# PLACEMENT BROCHURE

JTE OF

SANT LONGOWA

# 2017-18

- 🕥 www.tnp.sliet.ac.in
- 🖌 headtp@sliet.ac.in
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Sant Longowal Institute of Engineering & technology Deemed University (Estb. by Govt. of India) Sangrur Punjab-148106

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sliet.ac.in| Department of Training & Placement



### VISION

CLOSE INTERFACE WITH INDUSTRY FOR PRESENTING THE COMPETENT & SKILFUL PERSONS WITH INNOVATIVE THOUGHTS TO FACE THE REAL WORLD OF WORK CHALLENGES WITH INDIAN VALUES.

# MISSION

BRIDGING THE GAP BETWEEN THE NEEDS OF THE IN-DUSTRY & SKILLS OF THE STUDENTS.

### VISION

SLIET shall strive to act as an international po dium for the development and transfer of -tech nical competence in academics through formal and non formal education, entrepreneurship and research to meet the changing need of society.

### MISSION

1. Non formal,flexible,modular,multipoint entry programs in engineering and technology and in the areas like rural development, educational planning, information and management sciences.

2. Education and training in modern technology areas.

3. Promotion of self-development among the students.

4. Extension services to industry working population, passed-out students, social organizations and institutions of research and higher learning.

5. Close interface with the industry to conduct research on the basis of manpower requirements leading integrated educational planning curriculum development and instructional material preparation in technology and inter-disciplinary areas.6. Promotion of institute-institute linkages for sustainable development of academic

and research.

### LOCATION '

The Institute is situated at Longowal (about 8 km from Badbar on Chandigarh-Bathinda Highway) in the District of Sangrur, Punjab. It is well connected by road with Sangrur (18 km), Ludhiana (100 km), Chandigarh (150 km) and Delhi (360 km). The nearest railway stations are Sangrur (18 km), Dhuri (30 km) & Sunam (16 km) on the Northern Railway. The nearest airports are at Chandigarh and Ludhiana.

### ABOUT US

Consequent upon the decision, taken by Govt. of India in 1985, to tender a valuable, yet humble tribute to the everlasting memory of the revered saint, Sant Longowal Institute of Engineering and Technology took its shape. The institute was established by Ministry Of Human Resource and Develop ment (MHRD), Govt. of India in the year 1989 and was formally inaugurated on 20th December 1991.

Accepting the new challenge of new education policy, Sant Longowal Institute of Engineering & Technology (SLIET) was established, with a vision to act as an international podium for the development and transfer of technical competence in academics. It is committed to provide best possible technical education and to cater to the technical manpower requirements with emphasis on practical training in industry.

The institute is an autonomous body, fully funded by Govt. Of India and controlled by SLIET society, registered under Societies Registration Act, 1860. The institute awards its own Certificate, Diploma, Undergraduate and Postgraduate courses approved and recognized by AICTE, New Delhi. Ph.D. programmes have also been started after it attained the status of Deemed University.

It was formulated that the institute, besides catering to the needs of formal education would undertake an arduous task to prepare the skilled and qualified manpower for self employment. Further, the institute would take up a strategic research and development activities which along with entrepreneurship will help in extending the efforts of the institute in imparting education to the unemployed and working population by updating and upgrading their technical skills. The institute was thought to cater to then existing 3-tier system to modern industry, which incorporates workers, technicians and engineers.

The institute has a sprawling area of 451 acres of land provided by Punjab Government. Surrounded by lush green land, the campus of the institute extends a beautiful and well developed area with many topographically featured picturesque landscape, numerous buildings of various nature and stature and metal road network. The campus presents a spectacle of harmony and natural beauty. It is embedded with all the amenities required for a complete township.

# From chairman's Desk



Sant Longowal Institute of Engineering and Technology, carries a legacy of more than 25 years as one of the premier institutes of India. The technology is changing the world and it becomes a challenging task to cater the needs of the industries, but I am proud to say that SLIET has faced the challenge successfully.

This is possible due to the outstanding efforts of the faculty and of the bright students who took admission to this premier institute and are selected after the stringent process. Our alumni have achieved tremendous success in all the spheres and this bears an eloquent testimony to our efforts.

I take pride in cordially inviting you to participate in our endeavor and look forward to wel coming you for the recruiting process. The continuous innovation in teaching methodology are geared to meet the vision and mission of the market efficiently.

If you are looking for skilled Diploma, B. Tech & M. Tech students then SLIET Deemed University, Longowal may be a great place for recruitments under one roof.

