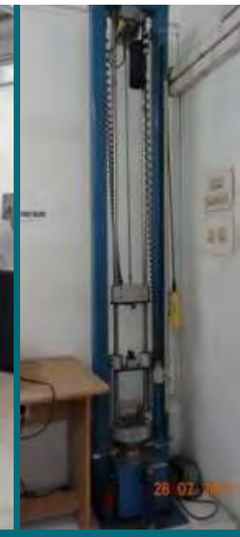
ME - Computer Integrated Manufacturing

Core courses

Applied Numerical Analysis, Materials and Manufacturing Engineering, Components and Architecture of CIM, CNC Machines and Robotics, Mechatronics System Design, Sensor Interface and Robotics Laboratory, FEA in Manufacturing, Geometric Modeling, Modeling and Analysis of Advanced Manufacturing Systems, Design for Manufacture and Assembly, Product Development and Reverse Engineering , Computer Aided Engineering Laboratory.

Elective Courses

Enterprise Resource Planning, Mechanics of Composites and Smart Materials, Industrial Robotics, Simulation Modeling and Analysis, Optimization Techniques, Advanced Metrology and Automated Inspection, Micro Electro Mechanical Systems, Nanomaterials and Nanotechnology, Engineering Economic Analysis, Statistics and Reliability Engineering , Precision Engineering, Computational Fluid Dynamics, Information Technology in Manufacturing Applications, Industrial Design and Applied Ergonomics, Lean Six Sigma in Manufacturing and Servicing, Artificial Intelligence and Expert Systems, Industrial Engineering Laboratory,



ME - Lean Manufacturing

Core courses

- Statistics, Quality Control and Reliability Engineering
- Manufacturing Engineering and Industrial Management
- Design of Lean Production System
- Lean Tools and Management Systems
- Information Technology in Manufacturing Applications
- Lean Manufacturing Laboratory
- Cost Management and Lean Accounting
- Lean Supply Chain and Logistics Management
- Lean Six Sigma in Manufacturing and Service
- Enterprise Resource Planning
- Global Integrated Manufacturing
- Manufacturing Simulation Laboratory
- Manufacturing Systems Design Laboratory

Elective Courses

- Quality Engineering and Ergonomics
- Modeling and Analysis of Advanced Manufacturing Systems
- Design for Manufacture and Assembly
- Creativity and Innovation Management
- Industrial Scheduling
- Project Management
- Optimization Techniques
- Human Resource Management
- Leadership and Personality Development
- Flexible Manufacturing Systems
- Job and Workplace Design
- Inventory and Warehouse Management

ME - Energy Engineering

Core Courses

- Concepts of energy engineering,
- Thermodynamics and combustion systems,
- Thermal energy conservation and management
- Renewable energy systems
- Energy economics, forecasting and modeling
- Energy and thermal systems design
- Computational fluid dynamics
- Instrumentation for energy systems
- Electrical energy conservation and management

Elective Courses

- Cleaner production
- Building energy conservation and green buildings
- Solar energy technologies
- Design of solid and liquid waste conversion systems
- Advanced energy technologies and sustainable development
- Nano technologies and energy systems
- Design of bio-energy systems
- Energy storage systems
- Industrial processes and energy conservation

Major Research Area

- Department of Mechanical Engineering is presently carrying out research in the fields of Design and development of alternate materials for machine tool structures, Machining of composites, High speed machining, Renewable energy, Vibration analysis and smart materials, Micro manufacturing, Sheet metal manufacturing.

The Department of Metallurgical Engineering established in year 1968 has been in the forefront of metallurgical engineering education for nearly five decades. Besides offering quality education to the students, the department is also actively engaged in research and development. It also offers testing and consultancy services to industries. Faculty members of the department are highly qualified and most of them have long industrial experience. The department also offers a post-graduate programme in Industrial Metallurgy.

DEPARTMENT OF METALLURGICAL ENGINEERING

Programmes offered:
B.E. - Metallurgical Engineering
M.E. - Industrial Metallurgy

Major Laboratory Facilities for UG and PG programmes

Mineral Dressing laboratory

- Jaw crusher, Roll crusher
- Ball mill
- Ro-Tap Sieve Shaker
- Wilfley Table
- Hydraulic Jig

Metallography Laboratory

Metallurgical Microscopes with digital camera, Image processing and analyzing system , Stereo microscopy, In-situ Metallography kit .

Foundry Laboratory

Foundry Sand Testing Equipment (Moisture content tester, sand strength tester, clay content tester, shatter index tester, mouldability tester, permeability tester) , Induction Melting Furnace (Capacity of 25kg), Rheo casting setup, Vacuum metal melting furnace Stir casting set up, Cast decant casting (CDC) set up.

Welding Laboratory

GTAW, GMAW and SMAW Units, Implant Tester, Diffusible Hydrogen Determinator, Diffusion Bonding Setup, Varestraint tester.

Surface Engineering Laboratory

Salt Spray (Fog) Test Setup, Wear and Friction Monitors, High temperature wear tester, Electroplating unit, Air Jet Erosion Tester, Slurry Jet Erosion Tester.

Metal Forming and Mechanical Testing Laboratory

- Universal Testing Machine (40 ton)
- Computerized Universal Testing Machine (10 ton)
- Charpy Impact Tester
- Hardness Testers (Brinell, Rockwell, Rockwell superficial, portable hardness tester)
- Hydraulic Press
- ECAP facility (200 ton)

Heat Treatment Laboratory

- Controlled atmosphere furnaces
- Induction furnace
- Vacuum furnaces
- Silicon carbide furnace

Powder Metallurgy Laboratory

- Hot Isostatic Press
- Planetary Ball Mill
- Attritors
- Glove Box
- Tumbler mill

Non-destructive Testing Laboratory

- X-Ray Radiography Unit (300 kV, 6 mA)
- Ultrasonic Flaw Detector
- Eddy Current Tester
- Magnetic Crack Detector
- Boroscope
- Ultrasonic C- scan system

Materials Modeling Lab

- 40 PCs with windows and linux OS.
- CALPHAD software : Thermo calc
- Analyzing software : Ansys

Advanced Characterization Lab

Scanning Electron Microscopy (SEM) with EDS attachment, Optical Metallography with polarized light attachment, phase contrast, dark field/bright field illumination. Microhardness Tester (Load range: 10 gm to 30 Kg), Microhardness Tester (Load range:10 gm to 2 Kg with a TV projection system) , Optical Emission spectrometer (OES), X-Ray Diffraction unit (XRD) .

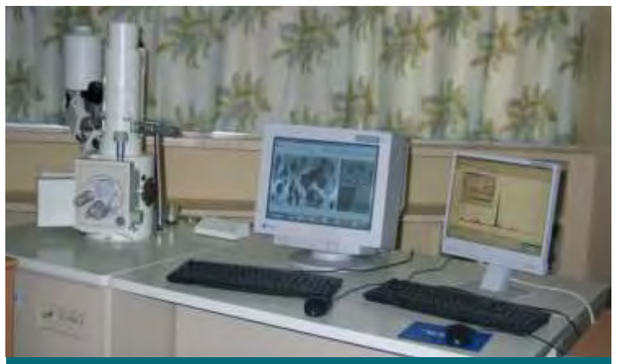
BE - Metallurgical Engineering Curriculum

Mathematics

- Calculus and its Applications
- Differential Equations
- Complex Variables and Transforms
- Probability and Statistics

Research Projects in Progress

- Synthesis and Characterisation of Zircon Sand /Ai-Zn-Mg alloy composites; sponsored by UGC.
- Establishment of Centre of Excellence in Welding engineering and technology sponsored by Department of Heavy Industry, Government of India. (Rupees 26.7 Crores)



Science and Humanities

- Material Science
- Applied Chemistry
- Professional Skills
- Communication Skills
- Economics for Engineers
- Environmental Sciences

Core courses

Problem Solving and C programming, Mineral Beneficiation, Fluid Mechanics and Heat Transfer, Applied Mechanics, Design of Machine Elements, Basics of Electrical and Electronics Engineering, Production of Iron, Elements of Physical Metallurgy, Metallurgical Thermodynamics and Kinetics, Physical Metallurgy, Production of Steel, Mechanical Behavior and Testing of Materials, Corrosion Engineering, Non Ferrous Extraction Metallurgy, Metal Casting , Heat Treatment and Surface Engineering, Rate Processes in Metallurgy, Metal Forming, Metal Joining, Powder Metallurgy, Ceramics and Composites, Fracture Mechanics and Failure Analysis, Materials Characterization, Non Destructive Testing, Physical Metallurgy of Steels and Non Ferrous Alloys

Elective Courses

Advanced Surface Engineering, Metallurgy of Tool Materials, Special Casting Techniques, Metallurgy of Castings, Selection of Materials, Computations in Metallurgical Engineering, Nano Materials, Bio Materials, Polymer Science and Technology, Elements of Dislocation Theory, Creep and Fatigue, Optical and Magnetic Materials, Electrical and Electronic Materials, Motor Vehicle Engineering, Modern Materials.