# **From Director's Desk**



Sant Longowal Institute of Engineering and Technology, with its principles of nurturing sci entific advancements have always been amongst the top technical institutions of the country.

Our competitive academic environment helps us attract and cherish our country's best and brightest students. Here students are trained to face any challenge that may come in their path. This helps them become not just the next innovators but also leaders in their respective fields.

Our highly motivated faculties are testimony to this fact. In a rapidly changing global econ omy, students have to be dynamic and ready to face diverse challenges. I can gladly say that SLIET has been striving constantly from 1989 in putting excellent outputs for the recruiters. The training provided by the institute equips them with all the tools that are necessary to be come leaders.

The placement office has been struggling continuously to match the students with their dream jobs. I would thus like to take this opportunity to invite companies to the campus recruitment on behalf of SLIET and sincerely hope that this would be the foundation of a new era where our students are able to contribute effectively.

# **From Desk of Dean (Academics)**



I am happy to know that Department of Training & Placement has taken lead to publish Train ing & placement brochure for the session 2017-18. We have observed a remarkable progress in student's placement in the year 2016-17 in comparison with previous year placements. SLIET students are known for their leadership qualities. They are also good at understanding challenges of working in a team at an organization level.

Everyone knows the importance of institute and industry relationship in today's world, so I would like to emphasize that more intersection of experts from industry should be scheduled in different departments as well as at central level in department of TnP.

I am happy to know that in the session of 2016-17, 12 job counselling sessions has been conducted in the department of TnP and I am hopefull that more such interactive activities will be organised.

I feel all the different department along will the team of our valuable alumni should work in li - aison with department of Training and Placement for enhancing the placement of the institute.

Various recruiters will provide the opportunity to recruit our students in their renowned organization.

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# From Desk of Dean (SFW)



Accepting the challenge of new education policy, Sant Longowal Institute of Engineering and Technology, was established by Govt. of India in 1985, with a vision to act as the podium for development and transfer of academic competence in academics.

Today the institute enjoys status at part with NITs, IIMs, Central Universities and other CFTIs. We at SLIET always strive to forge stronger relations with industries for the mutual benefit through exchange program, expert lectures by industry professionals , sharing of R&D facilities , Consultancy ,Student's projects , industrial training etc.

We highly value our partnership with recruiters and alumni of SLIET and remain committed in making your recruiting experience productive and positive. I invite the recruiting organizations to find the best match for their needs.

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# Head's Message (Dept. of Training & Placement)



Greetings! We at SLIET, Longowal extend a hearty invitation to all our recruiting partners.

The relationship between industry & institution is highly synergetic. As one of the important objective of students pursuing Diploma, B.E., M.E. & Ph.D. Degree is to get a good job on completion of their respective courses, we need the support of industries to help the interested and eligible students in their placements. On the other side industries also fulfill their requirements by appointing young, fresh, skilled & talented candi dates. So it is win-win situation for both Industry and Institute.

Now in these days, we want our students to be corporate ready professionals. In addition to departmental activities, we often organize various kind of professional development program like mock interview, group discussions, pre-placement talk, interactive sessions with industrial experts, case studies etc. on regular basis to enable the students to acquire the necessary traits to become employable to industries.

The placement activities are being looked after by team (T&P) comprising of Students Placement Repre sentatives, Departmental Faculty, Placement Coordinators, Training Coordinators, ATPO's and Training & Placement officer.

The confidence is reposed in us by placement of our students in esteemed industries like *TCS, ISGEC, HPE, GE India, Afcons Infrastructure, Honda Cars India Limited, L & T, Hero Group, Trident Group, Godrej, Vardhman Industries, Mahindra & Mahindra, Microsoft, Reliance, Punj Lloyd, Infosys, Hexaware, Hewlett Packard, LG, Wipro, Honeywell, Accenture, International Tractors Limited, Maruti Suzuki, Coca-Cola etc.* 

We are confident at SLIET. You would find candidates meeting your requirements in every field of interest to your organization. It will be our pleasure to assist you in your recruitment efforts. Many of our students are also doing well in higher studies at different National and International University and higher learning Institutions.

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# **Message of Training & Placement officer**

### Prof. (Dr.) Sukhcharn Singh sukhcharns@yahoo.com

It gives us immense pleasure to extend to you a most cordial invitation to participate in the cam pus recruitment programme of the SLIET. In the Institute, the training and placement depart ment plays a vital role and is becoming a key department of the institute. Employment of the students of the institute is our major concern. The placement Cell provides the infra-structural facilities to conduct group discussions, tests and interviews. The institute is actively organizing in-campus and out-campus interviews for its students to get proper placement. Our students are an indicative factor that the institute is having very fruitful and meaningful relations with the industries. However, during last few years., the demand of our graduates has increased expo nentially. As a part of the efforts to develop and strengthen the relationship with the corporate world, SLIET has delineated long-term strategy to place students in prestigious organizations. "The goal is to help to build a long-term career with leading organizations and not just place the students". The department will work diligently from the time trainees are accepted into a training program to find placement opportunities through mutual agreements with companies and other partners.

It would be our proud privilege to host you, and we would only be most delighted to be involved in such a partnership.

Looking forward to a mutually beneficial relationship.

# **Department of Mechanical Engineering**

# Prof. (Dr.) Kulwant Singh HOD

Mechanical engineers play a significant role in the design and development of all products and systems essential to our day today modern life. we have a team of dedicated an experienced faculty, driving the department towards excellence in teaching. Our faculty spreads knowledge by conducting a wide variety of innovative research. These research activities compliment our educational needs of industry, and contribute to the economic and social development of the nation. Five certificate and four diploma courses are also being offered covering major areas of mechanical engineering to produce skilled man power for shop floor in industry. For non fomal courses under the scheme of community development plan are also running in the department.

The student members of "SAE INDIA SLIET Collegiate Club" function as a team of design, fabricate, test, promote and compete with other vehicles. "JUNKYARD WARRIOR'S", a expeditious team, seeks your support to accelerate its pace to win. Junkyard warrior's has participated seven times in BAJA SAE events. The team has been adjudged overall champions twice, amongst engineering colleges from all over India including IITs, NITs etc. The de partment has formed SLIET mechanical engineering society (SMES) to accelerate academic activities of students and faculty. The SMES is regularly organizing technical activities like seminars, student competitions and industrial visits at regular intervals for the benefits of the students. IWS- Indian Welding Society, has its local center in the department. There is an exchange program of students between MIT-SETU of USA and SLIET Longowal for academic and cultural exchange.

Sant Longowal Institute of Engineering & Technology

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# **Our Faculty**



# FACILITIES



### CAD/CAM Lab

It is the one of important laboratories for diploma & degree students for their course curriculum. The aim is to establish this laboratory for practical training in the field of CAD (Computer Aided Designing) & CAM (Computer Aided Manufacturing). List of Equipments in the laboratory: Starturn Bench Milling Machine. Starturn Bench Lathe.

### Heat & Mass Transfer Lab

The aim of the lab is to give a practical insight to degree students for various modes of Heat and Mass transfer in same metals, different metal and water. The apparatus give us method to calculate heat transfer co-efficient and constants in different mode of Heat transfer. Proper equipments in working condition are available for performing the experiments of the provided syllabus.





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### I. C. Engine & Thermal Eng. Lab

It is the one of important labs for students for their course curriculum. The aim to establish this laboratory was to impart practical training in the field of I.C. Engine & Thermal Engg. like determination of BHP, IHP, thermal efficiency, fuel consumption, air consumption, and gas emission analyzing of the engine by using the engine test rigs and gas emission analyzer. It is also used for determination the fuel properties like flash and fire point, carbon residue, cloud and pour point and calorific value by using flash and fire point apparatus, cloud & pour point apparatus, Carbon residue conradson apparatus and Digital bomb calorimeter. It also provides knowledge to students about various types of Boilers and engine models.



### **Industrial Engineering Lab**

It is one of the important laboratories for Diploma and Degree students for their courses. The aim to establish this laboratory was for practical training to conduct Work study, Method study and Time study. Industrial Engg. lab. contains equipments both in form of working and non-working model through which the students are able to synergies the theory with practical work.

### Material Testing Lab

Strength of material course is offered to degree and diploma students and is a important part of the course curriculum. The SOM laboratory contains machines for testing of material like mild steel, copper, aluminum, cubes, and bricks etc. The students are able to synergize the theory with practical.





### Metrology & Measument Lab

Metrology has a great importance in quality assurance. The aim is to establish this laboratory is to provide practical training in the field of various types of standards & measurement. The laboratory has conventional, optical (and laser based) equipments used in metrology. This laboratory is being used for practical to degree & diploma students and in research to PG students.

### RAC Lab

The aim of the lab is to give a practical insight to students for equipments running on Vapour compression cycle. Water cooler and cooling Tower apparatus has been designed for calculation of C.O.P. and Efficiency of the system. And cut section model of all types of compressors, Air conditioners and condensers are used to give thorough knowledge of their parts, working and mainte nance.