ME - Industrial Metallurgy

Core Courses

- Statistics, Quality Control and Reliability Engineering
- Engineering Physical Metallurgy
- Foundry Technology
- Welding Technology
- Mechanical Metallurgy
- Optical Metallography Laboratory
- Experimental Techniques in Metallurgy

- Forming Processes
- Heat Treatment and Surface Modification
- Iron and Steel Making
- Environmental Degradation of Metals
- Casting, Joining and Forming laboratory
- Testing and Characterization Laboratory

Elective Courses

- Non-Destructive Evaluation
- Thermodynamics of Materials
- Ferrous and Non-Ferrous Alloys
- Powder Metallurgy
- Foundry Metallurgy
- Welding Metallurgy
- Selection of Materials for Mechanical Design
- Ceramics and Polymers
- Composites
- Metallurgical Failure Analysis
- Advanced Materials
- Materials Modeling
- Creep Fatigue and Fracture
- Welding Procedures and Qualifications
- Research Methodology
- Quality System Management
- Ceramics Processing Technology
- Advanced Coating Technologies
- High Performance Ceramics
- High Temperature Behavior of Alloys and Ceramic

The undergraduate programme in Production Engineering was started in the year 1975. Subsequently, the department grew in several dimensions of academic excellence with time and offers postgraduate programmes in Manufacturing Engineering, Product Design and Commerce and Virtual Prototyping and Digital Manufacturing. All laboratories of the department are approved for carrying out research, leading to Ph.D Degree. Currently, there are 43 research scholars pursuing their Ph.D work in the department. The department offers consultancy in manufacturing processes, design and testing products, including product styling. A team of dedicated faculty members nurture the programme and actively contribute towards the creation of a high quality learning environment that is persuasive.

DEPARTMENT OF PRODUCTION ENGINEERING

Programmes offered:

B.E. - Production Engineering
B.E. - Production Engineering (Sandwich)
M.E. - Manufacturing Engineering
M.E. - Product Design and Commerce
M.E. - Virtval Prototyping and Digtal Manufacturing

Laboratory Facilities for UG and PG programmes

Production Engineering Laboratory

- CNC Vertical Machining Center
- CNC Horizontal Turning Center
- Hydroforming Machine
- Lapping Machine
- Honing Machine
- CNC Fanuc Simulator
- Ultrasonic Metal Welding Machine
- Ultrasonic Plastic Welding Machine
- Laser Engraving Machine
- Injection Molding Machine
- Tool and Cutter Grinder
- Tool Presetter
- Pin On Disc Wear and Friction Tester
- Subtractive Rapid Prototyping Machine
- TIG Welding Machine
- Brinell and Rockwell Hardness Testing Machine
- Tensile Testing Machine
- Thermal Imager
- Cutting Tool Dynamometers

Production and Industrial Engineering Laboratory

Software

Arena V 7.0 Evaluation version, Crystal Ball 2000, Pro/Engineer Wildfire 5, Creo 3.0 , Visual Mill , CatiaV5R 17 , SOLIDCast , Simlab , Solid Works.

Metrology and Machine Vision Laboratory

Machine Vision System, Coordinate Measuring Machine (CMM), Gauge Blocks and Angle Gauges, Michelson Interferometer, Pneumatic, Electro-Pneumatic and Electrical Comparators, TESA Bore Gauge, UDT-2 Dial Gage Tester 170, Auto Collimator, Floating Carriage Micrometer, Electronic Height Gauge, Profile Projector, Surface Roughness Tester, Tool Makers MS TM 500, Universal Bevel Protractors.

Sensor and Automation Laboratory

Modular Manufacturing System, Pneumatic Trainer Kits, Electro Pneumatic and PLC Based Controls, Measurement System- Temperature, Speed, Load, Displacement, Pressure and Vibration., Do it yourself Kit - Sorting Station, Automation Studio Software.

Ergonomics Laboratory

Anthropometric Measuring Kit, Environment Variable Measurement System, Goniometers, Electrocardiogram(ECG), 3D Scanner and Printer, Peg Board Testers, Hand Grip Dynamometers, Surface electromyography (sEMG), Force Gauges.

Reliability and Product Testing Laboratory

- Electrodynamic Shaker

CAD/CAM Learning Centres

Hardware

HCL Intel Core2 Duo Workstations, HCL Intel i3 Workstations, HCL Intel i5 Workstations, Acer Intel i3 Desktops.

Software

Pro/ENGINEER Wildfire 5, Creo 3.0, ANSYS 12, SOLIDCast 7.0.2, MoldFlow, Mastercam X4, Windchill 10.

Manufacturing Process Simulation Laboratory

- Pro/ENGINEER Wildfire 5.0
- SOLIDCast 7.0.2
- Visual mill 5.0

PSG-DSIR Clinic on Product Styling and Design

Hardware

- HCL Xenon Workstations
- Immersion Microsribe
- Wacom Tablet

Software

Alias Studio Tools, Rhinoceros, Pro/ENGINEER, Creo 3.0, Hyperworks, Radioss, Comsol, ABAQUS 6.12,

Computer Aided Engineering Lab

Pro/ENGINEER, SOLIDCast, ANSYS 12, Creo 3.0, AutoCAST, Moldflow.

PDM and Integrated Product Development Laboratory

CATIA V5 R16, Rational Rose, Oracle 9i, Auto Vue

CAD/CAM Centre

Hardware

Silicon Graphics ORIGIN 200 Server, Silicon Graphics O2 PCs, HCL Intel Core2 Duo workstations, Acer Intel i3 Desktops, HCL Pendium-D workstations,

Software

Pro/ENGINEER wildfire, Creo 3.0, NX, CATIA, Master CAM, AutoCAST, SOLIDCast, NX Moldwizard, ANSYS, Solidworks, MoldFlow, Cimatron 10, Windchill 10,

Ultrasonic Welding Laboratory

Ultrasonic Plastic welder (1500 W, 20kHz), Ultrasonic Metal Welder (2500 W, 20kHz), National Instruments Temperature Measurement Module, Computerised Tensile Testing Machine (UTM), Non-contact Temperature Measuring Device - Thermal Imager.

Subtractive Rapid Prototyping Lab

Hardware

- CPM 3020 ISEL CNC Machine
- Robot

Software

Creo 3.0, Wild Fire, Keller Cam, Visual Mill, Desk Proto, Solid Cast.

Virtual Reality Centre

Hardware

Dell, HP and HCL Workstations, LG 3D Smart TV, Sony 3D HMD, Barco Projector, Virtual Research HMDSGI 24" Monitor, Microsoft X-Box 360, 3D Connexon Space Mouse, Wanda Mouse - 6 DOF, Wacom Tablet, Tracking Devices - Flock of Birds, X-box Kinect, Wiimote,

Immersion Microscribe, Haptic Device: - CyberGlove RH, 5DT Data Glove LH & RH with wireless kit, Stereo Glass - NuVision with IR Emitters, Leap Motion Controller, Epson 3D Projector and 3D Glasses,

Software

Vizard, Vcollab, 3Ds MAX, MAYA, Creo 3.0 CATIA V6.

In addition to these facilities, laboratories like workshop, fluid machinery and hear power laboratories are available.

BE & BE (Sandwich) - Production Engineering

Curriculum

Mathematics

Calculus and its Applications, Differential Equations and Transforms, Linear Algebra and Numerical Analysis, Probability and Statistics, Statistical Quality Control.

Science and Humanities

Applied Physics, Industrial Chemistry, Professional Skills, Communication Skills, Operations Research, Economics for Engineers, Production and Operations Management, Environmental Science.

Core courses

Problem Solving and C Programming, Introduction to Manufacturing Engineering, Engineering Mechanics, Engineering Metallurgy, Basics of Electrical and Electronics Engineering, Welding Technology, Strength of Materials, Fluid Mechanics and Machinery, Machining Technology, Machine Drawing, Foundry Technology, Kinematics of Machinery, Thermal Systems and Heat Transfer, Manufacturing Metrology, Metal Forming Processes, Design of Machine Elements, Process Planning and Cost Estimation#, Dynamics of Machinery, Instrumentation and Control Systems, Applied Hydraulics and Pneumatics, Design for Manufacture and Assembly, Jigs, Fixtures and Die Design, Sensors, Automation and Modular Production Systems, Computer Numerical Control and Robotics.

Elective Courses

Mechatronics, Mechanical Measurements, Robotics and Applications, Maintenance and Safety Engineering, Finite Element Applications in Manufacturing, Micro and Nano Electromechanical Systems, Product Development Strategies, Design and Manufacture of Gears, Product Life Cycle Management, Cleaner Production, Surface Engineering and Tribology, Manufacture of Automotive Components, Lean Manufacturing, Material Handling Facilities, Non -Traditional Machining Techniques, Supply Chain Management, PLC Programming and Applications, Machine Tool Engineering, Rapid Prototyping, Composite Materials Processing, Simulation of Manufacturing Systems, Computational Fluid Dynamics, Mechanical Vibrations.

BE Production Engineering (SW)

The students of this programme undergo industrial training in addition to the academic process that is provided in the regular BE programme. As a result, students are equipped with skills that make them ready to be deployed on the job. They undergo internship in several industries and learn several issues in industry and understand techniques to solve them. There is a well planned curriculum for industrial training that smoothly transforms the students to an employable professional.

Industry Training

Manufacturing processes; Metrology and Quality Control; Industrial Safety Procedures; Shop Floor Management Systems; Soft Skills; Entrepreneurship

ME - Manufacturing Engineering

Core Courses

Statistics, Quality Control and Reliability Engineering, Advanced Manufacturing Processes ,Materials Selection and Metallurgy, Geometric Modeling for Manufacturing, Design for Manufacture and Assembly, Object Computing and Data Structures Laboratory, Engineering Economics, Finite Element Applications in Manufacturing, Advanced Metrology ,Automation in Manufacturing, Computer Numerical Control, Advanced Manufacturing Laboratory, Automation, Metrology and Simulation Laboratory

Elective Courses

Production and Operations Management, Industrial Robotics, Tool Design, Rapid Prototyping, Applied Pneumatics and Hydraulics, Optimization Techniques, Non-Traditional Machining Processes, Product Development Strategies, Image Processing and Machine Vision, Mechatronics System, Solidification Processing and Foundry Metallurgy, Reliability Engineering, Logistics and Supply Chain Management, Total Quality Management, Work Systems Engineering, Six-Sigma, Lean Manufacturing, Agile Manufacturing, Combinatorial Optimization.