### Simulation Lab

Simulation and Project Laboratory is one of the main developing laboratory in the department. Its infrastructure is mainly developed under three categories viz. Mechanical Engineering Department, MHRD sponsored project Applications of Networking in Manufacturing Systems and DST sponsored Fund for Improvement of S&T Infrastructure in Universities & Higher Educational Institutions (FIST) scheme.

### **Theory of Machine Lab.**

Engineering Mechanics & Theory of Machine course is of fered to Degree & Diploma students and is an important part of the course curriculum. Theory of machine laboratory con tains equipments both in the form of working and non-work ing models through which the students are able to synergize theory and practical skills.



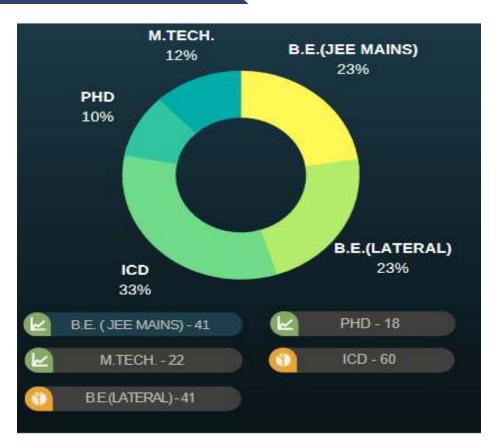


### <u>Welding Metallurgy & N.D.T. Lab</u>

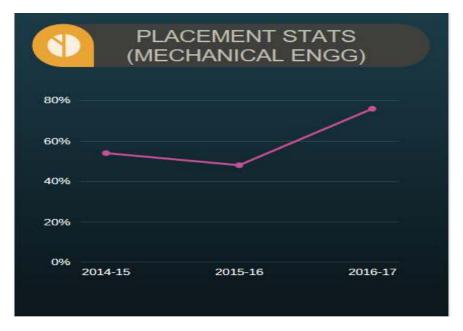
This lab is being used by certificate, Diploma and degree students for their practicals as well as project work. In this lab we have facilities for metallurgical investigations, specification microstructure analysis and non destructive testing.

# **DEMOGRAPHICS**

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Demography of Mechanical Engineering Student in session 2017-18.



Placement Record of the Students of Mechanical Engineering Department:

# Achievements

# Mega ATV Championship

The 2<sup>nd</sup> season of MEGA ATV CHAMPI ONSHIP 2017, a student competition orga nized by Autosports India, which task engi neering students all over the India to design, build and race All Terrain Vehicle (ATV). This season had a new essence to the championship based on "Mountain Riders" and "Night Races" which distinct this event from world of the adventure.

SLIET team 'Junkyard Warriors' (21 mem ber) under the guidance of Dr SHANKAR SINGH, Professor (Mechanical) as Faeul ty Advisor (FA) participated in the MEGA ATV CHAMPIONSHIP 2017 for the first time, which was held in the mountains rang es of Dr. Vithalrao Vikhe Patil College of En gineering, Ahmednagar from 13th March-16th March 2017.



The events that took place at the Mega ATV Championship 2017 were Technical evaluation, Brake test, Drag race, Armageddon, Flat dirt race, Endurance race (Day Racing) and Endurance race (Night racing). SLIET vehicle (#45) completed all the tasks smoothly. The team 'Junkyard Warriors' ATV (#45) performed well and was ranked best amongst top ten team in day endurance race by completing 19 laps. The team has scored a total of 316.952 out of 500.

### SAE NIS



SLIET team "Green Rangers" (10 members) under the guidance of Dr. Shankar Singh, Professor (Mechanical) as Faculty Advisor (FA), designed and build a human-powered vehicle namely "EF-FICYCLE 'FATEH' (#80) and participated at 6th season of "Efficycle 2015", a student competition by Society of Automotive Engineers Northern India section (SAE-NIS) was recently hosted at Lovely Professional University, Jalandhar 15th-18th October 2015.

Nearly 100 teams of top engineering institutions, including IITs, NITs and government institutions from across India exhibited their motorised ex pertise.

The SLIET team bagged the Overall Winner Award and a cash prize Rs. 1 lacs/-; 2nd position in Endurance Race (Durability Award) and a cash prize Rs. 20,000/- and Marketing Award and a cash prize of Rs. 15,000/-. Dr Shankar Singh was also awarded Dhronacharya Award (Best Faculty Advisor Award) and a cash prize of Rs. 10,000/- at the event.

# Go Cart Design Challenge



Team Juggernauuts ( GO CART vehicle team) of SLIET Longowal under the guidence of Dr. Shankar Singh and Er. Anuj Bansal won the runner up title in National Go Cart Design Challenge held at Coimbatore. The team was

awarded FIRST PRIZE FOR BEST DESIGN, FIRST PRIZE FOR BEST AESTHETICS and SECOND PRIZE FOR ENDURANCE N FUEL ECONOMY.

### **Placement Representative Team**



Shubham Shreshth GME SL/14/4418 shubham gme1444014@sliet.ac.in



Avijeet Mishra GME 132712 mechprsliet@yahoo.com

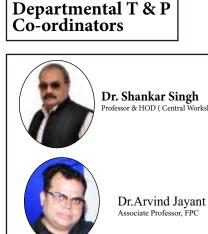


Bhargav Kumar Konda GWT SL/14/4711 kbrgvkumarslietgwt@gmail.com



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Ankit Kumar GWT/110377 ankitkumar110377@gmail.com







ATPO

Manoj Kumar

orkshop), FPC

Dr. Indraj Singh Associate Professor, ATPO



Jonny Singla Assistant Professor, FPC

# **Department of Electrical & Instrumentation**



The Department of Electrical & Instrumentation Engineering provides students with thorough technical knowledge and in-depth practical training in the field of operation, maintenance and diagnosis of Automated Process Control and Machine operation used in the production of various commodities. Students learn about pneumatic devices, control valves, various types of measuring and control instruments, electric machines, circuits and networks, digital logic devices, wireless robotics and many more.

The department caters to the manpower and technical requirements of various sophisticated and household industries such as petro-chemical, fertilizer, cement, power generation stations ,biomedical industries etc. The department is in the process of undertaking several projects with the help of several government funding agencies like MHRD, DST,etc. Moreover the department is also planning to initiate Industry-Institute interaction to impart technical aptitude and to provide consultancy services by organizing joint Seminars,Workshops and Short Term Training Programmes.

The department initiated the 4-year Bachelor of Engineering (B.E.) Degree Programme for Electrical Engineering and Instrumentation & Control Engineering in the year 2014 while it has been offering 3-Year Degree Programme in Instrumentation & Control Engineering since its inception. The department is also running the post graduate M.Tech course with specialization in Instrumentation and Control Engineering and 3 year ICD programme in both Electrical and Instrumentation & Control Engineering.

The Electrical and Instrumentation Engineering Department has continuously been of-na tional prominence and international visibility, with academic freedom to pursue cutting-edge technology and all insidious research culture and recognition of a true value system with trust and empowerment at all levels.

# **Our Faculty**



#### Dr. Ajat Shatru Arora Professor

Ph.D. (Biomedical Engineering), IIT Roorkee, 2002
M. Tech. (PAED), University of Roorkee, 1992
B.E. (Electrical Engineering), University of Roorkee, 1990
Journals: 34
Conferences: 50



Dr. VK Jain Professor, EIE Department Director SLIET



### Dr. Sanjay Marwaha

Professor 1. Award for "Excellent contribution in Education Sector" conferred by AICTE during 2nd National Punjab Summit and Awards 2017 TM held on 13th April 2017 in Chandigarh. 2. Certificate of Merit by Institution of Engineers, Letter Ref. No. SC/T-102/ COM/2008 dated 27.01.2009.



#### Dr. Manpreet Manna

Presently on Liaison with All India Council for Technical Education (AICTE) and working as Director (Administration), AICTE



#### Dr. Sanjeev Singh

Associate Professor As Post Doctoral Researcher at École de technologie supérieure (ETS) Montre al, Quebec, Canada from Dec 2016-June 2017. PhD – Power Electronics and Drives (IIT Delhi Refereed Journals (International & National) – 19; International Conferences – 27; National Conferences -25



Manpreet Kaur, Ph.D., FTC



#### Dr. Surita Maini

Associate professor •carrying out research work in microwave ablation the apy for the treatment of Hepatocellular carcinoma (HCC) and primary liver cancer. •published more than 40 papers in National and International journals and conferences of repute



### Anshuka Bansal

18 Years of Teaching experience with specialized Research in bio-sensors.



#### Asim ali khan

15 years teaching experience 03 years Industrial experience



### Diljinder Singh

19 years of teaching Experience and Co author of Principle of Electrical & Electronics Engineering by Jaspreet Singh Dhillon, Jarnail Singh Dhillon and Diljinder Singh,



### Manmohan Singh

M.E Indian Institute of Technology, Roorkee Electrical Engineering (spl. in Power Apparatus & Electric Drives)



Charanjiv Gupta Associate Professor

19 Years Teaching Experience with specialized Research in Energy Management & Renewable Energy

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# FACILITIES



#### **Biomedical Lab**

Biomedical engineering is an emerging area and exposure to different instruments of biomedical will be a great help to the students. With the introduction of M. Tech classes many students can take a projects/dissertations in the bioelectrical signal-processing laboratory. Starting from certificate to PG classes, biomedical engineering laboratory is the part of curriculum. The consultancy can be provided in this area with the active collaboration of medical experts from Institutes of Higher learning. However, an expert system can be developed for the various disease diagnosis and the new instruments can also be devolped to help the pathologist.