ME - Product Design and Commerce

Core courses

Computational Mathematics, Failure Theories in Design, Materials Selection and Metallurgy, Geometric Modeling and Computer Aided Design, Design for Manufacture and Assembly, Object Computing and Data Structures Laboratory, Product Lifecycle Management, Finite Element Analysis, Engineering Economics, Product Reliability, Human Factors for Product Design, Product Design and Development Laboratory, Engineering Design Laboratory.

Elective Courses

Database Management Systems, Product Development Strategies, Enterprise Computing, Rapid Prototyping, Object Oriented Analysis and Design, Computational Fluid Dynamics and Heat Transfer, Composite Materials, Optimization Techniques, Analysis of Metallurgical Failures, Production and Operations Management, Total Quality Management, Mechanical Vibrations.

ME - Virtual Prototyping and Digital Manufacturing

Core Courses

Linear Systems Theory, Concepts of Digital Manufacturing, Virtual Reality Systems, Computer Graphics for, Virtual Reality I, Geometric Modeling and Computer Aided Design, Object Computing and Data Structures Laboratory, Computer Graphics for, Virtual Reality II, Modeling and Simulation of Virtual Systems, Product Life cycle Management, Mathematical Modeling and Computer Aided Engineering, Scientific and Engineering Data Visualization, Virtual Modeling and Simulation Laboratory, Virtual Prototyping and Design Laboratory.

Elective Courses

- Simulation and Modelling Techniques
- Human Computer Interaction
- Object Oriented Analysis and Design
- Mechatronics System
- Database Management Systems
- Enterprise Computing
- Image Processing and Machine Vision

Research Projects in Progress

- Development of an Adaptive Control System for Precision Machining of Aircraft Aluminium Alloys at Near Minimum Material Zone With Targeted Mean; sponsored by ARDB, New Delhi
- Experimental Investigation on Sound and Vibration Damping Characteristics of Green Sandwich Composites; sponsored by AICTE New Delhi.
- Ergonomic Investigations on Manual Tasks in Manufacturing Workplaces to Reduce Fatigue and Improve Productivity; sponsored by AICTE New Delhi.
- Experimental Investigations on Surface Topography in Micro-milling of New Ti-Nb-Ta based Alloys for Biocompatibility in Medical Implants; sponsored by DST, New Delhi.

The Department of Robotics and Automation Engineering was established in the academic year 2011 in order to meet the growing demand for trained manpower in the field of Robotics and Industrial Automation. It holds pride in equipping the young minds with a dedicated curriculum in Robotics and Automation at the undergraduate level itself. From robots that perform industry's clear-cut needs to automotive solutions that crave for perfection and sophistication, the department makes an impact in the quality of life world-wide. The program in Robotics and Automation Engineering encompasses all areas of research, development, design, and operation which allow students to nurture in the major areas of Electrical, Electronics, Mechanical, Automation, Computer and Robotics Engineering. The department keeps close contact with the Indian and International industries as well as Institutions for student projects, internships and employment.

DEPARTMENT OF ROBOTICS AND AUTOMATION ENGINEERING

Programmes offered:
B.E. - Robotics and Automation Engineering

Laboratory Facilities

PSG- Fanuc Centre for Advanced CNC and Robotics

- High Precision Turning Centres
- High Speed Vertical Machining Centre
- Fanuc LR Mate 200iC Robot
- Fanuc M 710iC Robot
- ABB IRB 1400 M94A Robot

PSG-Heidenhain CNC Centre

- CNC Simulation Software
- Keller Cam
- SYMPlus
- TECHNICPlus
- CAMPlus
- Training kits for CNC Turning and Milling Centres

PSG- Adept Centre for Robotics

Adept Cobra s600, SCARA robot, Adept Quattro s650H parallel robot, Bumblebee, OCAM360, LIDAR, Phantom Haptic device, Dual delta 3D printer

PSG - Danfoss Centre for Climate and Energy

RC Components, Heating Solution and PCA Components, IGBT'S Dismantling Kit, Practical Working Drive, Test Beds, VLT Drive, 4"E-learning portal.

PSG-Siemens Centre of Excellence in Automation

Siemens PLCs - S7 1200 and S7 1500, Siemens HMI Panels, Remote I/O Section, HMI's : KTP 600 COLOR PN, KTP 600 COLOR DP and KP 300 BASIC MONO PN, SINAMICS G120 and V60 training kit, SCADA and HMI: WINCC Advanced V12, WINCC RT Advanced V12 128TAGS, WINCC Professional RT 512 TAGS,WIN CC Professional Engg 512 TAGS, Simatic Tia V12 Professional.

PSG- FESTO Centre for Robotronics

- FESTO MPS
- Robotino
- FluidSim software
- CIROS software

PSG- Beckoff Centre for PC Based Automation Technology

Ethercat, Profibus, Devicenet, Asi - Linear servo - AC and DC servo, TwinCAT- NTP - Motion Control, Industry 4.0 - Home Automation.

e-Yantra Robotics Laboratory In association with IIT Bombay

- TETRIX
- LEGO Mindstorm NXT
- Aldebaran
- NAO, Firebird
- Hexapod

R&D Centre

- Equipped with sophisticated equipments
- Workshop for design &fabrication
- Simulation softwares

Computer Centre

PCs,C, C++, Pspice, MATLAB, Labview, Adams, AutoCAD, Autodesk Inventor, Ansys, Solidworks.

Research Projects in Progress

- Vision-based precision entry into buildings and landing on elevated flat surface, funded by Aeronautics Research and Development Board (ARDB), Ministry of Defense, Govt. of India.
- Design and Development of Robotic Endotrainer, funded by Global Innovation and Technology Alliance (GITA), DST.
- Design and Development of Solar panel Cleaning Robot, funded by DST - SERI.
- Development of High temperature servomotor, funded by Board of Research in Nuclear Sciences (BRNS) of the Department of Atomic Energy (DAE).
- Automated Welding station, funded by Department of Heavy Industry (DHI), Ministry of Heavy Industries, Govt. of India.
- Intelligent welding power source, funded by Department of Heavy Industry (DHI),Ministry of Heavy Industries, Govt. of India.

BE - Robotics and Automation Engineering Curriculum

Mathematics

- Calculus and its Applications
- Complex Variables and Transforms
- Linear Algebra and Numerical Analysis
- Probability, Statistics and Random Processes

Science and Humanities

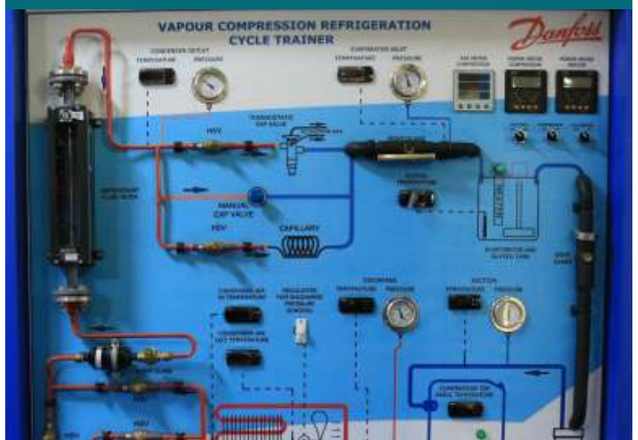
- Material Science
- Electrochemistry
- Professional Skills
- Communication Skills
- Operations Research
- Economics for Engineers
- Environmental Sciences

Core courses

- Problem Solving and C Programming
- Introduction to Mechanical Systems
- Electrical Circuit Theory
- Digital Electronics
- Sensors & Instrumentation
- Electronic Devices and Circuits
- Electrical Machines & Power systems
- Automatic Control Systems
- CNC Technology
- C++ and Data Structures
- Linear Integrated Circuits
- Kinematics and Dynamics of Machinery
- Programmable Logic Controllers
- Basics of Robotics
- Microprocessors and Microcontrollers
- Mechanical Design
- Computer Architecture
- Power Electronics & Drives
- Embedded & Real-time Systems
- Vision Systems and Image processing
- Automation System Design
- Precision Equipment Design
- Field & Service Robotics
- Totally Integrated Automation

Elective Courses

- Special Machines and Controllers
- Artificial Intelligence for Robotics
- Advanced Control Systems
- VLSI Design
- Digital Signal Processors and its Applications
- Embedded Systems Design
- Advanced Microprocessors and Microcontrollers
- Computer Architecture and Parallel Processing
- Nano Computing
- Maintenance and Safety Engineering
- Wireless communication
- Micro Electro Mechanical Systems
- System Software
- Software Project Management and Quality Assurance
- Renewable Energy Sources
- Advanced Strength of Materials
- Automobile Engineering
- Lean Manufacturing
- Supply Chain Management
- Industrial Design and Applied Ergonomics
- Process Planning and Cost Estimation
- Industrial Networking
- Virtual Instrumentation Systems
- Computer Integrated Manufacturing
- Neural Networks and Fuzzy Systems
- Internet Tools and Java Programming
- Industrial Robotics and Material Handling Systems



Established in 1965, the Department of Textile Technology is regarded as one among the few premier departments for Textile Engineering in India. The National Board of Accreditation (NBA) has granted the department with certification for 5 years in 2017, 2012, 2004 and 1997. The department is backed by well experienced, diverse team of faculties who regularly involve in funded projects, organizing conferences, workshops, and provide consultancy. The Department received the Mentor Award for Best Industry Linked Engineering Institute 2015 for Chemical & Allied Engineering Institute by AICTE and CII. Students present papers in academic forums all over India and have won several distinctions. They compulsorily undergo INTERNSHIP programs in reputed industries and are exposed to practical aspects of Technology & Quality Assurance systems.