#### **Electrical Workshop**

Electrical workshop provides a platform for all kind of prae tical jobs like domestic wiring, fittings, drilling job, switchboard assembly, coil winding, repair and maintenance work of various electrical appliances. It has its optimum utilization for the assembly work, component testing and troubleshooting of devices and circuitries in student's projects. This laboratory is equipped with automatic coil winding machine, insulation testers, earth testers, single phase & three phase transformers as well as loads to carry out any experimental/demonstration work.





#### <u>Electrical Machine Lab</u>

Electrical machines have wide field of applications in various engineering branches. Different types of electrical ma chines are used in various types of applications in domes tic as well as industrial arena. The students are introduced about the various types of machines and their characteristics, practically. This laboratory is equipped with various dc ma chines, induction machines and transformers to carry out any experimental work.

#### <u>Hydraulic & Pneumatic Lab</u>

This laboratory was one of the first laboratories established in the electrical and instrumentation department. Process control is the integral part of any curriculum related to instrumentation engineering. This laboratory was established to make students aware about basic fundamentals of practical process control. Various control viz. closed dc loop control, cascade control, ratio control, PLC control are simulated/practically implemented to give student a better understanding. Besides this, advanced hydraulic trainer kit and pneumatic trainer kit give inside view of hydraulic and pneumatic control principles.





#### Instrumentation Workshop

The aim to establish this laboratory is to give basic information to students regarding identification and checking of various passive circuit elements. It is also used to provide a platform for the assembly work, components testing and troubleshooting to carry out their projects using the different components and devices. It is specially designed for the certificate, diploma and degree students. The consultancy work can also be done for fault-finding and rectification of various instruments. This laboratory is equipped with crops, function generators, pulse generators and power supplies to carry out any experimental /demonstration work.

#### **Analytical Instrumentation Lab**

It is the one of important laboratory for diploma & degree students for their course curriculum. The aim is to establish this laboratory for practical training in the field of analytical instrumentation like flaw detection in the metallic pieces using ultra sonic flaw detector, sample analysis using gas chromatograph, flame photometer, atomic absorption spectro-photometer etc. It is also used for the determination of moisture contents, hu midity, conductivity and dissolved oxygen contents in a given material sample.





#### **Computational Lab**

This laboratory is to provide the computational facilities to M.Tech, B.E, Diploma students to undertake their thesis or Project work. Presently 25 computers are providing 24 hour internet access and computational facility on MATLAB 6.1. as well as labview software.

#### **Digital Signal Processing Lab**

This laboratory is useful for the graduate and post graduate students for experimental and research work. This laboratory is equipped with various DSP processors with evaluation modules, hardware emulators, code composer studio and Matlab software with Simulink to carry out any type of simulation and R&D work.





#### **Control Engineering Lab**

This laboratory is to impart the practical knowledge about various process control techniques used in modern process industries. This laboratory is equipped with process simulation kit with feed forward and cascade control schemes, electronic logic controllers, relay logic controllers, level and temperature control with PID controller, electronic transmitters , recorders, DCS and PLC (programmable logic controller) trainer kit to carry out advanced experiments in process control engineering.

### <u>Transducer Lab</u>

Transducer Laboratory is equipped with modern measurement instrumentation equipments, which helps the students to study different mechanism of measurement of Temperature, pres sure, density, humidity, displacement, force, speed, torque, stress etc. Students learn to measure as well as develop the skill to calibrate the temperature and pressure gauges etc.





#### **Basic Electrical Engineering Lab**

This laboratory is to impart the basic knowledge of various fundamentals of Electrical Engineering and their usage for all branches of Certificate, Diploma and UG students. This laboratory has support to carry out any experimental work and used as inter-disciplinary laboratory.

#### **Instrumentation Center**

It is to impart practical training to the students in the field of calibrating pressure gauges, transducers switches and indicators etc. It also initiates the research in the field of metrology. This laboratory is used by certificate to PG classes for their various project works and course curriculum like calibration facility for pressure gauges, pressure transducers, pressure switches and pressure indicators, vacuum gauges etc. The laboratory is equipment with Pressure Calibration Test Bench for calibrating the pressure gauges up to 250 bars and vacuum gauges up to 760 mm of Hg.





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The objectives of this lab is to help to perform the rigorous experiments with different types of designs as sequential logic circuits, combinational logic circuits, study of digital CROs, test ing of ICs, Realization of truth tables using multiplexers, study

and trouble shooting of various digital systems.

Microprocessor/Micro Controller Lab

# **Demographics**



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# Achievements

### **President Award**



Dr. Manpreet Singh Manna, Asso ciate Prof. EIE Department received the award from Shri Pranab Mukherjee, the Hon'ble President of India on 9th July,2017 for his pioneering efforts for development of SWAYAM Platform for hosting Massive Open Online Courses(MOOCs) within a record timeline launching SWAYAM Platform, one of the important dig ital initiatives of MHRD during 3 Days National Convention held at Vigyan Bhawan, New Delhi from 8th July,2017 to 10th July,2017.

### **International Robotics League**



SLIET Robotics and Automation society (SRAS) an organization of SLIET, Longowal that smoothly run under the mentorship of Prof. Ajat Shatru Arora (Dean SFW), the faculty advisors are Mr. Asim Ali Khan (Dept. of EIE) and Mr. Manmohan Singh (Dept. of EIE) and the president is Mr. Shani Ranjan (GIN/2K14). World Robotics Championship (WRC) and the International Robotics League(IRL) 3rd edition of Technox ian'17 was organized by Times world Group in association with Ministry of Science and Technology, Govt. of India and All India Council of Robotics and Automation from 28th - 30th April, 2017. Over 12 countries and more than 2000 teams participated in the overall championship.

The bot completed the arena within a time span of 1min 37sec record time. The SRAS were successful in grabbing the #Worldwide 3rd Position in the Senior Robotics Championship in International Robotics League -2017 and won cash prizes and many more coupons from robotics companies.

# Effi-Car



SLIET team FUTURE - FOOTPRINTS under the mentorship of Dr. Sanjeev Singh Chauhan (Associate Professor EIE Department) participated in NATIONAL LEVEL COMPETITION EFFI – CAR 2016 conducted by UIET, Chandigarh. Teams from all the states of INDIA participated in this competition. Team FUTURE – FOOTPRINTS bagged All India Rank – 08 position among 16 teams.

### **Placement Team Electrical Engineering Student Placement Co-ordinators** Departmental T & P **Co-ordinators** Shivanshu Srivastava Ankur Sengar Shivam Maury Umang Yadav Anshuka Bansal Neha Sharma Kaushik Suman Reddi Sharan Rishi Kumar Instrumentation Engineering Asim ali khan Abhishek Sagar Parminder Singh Shani Ranjan Anjali Priya

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# **Department of Computer Science**



Welcome to SLIET University, dedicated to ensuring great careers for its students. For us, this means forging deeper industry linkages than ever before, creating a research culture from day one and ensuring seamless education using the best technology available anywhere.

I have myself invested a great deal of time and energy in creating strong foundations for SLIET and will continue to do all that it takes to ensure the best job opportunities through career focused education for our student.

The excellent infrastructure, teaching faculty of the best kind of the Department ensuring quality education such as interaction among students, parents and staff, along with a Training and Placement Cell ensures a bright future to its students. The Department of CSE is striving hard towards the goal of providing innovative and quality education with high standard to achieve academic excellence and provides platform for the students to achieve their career goals.

We strongly encourage innovation in research, in teaching and in service to the profession, the local community and industry. Our faculty and students are constantly striving to excel and to advance the state of the art in computer science. I invite you to be part of our efforts as we propel the Computer Science Department to ever-greater heights. In closing, I wish all the students and faculty a good academic career.

# **Our Faculties**



Dr. Manoj Sachan Associate professor, ATPO 1.Publications : 18, Courses Participated : 10 2.Lectures delivered as Resource Person : 2



Dr. Damanpreet Singh Associate Professor

1.40 publications in International Journals / Conferences



Jaspal Singh Assistant Professor, FPC

International and National Journals: 03
 Conference Proceedings: 07
 Conference/ Workshop/Seminar/Short Term Course Organised: 05
 Conference/ Workshop/Seminar/Short Term Course Attended: 13



Dr. Birmohan Singh Assocaite Professor

1.Member IACSIT 2.International and National Journals: 02 3. Conference Proceedings: 08



Gurjinder Kaur Associate Professor 1.International and National Journals: 02 2.Conference Proceedings: 10 3.Conference/ Workshop/Seminar/Short Term Course Attended: 10



Harmandeep Singh

1.International and National Journals: 03 2.Conference Proceedings: 02 3.Conference/ Workshop/Seminar/Short Term Course Attended: 02



#### Manminder Singh Assistant Professor, FTC

National/International Journals -M. Singh, Dr. A.S. Arora, "Face recognition and Face Liveness", Research Cell: International Journal of Engineering Sciences, ISSN: 2229-6913 (Print), ISSN: 2320-0332 (Online), Vol 10, Issue- June, 2014, Page no. 38-42.