DEPARTMENT OF TEXTILE TECHNOLOGY

Programmes offered:
B.Tech. - Textile Technology
M.Tech. - Textile Technology

Laboratory Facilities for UG and PG programmes

- Spinning Lab
- Weaving Lab
- Knitting Lab
- Textile chemical Processing Lab
- Textile Testing Lab
- Garment Manufacturing Lab

DST - FIST Product Development Centre

- Miniature Versions of
- Card / Drawframe
- Rotor Frame
- Sectional Warper
- Speed frame / Ring Frame
- Fancy Doubler / Two-for-one Twister
- Single end sizing
- Rapier Room

Textile CAD Centre:

Software like: Textronics, Wilcom, Adobe Photoshop, Corel Draw X5 / Cs5.

PSG TECHS COE INDUTECH:

- Is a project funded by Office of the Textile Commissioner, Ministry of Textiles, GoI, under Technology Mission on Technical Textiles (TMTT) for promotion of Technical Textiles in 2011 with Rs.25 Crores grant. Major Facilities are -
- Needle punching line
- Hot melt coating and lamination
- Chemical coating machine
- Industrial Wet Wipes
- FESEM
- UV Accelerated Weathering Tester

Powder Metallurgy Laboratory

Hot Isostatic Press, Planetary Ball Mill, Attritors, Glove Box, Tumbler mill.

B.Tech -Textile Technology Curriculum

Mathematics

Calculus and its Applications, Differential Equations, Complex Variables and Transforms, Probability, Statistics and Random Processes.

Science and Humanities

Material Science, Industrial Chemistry, Professional Skills, Communication Skills, Economics for Engineers, Environmental Sciences, Production Planning and Operations Research.

Core Courses

Problem Solving and C Programming, Basics of Textile Engineering, Basics of Electrical & Electronics Engineering, Theory of Machines, Instrumentation & Microcontroller Technology, Textile Physics, Yarn Manufacture I & II, Technology of Man Made Fibres, Fabric Manufacture I & II, Knitting Technology, Textile Quality Evaluation, Preparation and Dyeing, Apparel Manufacturing Technology, Printing and Finishing, Process and Quality Control in Textiles, Fabric Structure, Technology of Bonded Fabrics, Mechanics of Textile Machines, Technical Textiles, Clothing Science, Management of Textile and Clothing Industry.

Research Projects in Progress

- Centre of Excellence in Industrial Textiles to the tune of 25 Crores; sponsored by Ministry of Textiles.
- Focus Incubation Centre; sponsored by Ministry of Textiles
- Development of Jute/Jute Blended Fibrous Mat for Effluent Filtration Applications; sponsored by Ministry of Textiles
- Vetiver Based Treatment System for Textile Industry Wastewater;sponsored by DBT.
- Development of Oil Sorption and Sound Absorption Pad using Natural Fibre Based Non Wovens Textiles; sponsored by UGC
- Development of Antimicrobial Silk Suture Materials; sponsored by AICTE
- Empanelment of Assessment Agencies in Textile and Clothing Sector; sponsored by Ministry of Textiles
- Skill Training Programme AICTE-PMKVY.

Elective Courses

- Advances in Manufactured Fibres
- Analytical Characterization of Textiles
- Structural Mechanics of Textile Materials
- Coated Textiles
- Functional Finishes
- Green Processing of Textiles
- Colour Science, Measurement & Applications
- Theory of Colouration
- Computer Application in Textiles
- Energy Management in Textile Industry
- Apparel Marketing and Merchandising
- Apparel Quality Evaluation and Standards
- Apparel Production Planning and Control
- Apparel Product Engineering
- Textile and Apparel Costing
- Industrial Engineering
- Operations Research

M.Tech - Textile Technology Curriculum

Core Course

- Quantitative Techniques in Textile Engg.
- Polymer and Fibre Physics
- Theory of Yarn and Fabric Manufacture
- Colouration and Finishing Technology
- Quality Analysis of Textiles & Clothing
- Statistics & Quality Control for Textile Industry
- Industrial Textiles
- Principles of Colour Measurement
- Clothing Comfort
- Functional Textiles

Elective Courses

- Characterization of Textile Polymers
- Nanotechnology in Textiles
- High Performance and Specialty Fibres
- Alternate Spinning Systems
- Process & Quality Control in Spinning & Weaving
- Theory of Yarn and Fabric Structures
- Specialty Textiles
- Nonwovens
- Surface Modification of Textiles
- Green Processing of Textiles
- Functional Finishes†
- Chemical Processing of Synthetic Textiles
- Printing Technology
- Textile Effluent Treatments
- Textile Marketing and Merchandising
- Textile Composites
- Filters and Filtration Textiles
- Biomechanical Engg. of Functional Textiles
- Coated Textiles
- Electro-Active Textiles
- Recycling in Textiles
- Control System & Automation in Textile Engg.

The Department of Applied Sciences offers a three year B.Sc (Applied Sciences) programme affiliated to Anna University. In addition it offers specialised courses in physics and materials science for several PG programmes in the College. The major areas of research work pursued in the department are piezoelectric materials, solid oxide fuel cells, thin films for thermoelectric applications, functional textiles, spintronics, polymers, electrochemistry, water management, corrosion and textile chemistry. The Department undertakes consultancy work in thermal and spectral characterisation of materials, measurement of magnetic properties, colour metrics of liquids and solids, development of piezoelectric devices and also computerised measurements and analysis for specific industrial applications and measurement systems based on the emerging IoT platforms.

DEPARTMENT OF APPLIED SCIENCE

Programmes offered:
B.Sc. - Applied Science

Programme Profile

The B.Sc. Applied Science Programme has a unique structure that gives the students a broad based science background. They may however specialize in one of the following streams of basic sciences namely Physics, Chemistry or Mathematics and Computer programming. This helps to prepare the students for any analytically oriented profession, while at the same time enabling them to take up post-graduate studies in physical, mathematical and computational sciences. Subsequently they could pursue research in the leading institutions and national R & D laboratories. Besides the regular theory and laboratory subjects, students are offered elective subjects in emerging areas of study. They are also exposed to engineering practices and research methodologies by means of open electives and a project work that has to be completed in the final semester. This would enable them to engage in life-long learning and thereby make them versatile practitioners or researchers in their chosen fields.

Curriculum

The students have subjects of study from mathematics and computer programming, physics and chemistry. A representative list of core courses (T) and associated laboratory (L) courses are given below:

Laboratory Facilities

Infrastructure facilities are available for carrying out experiments related to the respective theory courses. The students also have access to the research labs for carrying out their project work.

Student Projects

A project work has to be completed in the final semester. Students carry out project work in Physics, Chemistry or Mathematics and Computer Applications according to their field of interest.

Core Subjects of Study

Physics

- Properties of Matter (T+L)
- Electricity and Magnetism(T+L)
- Atomic and Nuclear Physics
- Acoustics and Optics(T+L)
- Mathematical Physics
- Mechanics, Waves and Oscillations
- Analog and Digital Electronics(T+L)
- Solid State Physics(T+L)
- Quantum Mechanics

Chemistry

- General Chemistry
- Physical Chemistry
- Organic Chemistry
- Inorganic Chemistry
- Applied chemistry
- (All the subjects have both theory and laboratory component)

Mathematics and Computational Sciences

- Calculus and its Applications
- Linear Algebra
- Complex variables and Transforms
- Probability and Statistics
- Mathematical Structures
- Operations Research
- Graph Theory
- C Programming (T+L)
- Object Oriented Programming and C++ (T+L)
- Data Structures (T+L)

- Apart from these subjects they have four Professional Electives, four Skill Based Electives and an Open Elective to widen their knowledge in their chosen area of specialization.

The Department of Computer Applications is managed by a team of faculty members, six of whom hold Doctorates. The faculty has diverse specializations and research interests. The first AICTE approval for the programme 'Master of computer Applications' was obtained in 1995.

DEPARTMENT OF COMPUTER APPLICATIONS

Programmes offered:
Master of Computer Applications

Laboratory Facilities

PARAM Shavak - Super Computer

HPC Applications, mpiBLAST, GROMACS, WRF, MOM, Onama, Open-source Applications, Parallel and applications, Bio-informatics applications, Chemical engineering applications, Mechanical applications, CHReME.

Computer Centre

Dell PCs, Windows, Linux OS, Microsoft Visual Studio, Microsoft Visio, Eclipse, Net Beans, Turbo C/C++, Oracle , My SQL, Python, PHP, Ruby on Rails, Yacc and Lex, Prolog.

Soft Computing Research Lab

- HP Work station
- ACER Ferrari Notebook
- ACER Travelmate Notebook
- HCL Desktop personal computer
- Matlab Software
- Parallel Computing ToolBox
- Assortment of Tool boxes for the Client-Server based environment

Curriculum

Core courses

Probability and Statistics, Mathematical Foundations of Computer Science, Principles of Programming Languages, Data Structures, Computer System Architecture, Programming Languages Laboratory, Data Structures Laboratory, Optimization Techniques, Object Oriented Programming, Advanced Data Structures and Algorithms, Database Management System , Microprocessors and Embedded Systems, Object Oriented Programming Laboratory, RDBMS Laboratory, Professional Communication, JAVA and .Net Programming, Operating Systems, Computer Networks, Principles of Compiler Design, JAVA and .Net Programming Laboratory, Multimedia Application Development Laboratory, Unix Architecture and Programming, Enterprise Computing, Software Engineering Methodologies, Unix System Programming Laboratory, Enterprise Computing Laboratory, Data Mining, Service Oriented Architecture and Web Services, Service Oriented Computing Laboratory.

Elective Courses

Network Management, Wireless Networks, Security in Computing, Cloud Computing, Pervasive Computing, Mobile Computing, Computers Forensics, High Performance Computing, Foundations of Modern Networking Social Networking and Web Mining, XML and its Applications, Semantic Web Technologies, Machine Learning, Soft computing, Artificial Intelligence, Bioinformatics, Evolutionary Computation, Programming for Robotics, Advanced Database Technology, Information Storage and Management, Green Computing, Multidimensional Data Structures, Multi-Core Programming, Applied Graph Theory, Computer Graphics, Open Source Systems, Human Computer Interaction, Design Patterns, Games Engineering, Big Data Analytics, Data Analytics, Internet of Things, Software Project Management, HPC Programming Model, Programming with Advanced Architectures, Video Processing, Virtualization, Knowledge Management, Principles of Management and Behaviourial Sciences, Accounting and Financial Management, Entrepreneurship, Text Mining, Intelligent Information Retrieval, Geographic Information System, Numerical Methods, Applied Mathematical Modeling, Internet of Things, Python Application Programming, Pervasive Computing.

Projects

Two miniprojects with 4 credits

One six month internship with 12 credits

Research Projects In Progress

- Investigation of Routing Algorithms in Mobile Adhoc Networks;
- Classification using Pattern Matching and Rule Mining;
- Investigation on Link Prediction in Social Networks;
- Parallel and Distributed Computational Intelligence Algorithm for Portfolio Optimization in Financial Engineering;
- An Intelligent System for Automatic supply of fertilizers for Greenhouse Environment

Mission of the Department

The fundamental objective of the department is to develop quality professionals by providing concept oriented subject knowledge through high quality teaching supplemented with practical training. Apart from specialized knowledge and skills, the programmes conducted by the Department aim to develop the personality of students by inculcating values of honesty, sincerity, team spirit and work culture.

DEPARTMENT OF APPLIED MATHEMATICS AND COMPUTATIONAL SCIENCES

PG Programmes offered by the department:

- M.Sc.(Applied Mathematics)
- M.Sc.(Software Systems)
- M.Sc.(Theoretical Computer Science)
- M.Sc.(Data Science)

UG programme offered by the Department:

- B.Sc (Computer Systems & Design)

Laboratory Facilities for UG and PG programmes

- SKAVA Mobile Computing Laboratory
- Computational Sciences Laboratory
- Data Science Laboratory
- Cyber Security Research Lab
- Computational Neuroscience Lab

Hardware:

IBM Server -5 Nos, HP Blade server -2 Nos, HP Server - 1

All necessary open source and proprietary software for the various laboratory courses are available.

B.Sc - Computer Systems and Design

Mathematics and Humanities Courses

- Calculus and its Applications
- Communication Skills
- Discrete Mathematics
- Environmental Science and Green Computing
- Linear Algebra
- Probability and Statistics

Core Professional Courses

Advanced Data Structures, Analog and Digital Electronics, Computer Architecture, Computer Graphics and Multimedia, Computer Networks, Data Mining, Data Structures, Database Management Systems, Enterprise Computing, Java Programming, Microprocessors and Interfacing, Mobile Computing, Object Oriented Analysis and Design, OOP with C++, Operating Systems, Software Engineering, Software Testing, System Software, Web Technology

Elective Courses

Advanced Database Management Systems, Agent based Intelligent Systems, Big data analytics, Cloud Computing, Cryptography, Differential Equations, Embedded System and Design, Graph Theory, Machine Learning, Neural Networks, Numerical Analysis, Optimization Techniques, Semantic Web, Service Oriented Architecture, Software Patterns, Theory of Computing, XML and Web Services.

M.Sc - Software Systems

Curriculum

Mathematics and Science Courses

- Accounting and Financial Management,
- Applied Linear Algebra,
- Calculus and Its Applications,
- Discrete Structures,
- Material Science,
- Probability and Statistics,
- Transforms
- Three Dimensional Geometry

Core Professional Courses

Accounting and Financial Management, Advanced Data Structures, Analog and Digital Electronics, Applied Graph Theory , Computer Graphics and Visualization, Computer Organization, Data Base Management System, Data Communication Networks, Data Structures and Algorithms , Digital Manufacturing, Distributed Enterprise Computing, Enterprise Computing, Intelligent Information Retrieval, Machine Learning, Microprocessor Systems and Programming, Object Oriented Analysis and Design, Principles of Compiler Design, Object Oriented Programming, Operating Systems, Optimization Techniques, Principles of Management and Behaviourial Science , Soft Computing, Software Engineering Techniques, Software Project Management and Quality Assurance , Software Testing, TCP/IP Networks and Applications, Unix Architecture and Programming, Web Services

Elective Courses

- AdvancedComputerGraphics
- AdvancedDatabaseManagementSystems
- AgileSoftwareDevelopment
- CloudComputing
- DataCompression
- DataMining
- HumanComputerInteraction
- MobileComputing
- ModellingandSimulation
- ParallelandDistributedComputing
- PervasiveComputing
- PrinciplesofProgrammingLanguages
- RealTimeandEmbeddedSystems
- RequirementsEngineering
- SecurityinComputing
- SemanticWeb
- ServiceOrientedArchitecture
- SocialNetworkAnalysis
- SoftwareMetrics

M.Sc - Theoretical Computer Science Curriculum

Mathematics and Science Courses

- Abstract Algebra
- Complex Variables and Transforms
- Discrete Structures
- Graph Theory
- Linear Algebra and Numerical Analysis
- Materials Science
- Mathematical Methods
- Mathematical Modeling
- Probability and Statistics
- Stochastic Processes

Core Professional Courses

- Advanced Data Structures
- Analog and Digital Electronics
- Artificial Intelligence
- C Programming
- Computational Geometry
- Computational Number Theory and Cryptography
- Computer Graphics and Visualization
- Computer Networks and TCP/IP
- Computer Organization and Assembly Language Programming
- Data Mining
- Data Structures and Algorithms
- Database Design
- Design and Analysis of Algorithms
- Game Theory
- Intelligent Information Retrieval
- Machine Learning
- Object Oriented Programming
- Operating Systems
- Optimization Techniques
- Parallel and Distributed Computing
- Principles of Compiler Design
- Security in Computing
- Software Engineering
- Theory of Computing

Elective Courses

- Advanced Computer Graphics
- Approximation Algorithms
- Cloud Computing
- Data Compression
- Multi Paradigm Programming Languages
- Natural Language Processing
- Network Algorithmic
- Pervasive Computing
- Principles of Programming Languages
- Program Semantic Analysis
- Randomized Algorithms
- Semantic Web
- Social Network Analysis
- Software Patterns
- Software Process Management
- Wireless Networks

M. Sc - Data Science Curriculum

Mathematics and Science Courses

- Abstract Algebra
- Applied Physics
- Calculus and its applications
- Discrete Structures
- Graph Theory
- Linear Algebra
- Transforms and its applications

Core Professional Courses

- Advanced Analytics
- Advanced Data Structures
- Applied Numerical Analysis
- Applied Statistics and Python Programming
- Computer Networks
- Computer Organization and Assembly Language Programming
- Data Mining
- Data mining
- Data Privacy and Security
- Data Structures
- Database design
- Design and Analysis of Algorithms
- Digital Electronics
- Information Retrieval
- Modern Database systems
- Network Science
- Object Oriented Programming
- Operating System
- Optimization Techniques
- Parallel and Distributed Computing
- Predictive Analytics
- Problem solving and C Programming
- Reinforcement Learning
- Stochastic Models
- Supervised and Unsupervised Learning
- Theory of Probability
- Web Analytics

Elective Courses

- Algorithms for Bioinformatics
- Applied Graph Algorithms
- Artificial Intelligence
- Cloud Computing
- Computational Neuroscience
- Computer Graphics
- Data Compression
- Data visualization
- Design Patterns
- Digital Image Compression
- Game theory
- Marketing Analytics
- Mathematical Modeling
- Mobile computing
- Multimedia Analytics
- Natural Language Processing
- Pervasive Computing
- Social Network Data Analytics
- Soft Computing
- Software Engineering

M.Sc - Applied Mathematics Curriculum

Core Professional Courses

- Real Analysis
- Discrete Mathematics
- Applied Linear Algebra
- Numerical Analysis
- Programming in C
- Topology and Functional Analysis
- Applied Probability
- Differential Equations
- Data Structures and Algorithms
- Object Oriented Programming in C++
- Complex Variables and Integral Transforms
- Operations Research
- Data Mining
- Soft Computing

Elective Courses

- Advanced Data Structures and Algorithms
- Computer Graphics
- Computer Networks
- Number Theory and Cryptography
- Digital Image Processing
- Graph Theory and its Applications
- Intelligent Information Retrieval
- Machine Learning
- Mathematical Finance
- Numeric Solutions to Partial Differential Equations
- Stochastic Differential Equations
- Wavelet Transform
- Computational Topology
- Algebraic Topology
- Operating Systems
- Data Science

The Fashion Design & Merchandising is a five year integrated programme started in the year 2015. The curriculum is designed to prepare graduates with a solid understanding and expertise, required to enter professional practice in the challenging and competitive fashion industry. This course is first of its kind, designed at the university level with a unique blend of designing, production, merchandising and management, enabling them to be socially responsible entrepreneurs, to meet the diverse demands of the fashion industry through R&D.

DEPARTMENT OF
APPAREL & FASHION DESIGN

Programmes offered:
M.Sc. - Fashion Design and Merchandising

Laboratory facilities:

Pattern Making Laboratory:

- Dress Forms
- Cork Topped Tables

Computer – Aided Fashion Design Laboratory

- Corel Draw
- Adobe Illustrator
- Adobe Photoshop
- Colour Matters
- WGSN

Fashion Styling and Product Development Laboratory

- Embroidery Machine

Garment Construction Laboratory

- Single Needle Lock Stitch Machine
- Over Lock Machine
- Flat Lock Machine

Curriculum

Mathematics

- Applied Geometry
- Research Methods

Science and Humanities

- English for Professional Skills
- Applied Science

Professional Core courses

- Textile Science
- Elements and Principles of Design
- Textile Manufacturing
- Fabric Structure
- Indian Art and Craft
- Pattern Making
- Fashion Communication
- Dyeing and Printing of Textile Materials
- Process Flow in Apparel Manufacturing
- History of Costumes
- Trend and Fashion Forecasting
- Fashion Design
- Textile & Apparel Quality Evaluation
- Knitwear Design and Manufacture
- Fashion Branding
- Finishing and Clothing Care
- Clothing Science
- Apparel Production Planning and Control
- Apparel Marketing
- Principles of Management
- Apparel Costing
- Apparel Merchandising
- Fashion Retail Management
- Ergonomics in Clothing Design
- Visual Merchandising
- Financial Management
- Apparel Export Management
- Logistics and Supply Chain Management
- Entrepreneurship
- Fashion Illustration
- Garment Construction
- Fashion Draping
- Computer Aided Design

Employment Enhancement Courses

- Industrial Visit and Lecture
- Cluster Visit and Craft Documentation
- Internship / Project work (I,II)

Electives

- Theatre Costume and Design
- Footwear Designing
- World Art and Craft
- Garment Trims and Accessories
- Ergonomic in Apparel Industry
- Intimate apparels
- Sportswear
- Fashion Denim Wear
- Garment Size and Fit Analysis
- Human Resource Management
- Operations Management
- Global Marketing
- Strategic Business Management
- Total Quality Management
- Business Ethics and Social Responsibility
- Intellectual Property Rights
- Fashion Journalism
- Fashion Advertising and Promotion
- Organizational Behavior

Research Projects In Progress

- Design and development of functional wear for the elderly, sponsored by University Grants Commission – South Eastern Regional Office, Hyderabad.

PSG Tech was selected into the elite club of 65 PACE (Partners for the Advancement of Collaborative engineering Education - partnership between General Motors, Siemens PLM Software, Autodesk, Hewlett Packard and Oracle) institution across the globe and has received in-kind support of software and hardware worth INR 1500 Crores.

PSG TECH IN NEWS THIS YEAR

Our BE ECE 1994 alumnus Vanitha Kumar, Vice President - Software Engineering at Qualcomm in USA, is selected as one of the top ten powerful women in the world of technology.

Dr.Mylswamy Annadurai, an alumnus of EEE department, PSG Tech was awarded Padma Shri award by the Government of India for year 2016.

Mr. Cottalango Leon(1992 BE-CSE), received the Oscar Technical Achievement Award from OSCAR Academy for his contribution to the process of movie making.

Products developed by the ECE and BME departments under the support of Department of Science and Technology, Govt. of India, were successfully transferred to Industry for commercialization.

COLLABORATIONS

Industrial Collaboration, Research & Development and participation in Curriculum design. MoUs were signed by departments with industries for exchange of resources and knowledge, Industrial visit, identification of research projects of mutual interest, sharing Infrastructure, Market Survey, Student training & internship. MoUs were signed between

- Dept. of Applied Mathematics and Computational Sciences and Nalco Company LLC, Naperville, USA, Probyto Data Science & Consulting Pvt.Ltd. Ghaziabad, India.
- Dept. of Mechanical engineering and the American Society for Quality India Pvt. Ltd, New Delhi.
- Departments of Electronics and Communication Engineering and Instrumentation and Control Engineering with YantraVision Software Private Limited, Bangalore.
- Metallurgy Department with JSW Steel Limited, Salem.
- Robotics and Automation Engineering Department with SEFORGE Limited, BECKOFF Automation Pvt Ltd, Pune and TAL Manufacturing Solutions Limited, Pune.
- Department of Biomedical Engineering with M/s ROOTS Group of companies, Coimbatore.
- Dr.G.Thilagavathi, Professor & Head, Department of Textile Technology, participated in the International Teaching Week at HoF University, Germany.
- The Industrial Research and Development Cell of PSG Tech with Kovai Air Products, USA; Saint Gobain Ltd., Chennai; Tamil Nadu Transmission Corporation, Mercedes-Benz R & D India Pvt. Ltd, Indus Electronics Indi a(P) Ltd., Coimbatore; INDFURR SuperHeat Furnaces, Chennai.

Our faculty members and Ph. D scholars have contributed immensely to improving the academic and research ambience of the institution in the way of publications, patents and research grants from Government agencies and industry. To mention a few of the research projects sanctioned -

- Automated Welding Systems for specific Industrial Applications.
- Methanol Fed High Energy Density Fuel Cell System with Novel Catalyst and Flow Field Design
- Design and development of PCM based pilot solar hybrid thermal storage system for low temperature application.
- An Integrated System for Treatment of Textile Industry Wastewater.
- Design and Development of Technology for High Temperature Brushless Servo Motor for ISI-Systems for NPP in India.
- Wind- Solar cold storage plant for the needy.
- Experimental Investigations on Surface Topography in Micro-milling of New Ti-Nb-Ta Based Alloys for Biocompatibility in Medical Implants.
- Design and Development of Controller for Smart MicroGrid under Unbalanced Conditions.
- Development of Jute/Jute Blended Fibrous Mat for Effluent.

The college is associated with several research organizations and industries in order to promote closer interaction with other institutions in the areas of technology development, training of students, curriculum updating and development of state-of-art centres. Several advanced centres are set up in collaboration with industries as well as with financial support from the Ministry of Human Resources Development, Department of Science and Technology and other agencies .These include -

RESEARCH

- PSG - NI Virtual Instrumentation Centre
- PSG - Festo centre for Pneumatic & Control Engineering
- PSG - Siemens Centre of Excellence in Automation
- PSG - LAPP Centre for excellence in Cable Technology
- PSG - Heidenhain CNC Centre
- PSG - Lectra Apprael CAD Centre
- PSG - SIRUBA-MEHALA Apparel Machinery & Equipments Centre
- PSG - ELMAQ ERP Training Centre
- PSG - Cognizant Open source Software Centre
- PSG - Juniper Centre of Excellence in Networking
- PSG - Freescale Embedded Systems Lab
- Karivardhan centre of Excellence in Automobile engineering
- PSG - Adept Centre for Robotics
- PSG - Ranal Centre for Software Testing
- PSG - Ashok Leyland Automotive Research Centre
- PSG - Techtronics Centre for Excellence in Robotics
- PSG - IBM Centre for Excellence in Operating Systems
- PSG - Cypress - PSoC Design Centre
- PSG - Siemens PLM Training Centre
- PSG - Exilant Textile ERP Centre
- TIFAC - CORE in Rapid Prototyping and Manufacturing
- PSG - Yuken Hydraulic Automation centre
- PSG - Rockwell Centre for Excellence in Industrial Automation
- PSG - L&T Centre for Excellence in Low Voltage Switchgears
- PSG - Premier Textile Technology Centre
- PSG - ASSYST BULLMER - MEHALA Fashion Studio
- PSG - Kawabata Centre for Fabrics
- PSG - Infineon Embedded Systems Centre
- PSG - Keysight Centre of Excellence in Advanced Wireless Technology
- PSG - TCS Centre of Excellence in Software Engineering
- VLSI Design Centre
- PSG - Keysight Baseband Communication & Advanced Embedded Systems Lab
- PSG - Fanuc Centre for Advanced CNC and Robotics
- PSG - Eplan Centre for Electrical CAD
- PSG - Rane Automotive Test Centre
- PSG - GENERAL MOTORS - PACE Centre
- PSG - DANFOSS Centre of Excellence for Energy & Climate Change
- PSG - Supra SAE Lab
- PSG - Juniper Networking Lab
- National MEMS Design centre
- PSG - SIMA Textile Technical Training Institute
- PSG - Welding Research Centre

Few recent research initiatives by the college include the following -

- Machine Tool Development Centre, sponsored by the Office of the Principal Scientific Advisor to Govt. of India with a funding of 5.13 crores.
- Welding Research Project jointly established by Dept. of Heavy Industries (DHI), Govt. of India and PSGCT to the tune of 21.1 crores. The Centre was inaugurated by Shri Girish Shankar, Secretary, DHI.
- Centre of Excellence in Industrial Textiles jointly established by Ministry of Textiles and PSG Tech at a cost of 24.5 crores.
- Nanotechnology Research, Innovation and Incubation Centre jointly established by Department of Science and Technology, GoI and PSG Tech at a budget of 25 crores.
- Centre for Earthquake Technology established by FIST, GoI and PSG Tech with funding of 1.5 crores.
- PSG - TI Centre of Excellence for Medical Electronics jointly established by Texas Instruments, USA and PSG Tech in the Department of Biomedical Engineering.

The GRD Memorial Library of PSG Tech is one of the best equipped in terms of number of books, back volumes and current journals.Spread over an area of 51, 240 sq. feet, the library caters to the needs of faculty and students as well as the industrial associates of PSG College of Technology. The library is fully automated and includes a digital library facility to enable universal access.

As on date the library houses around 2, 50, 000 books and 280 journals. Online Journals like Science Direct, IEEE-ASPP, SME, ASCE, SPRINGER, NATURE, ASTM, McGraw Hill, J-Gate and Scopus databases at a cost Rs.36,67,474 are being subscribed .

The library organizes LIBFEST every year in association with the Book Readers Club of PSG Tech and the Rolling trophy is awarded to the Overall Championship.

Students take up various types of Internships, including the 3-month curricular Internship of the Sandwich branches - Electrical and Electronics, Mechanical and Production Engineering; coordinated by the Industrial Training Department attached to the PSG Industrial Institute, an on-campus Industry that is a unique feature of the PSG group of Institutions. For the year 2016-17, five Sandwich students carried out their Summer Internship at Lapp Kabel Germany, Siemens Abu Dhabi and at the University of Leeds, UK.

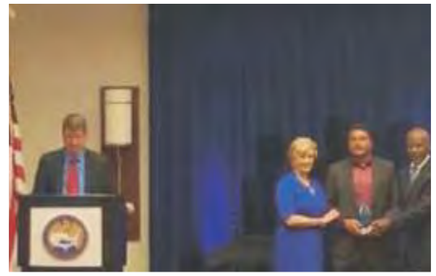
INTERNATIONAL EXPOSURE

Several of our students across various years and branches opt to attend a Summer School at overseas Universities that offer such programmes. Students also take up a One semester Study abroad programme as part of their curriculum. Universities that have a long-term relationship with PSGCT include the University of South Australia, University of New South Wales, University of Taylors Engineering and University of Flinders-Australia, University of HoF Applied Sciences and University Hochschule Esslingen of Applied Sciences - Germany, University of Colorado State, USA, Glasgow Caledonian University (GCU) and the University of Leeds, in the United Kingdom.

The Summer schools and One-Semester Study Abroad offer our students a glimpse into the teaching-learning processes at reputed global Universities, and also provide them additional Research and further study options.

FEW ACHIEVEMENTS OF OUR ALUMNI DURING 2016-17

Our M.E. Computer Integrated Manufacturing 1991 alumnus Prabhu Patil, CEO, PROLIM Corporation is honored by US Govt. Small Business Administration as the Entrepreneurial Success of the Year 2017 as he is the man behind the concept, design and implementation of complex global delivery model across continents and countries.



"M/s.Maxbyte Technologies Pvt. Ltd., a Startup by Mr.C.S.Ramshankar, alumnus of M.E. Product Design and Commerce of Department of Production Engineering has been recognized as a Best Start-up by the CII in Manufacturing Sector at CII STARTUPRENEURS 2017, Chennai on Apr 17th 2017.

Our Alumnus Mr.Safirulla IAS, B.E (EEE-SW) received an Award from the President of India in Appreciation of his Exemplary Services as Director-IT, Govt. of Kerala, during Elections 2016.

Our BE ECE 2004 alumnus Dr Sharath Sriram was awarded "3M Eureka 2016 Prize for Emerging Leader in Science". He has mimicked the way the human brain processes information with the development of an electronic long-term, multi-state memory cell. He is Associate Professor in Royal Melbourne Institute of Technology, Australia.

Our BE ECE 1984 Batch Alumni Dr Raj Rajkumar, Professor of Electrical & Computer Engg at Carnegie Mellon Univ in US. His General Motors - Carnegie Mellon Autonomous Driving Collaborative Research Lab is about to release Autonomous Car

Our Alumnus (M.Sc - Applied Mathematics) Prof. Dinesh Kumar, Professor in Quantitative Methods & Information Systems, Indian Institute of Management Bangalore (IIMB), has been recognized as one of the Top 10 Most Prominent Analytic Academicians in India for his extensive research in Big Data Analyses by Analytics India Magazine. He is also the President of the Analytics Society of India (ASI).

The Department of Physical Education covers an area of five acres located near the hostel premises. The department has infrastructure for all the indoor and outdoor games. The department is headed by a Physical Director and assisted by two Assistant Physical Directors, one Physical Training Instructor along with three markers as supporting staff. The activities are held throughout the year, every day, from 6.30 am to 7.00 pm.




EXTRA CURRICULAR ACTIVITIES

Our college teams have participated in various tournaments and won many laurels to our college. The following are the achievements of men and women teams. By winning first place in 9 games and second place in 5 games we won the Anna University zonal Overall Championship this year.

Our Players representing PSG sports Club currently playing in the 'A' division Coimbatore Football league.

Our cricket team is actively competing in Coimbatore District Cricket Association (CDCA) III Division League tournaments.

The National Cadet Corps (NCC) of PSG has five wings and there are about 278 cadets who are actively involved in NCC activities CLUBS AND ASSOCIATIONS AT PSGTECH

The Bridge is the student-run official online magazine of PSG Tech, which connects current students to the larger alumni community. It publishes the events and happenings in and around PSG Tech, the success stories and interesting interviews of the alumni and other contributions of Techians.

THE BRIDGE

http://thebridge.PSGtech.ac.in

GLOBAL LEADERS' FORUM (GLF) is a platform for students who aspire to become leaders and create a better tomorrow. The club conducts various interactive activities and events to instill leadership qualities and public speaking skills in students.

To develop social responsibility and to cultivate the service mind in young people NSS, YRC and ROTARACT organised several orphanage, donation camps and rural development camps.

The FINE ARTS CLUB encourages young talents in diverse wings like drawing, painting, philately and photography.

RADIO HUB of PSG TECH conducted RJ Hunt to bring out the Radio Jockeying talents of students and Ham Radio Awareness programme to create awareness about amateur radio, its use and procedure for obtaining license. PSG Super Singer 2017 encourages young talents every year.

To encourage innovative and practical skills among students STUDENTS' RESEARCH COUNCIL organised Technovator Award presentation. Selected teams were judged by Industrial Experts and were given funding to implement their ideas.

BOOK READERS CLUB conducted Book Reading Session where a classical book of reader's choice was read and discussions were made on the plot and characters.

The PSG STEP (Science & Technology Entrepreneurial Park) is in the seventeenth year of operation at PSG Tech and is spread over an area of 28,000 sq. feet with 41 incubates in the areas of IT, Mechanical, Electronics and Biotech. PSG _STEP adjudged as the "Best STEP" in the country by Ministry of Science and Technology, Govt. of India, provides technical services to entrepreneurs by providing hardware, software and humanware support available at PSG Tech.

ENTREPRENEURSHIP ACTIVITIES

A Boot Camp for Startup Co-Founders was organized by PSG STEP this year. The PSG STEP incubate "Coitor IT Technology P Ltd" won the CII-Startupreneurs Award" from CII, Chennai. The product of PSG - TSEP incubate TINO Techmations Pvt. Ltd - SmartAgri was selected as one of the top 150 innovations around the world by the United Nations.

The PSG STEP Entrepreneurs Club started in 2006 in collaboration with the National Entrepreneurship Network (A part of the Wadhani Foundation) with several campus companies including the Thirst-e, Tech Travels, Trend E, bookmark, organized several events this year including an "Evening with Entrepreneur" - an experience sharing session of entrepreneurs with students and the E-Next, a 2 day Entrepreneurship Summit for students of PSG College of Technology and other institutions from the region. The event had experience sharing by successful entrepreneurs, investors talk, panel discussion, workshops and idea pitches.

Three incubates of PSG STEP were invited by CII to showcase their products in the event "Start-up India" organized by CII, SIEMA and CODISSIA.

PSG STEP is authorized for NIDHI-PRAYAS (PRomoting and Accelerating Young and Aspiring Technology entrepreneurs) - a scheme launched by NSTEDB, DST, Govt. of India, as a pre-incubation initiative that supports young innovators to turn their ideas into proof of concept.

The NIDHI - Entrepreneurs - in - Residence (EIR) programme provides opportunity for guidance from experienced, innovative and highly successful entrepreneurs on business concepts, strategies, etc and co-working spaces for developing idea into a marketable product.

PLACEMENT PROCEDURE

PS G College of Technology has an independent Placement Office devoted to cater to the needs of organizations in conducting campus interviews for placements. It is headed by Dean, Placement & Training and supported by a Placement Officer and Placement Co-coordinator. The office is also assisted by student Placement Co-coordinators who lead a team of placement representatives from various courses of study. The Placement Office ensures and provides the best arrangements and hospitality for visiting companies' officials.

Placement Office functions in a separate air conditioned block with all audio visual facilities for PPT, written test, group discussion and interviews and has rapidly progressed over the years in enhancing the placement potential effectively. It plays a very important and key role in counseling and guiding students of the college for their successful career placement, which is a crucial interface for the students between the stages of completion of academic programme of studies and entry into a suitable employment.

This office also coordinates various activities related to the career of the students along with the industrial training. More than 150 reputed national and multinational companies visit the college for campus recruitment annually. Over 90% of the students secure job offers before they complete their programmes of study.

The Placement Section also offers Pre-placement Grooming to students in association with FACE (Focus Academy for Career Enhancement), Coimbatore. FACE, an IIM Graduates' Enterprise, was recently featured in the Starship Enterprise Section of Economic Times.

OUR PATRONS

- ABB Ltd., Bangalore
- ACC Limited, Mumbai
- Accenture, Bangalore
- Adobe Systems, Bangalore
- ADPPvt. Ltd., Hyderabad
- Advanced Academy for Development of Textile Technologist, Mumbai
- Akzo Nobel Coatings India Pvt. Ltd., Bangalore
- Alcatel Lucent India Ltd., Chennai
- Altair Engineering India Pvt. Ltd., Chennai
- Amazon Software Development (I) Pvt. Ltd., Bangalore
- Ameex Technologies Pvt. Ltd., Chennai
- Analog Devices India Pvt. Ltd., Bangalore
- Anand Automotives Ltd., Mumbai
- Areva T & D India Ltd., Noida
- Aricent, Bangalore
- Ashok Leyland Limited, Chennai
- Asian MotorWorks Pvt. Ltd., Gujarat
- ATCTyres Pvt. Ltd., Timnelveli
- Athenahealth Technology Pvt. Ltd., Chennai
- AVTEC Ltd., New Delhi
- BajajAuto Ltd., Pune
- Beroe Inc, Chennai
- BGR Energy Systems Ltd., Chennai
- Bharat Earth Movers Ltd., Bangalore
- Bharat Forge Limited, Pune
- Blue Star Limited, Chennai
- BrahMos Aerospace Pvt. Ltd., New Delhi
- Brakes India Limited, Sholinghur
- CA Technologies Pvt. Ltd., Hyderabad
- Capgemini India, Hyderabad
- Caterpillar India Pvt. Ltd., Chennai
- Cethar Limited, Trichy
- Chrysler IndiaAutomotive Pvt. Ltd., Chennai
- Cisco Systems (India) Private Limited, Bangalore
- Cognizant Technology Solutions, Chennai
- CommVaultSystems India Pvt. Ltd., Hyderabad
- Computer Associates, Hyderabad
- Computer Sciences Corporation (I) Pvt. Ltd., Chennai
- Consolidated Construction Consortium Ltd., Chennai
- Consul Consolidated Pvt. Ltd., Chennai
- Cordys Software India Pvt. Ltd., Hyderabad
- Cosmic Circuits Pvt. Ltd., Bangalore
- Crescent Foundry Co. Ltd., Kolkata
- Cypress Semiconductors Ltd., Chennai
- D.E.Shaw India Software Pvt. Ltd., Hyderabad
- Daimler India Commercial Vehilces Pvt. Ltd., Sriperumbudur
- Dalmia Cements (Bharat) Ltd., Trichy
- Danfoss Industries Ltd., Chennai
- Defiance Technologies, Chennai
- Deloitte Consulting (I) Pvt. Ltd., Hyderabad
- Delphi Automotive Systems Pvt. Ltd., Bangalore
- Delphi-TVS Diesel Systems Ltd., Chennai
- Donear Industries Ltd., Surat
- eBay IDC, Chennai
- Efficient Frontier India, Chennai
- Elgi Equipments Ltd., Coimbatore
- EmbedURSystems India Pvt. Ltd., Chennai
- EMC Corporation, Bangalore
- Ericsson (I) Pvt. Ltd., Chennai
- Ernst & Young, Bangalore
- ESAB India Ltd., Chennai
- EssarGroup, Surat
- ETAEngineering Ltd., Chennai
- ExeterGroup, Bangalore
- Exterro (I) Pvt. Ltd., Coimbatore
- Fiorano Software Technologies Pvt. Ltd., Bangalore
- Ford India Ltd., Chennai
- Frontline Consulting Services, Hyderabad
- Future Group, Mumbai
- GE India Healthcare, Bangalore (JFWTC)
- General Motors Technical Centre, Bangalore

OUR PATRONS

- Geometric Limited, Pune
- Givaudan India, Mumbai
- Global Analytics (I) Pvt. Ltd., Chennai
- Global Scholar, Chennai
- Godrej & Boyce Manufacture Company Ltd., Mumbai
- Goldman Sachs Services Pvt. Ltd., Bangalore
- Goodrich Aerospace Services Pvt. Ltd., Bangalore
- Google India Pvt. Ltd., Bangalore
- Groz-Beckert,Tirupur
- HCL Infosystems Ltd., Chennai
- Hewlett Packard India Ltd., Bangalore
- honda Motorcycle and Scooter(I) Pvt. Ltd., Gurgaon
- HP India Pvt. Ltd., Bangalore
- Hyundai Motor India Ltd., Chennai
- \2 Technologies India Pvt. Ltd., Bangalore
- IBM India Pvt. Ltd., Bangalore
- IBM India Software Lab, Bangalore
- IGATE Patni, Bangalore
- Indian Oil Corporation Ltd., New Delhi
- Innovation Labs, 24/7 Inc. Bangalore
- Intel India Technologies Pvt. Ltd., Bangalore
- Intimate Fashions (I) Pvt. Ltd., Chennai
- ITC Infotech India Ltd., Bangalore
- ITC Limited, Kolkata
- Ittiam Systems Pvt. Ltd., Bangalore
- IVY Comptech Pvt. Ltd., Hyderabad
- Jay Jay Mills (I) Pvt. Ltd., Tirupur
- JDASoftware India Pvt. Ltd., Bangalore
- John Deere India Pvt. Ltd., Pune
- JSW Steel Limited, Bellary
- KG Denim Limited, Coimbatore
- KEF Holdings Limited, Sharjah U.A.E
- KirioskarOil Engines Ltd., Pune
- KLATencor Software India Pvt. Ltd., Chennai
- KPMG, Mumbai
- L&T Valdel Engineering Ltd., Bangalore
- Lakshmi Machine Works Ltd., Coimbatore
- Larsen & Toubro Limited, (ECC Division) Chennai
- Larsen & Toubro Limited, (Infotech) Mumbai
- Larsen & Toubro Ltd., (Ramboll) Chennai
- Larsen & Toubro Ltd., Mumbai
- Laser Words Pvt. Ltd., Chennai
- Lister Technologies Pvt. Ltd., Chennai
- Loyal Textile Mills Ltd., Kovilpatti
- Lucas-TVS, Chennai
- M.N.Dastur & Company (P) Ltd., Chennai
- Madura Garments, Bangalore
- Mahindra & Mahindra Automotives Ltd., Mumbai
- Mangalore Refinery & Petrochemicals Ltd., Mangalore
- Manhattan Associates, Bangalore
- Maig Constructions Limited, Chennai
- Maruti Suzuki India Ltd., Gurgaon
- Mckinsey & Company, Chennai
- Michelin India, Chennai
- Microchip Technologies India Pvt. Ltd., Bangalore
- Microsoft India R & D, Bangalore
- Mindtree Consulting Ltd., Bangalore
- Morgan Stanley Advantage Services, Mumbai
- Motorola India Electronics Pvt. Ltd., Bangalore
- Mu Sigma Business Solutions Pvt. Ltd., Bangalore
- Murugappa Group, Chennai
- Must Garment Corp. Ltd., Hongkong
- Mytrah Energy India Ltd., Hyderabad
- National Instruments, Bangalore
- NetApp Systems India Pvt. Ltd., Bangalore
- Nokia India Pvt. Ltd., Chennai
- Nokia Siemens Networks India Pvt. Ltd., Bangalore
- ? Nomura Services India Pvt. Ltd., Mumbai
- Nortel Technology Excellence Centre Pvt. Ltd., Bangalore
- Novell Software Development (I) Pvt. Ltd., Bangalore
- NTT Data FAInsurance Systems (I) Pvt. Ltd., Bangalore

- Nvidia Graphics Pvt. Ltd., Bangalore
- OAT Systems Software (I) Pvt. Ltd., Bangalore
- Oracle India Pvt. Ltd., Bangalore
- Oxylane, Bangalore
- Patni Computer Systems (P) Ltd., Mumbai
- Payoda Technologies Pvt. Ltd., Coimbatore
- Paypal (I) Pvt. Ltd., Chennai (eBay India)
- Philips Electronics India Limited, Bangalore
- Philips Software Centre Pvt. Ltd., Bangalore
- Precot Meridian Ltd., Coimbatore
- Qualcomm India Pvt. Ltd., Bangalore
- Quest Global, Bangalore
- Rane Group, Chennai
- Raymonds Limited, Yavatmal
- Reckitt Benckiser (India) Ltd., Gurgaon
- Renault Nissan Technology and Business Centre India Pvt. Ltd., Chennai
- Robert Bosch Engineering & Business Solutions Ltd., Coimbatore
- Rotork Controls India Pvt. Ltd., Chennai
- Royal Enfield, Chennai
- S.P.Apparels Ltd., Coimbatore
- Saipem(I) Projects Ltd., Chennai
- Same Deutz- Fahr India Pvt. Ltd., Chennai
- Samsung India Software Operations, Bangalore
- Sankalp Semiconductor Pvt. Ltd., Bangalore
- Sanmar Group, Chennai
- SAP labs India Pvt. Ltd., Bangalore
- Satyam Venture Engineering Services, Bangalore
- Schneider Electric India Pvt. Ltd., Bangalore
- Shahi Exports Pvt. Ltd., Bangalore
- Shanthi Gears Ltd., Coimbatore
- Shapoorji Pallonji Co. Ltd., Mumbai
- SHV LPG India Pvt. Ltd., Chennai
- Siemens Information Processing Services, Bangalore
- Skava systems Pvt. Ltd., Coimbatore
- Sobha Developers Ltd., Bangalore
- Soma enterprise Ltd., Hyderabad
- Sony India Software Centre, Bangalore
- Sourcebits Technologies, Bangalore
- SRF Limited, Gurgaon
- Subex Limited, Bangalore
- Success Factors, Bangalore
- Sun Tec Business Solutions, Chennai
- Sundaram Fasteners Limited, Chennai
- Synopsys India Pvt. Ltd., Hyderabad
- Tata Consultancy Services Ltd., Chennai
- Tata Motors Ltd., Pune
- Tata PowerCompany Ltd., Mumbai
- Tata Steel Limited, Jamshedpur
- Tata Technologies Ltd., Pune
- TCE Consulting Engineers Ltd., Bangalore
- TESCO Hindustan Service Centre Ltd., Bangalore
- The Southern India Mills Association, Coimbatore
- Thermax India Ltd., Pune
- Thorogood Associates India Pvt. Ltd.,Hyderabad
- ThoughtWorksTechnologies India Pvt. Ltd., Bangalore
- Titan Industries Ltd., Hosur
- Tony Harris Business Solutions, Bangalore
- Tractors and Farm Equipments Ltd., Chennai
- Triad Software Pvt. Ltd., Chennai
- TVS Motor Company Ltd., Hosur
- Unisys Global Service Pvt. Ltd., Bangalore
- URC Construction Pvt. Ltd., erode
- VATech Wabag Ltd., Chennai
- VALEO Engineering Center (I) Pvt. Ltd., Chennai
- Vardhman Textiles Limited, Himachal Pradesh
- VE Commercial Vehicles Ltd., Bangalore
- Vedanta Resources, Tuticorin
- Volvo India Pvt. Ltd., Bangalore
- Wells Foigo India Solutions Pvt. Ltd., Hyderabad
- Windcare India Ltd., Udumalpet
- Wipro Technologies, Bangalore
- Yahoo! Software Developement India Pvt. Ltd., Bangalore.

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