### Dr. VINOD KUMAR VERMA

1.Selected for 2017 Albert Nelson Marquis Lifetime Achievement Award. USA

USA 2.Session's BEST PAPER AWARD by President International Institute of Informatics and Systemics (IIIS), ORLANDO, FLORIDA, USA.18 July 2014

2014. 3. SESSION CHAIRMAN ,International Conference, VENICE, ITALY.



Preetpal Kaur Buttar Assistant Professor, FTC



### Sukhpreet Singh

International and National Journals: 13
 Conference Proceedings: 04
 Conference/ Workshop/Seminar/Short Term Course Attended: 01



Navneet Garg



Rahul Gautam Assistant Professor



Chandra Shekhar Yadav

26

### FACILITIES



#### Advance Information Technology (AIT) Lab

The main objective of the lab is to provide the students with knowledge of windows environment and to develop applications for windows platform. Moreover the objective of this lab is to teach students various data structures and to explain them algorithms for performing various operations on these data structures. Another important objective of the lab is to impart knowledge on graphics applications and also to work with web programming.

The AIT Lab is used to work with following applications:-Database applications using Client Sever model, Graphical Applications, Web designing Applications.

#### Information Technology (IT) Lab

Main objective of this lab is to teach the basic concepts of fun damentals of computer. Students can learn how to work with different applications of MS-Office like MS-Word, MS-Excel, Power-Point. This lab enable the students to learn designing of Logos by using Corel Draw. This lab also helps to under stand the basic terminology used in computer programming by using different data types in a computer program. Students can also design programs involving decision structures, loops and functions.





#### Networking Lab

This lab helps to explain the importance of data communications and the Internet in supporting business communications and daily activities. Also explains how communication works in data networks and Internet. This lab helps to recognize the different internetworking devices and their functions and also explain the role of protocols in networking. Main objective of this lab is to implement different topologies like bus, ring, star, mesh.

#### <u>Linux Lab</u>

The objective of this lab is to introduce the students to LINUX kernel programming techniques and also the advanced C systems programming and debugging techniques in a LINUX environment. In this lab students are able to describe and use the fundamental LINUX system tools and utilities. Problems in the field of network - ing, data structures and system software can be easily built on Li nux platform because of the various inbuilt system calls available in Linux. Thus the main objective of the Linux lab is to make the students aware of the features and capabilities of Linux and also contribute to development of the operating system itself.





#### **Emerging Technology Lab**

Objective of this lab is to educate the students with fundamental concepts of Data Base Management System, Data Models, different Data Base Languages. Also help the students to analyze Data Base design methodology. It enables to analyze the difference between traditional file system and DBMS. Also enable the students to write queries mathematically. Introduce the students to soft computing concepts and techniques and foster their abilities in designing and implementing soft computing based solutions for real-world and engineering problems.

This Lab is used to work with following applications : Developing applications and data Structure in C/C++, Database Applications using Oracle.

#### Microprocessor Lab

This lab provides a theoretical and practical introduction to micro-controllers and micro-processors, assembly language pro gramming techniques, design of hardware interfacing circuit, micro-controller and micro-processor system design considerations. The students should be able to solve basic arithmetic operations using 8085 assembly language. Students should be able to generate different types of wave signals by interfacing ICs with 8085.





#### Hardware Lab

The main objective of the lab is to provide the students the knowledge of computer hardware, the processors, memories, motherboards, different add-on cards, and other peripherals like printers, plotters and the scanners. The students are trained for the assembly and disassembly of PCs. Another important objective is to impart knowledge about the troubleshooting and fault finding of the computers and the peripherals.

#### Software Engineering and Programming Lab

This lab helps to understand theories, methods and technologies applied for professional software development. Moreover the students understand the process to be followed in the software development life cycle. Another important objective of the lab is to impart knowledge on graphics application and also to work with Numerical Analysis. This lab also helps to understand the various steps in designing a creative and dynamic website. The nature of programming language is emphasized in the wide variety of examples and application.





#### Post Graduation Lab

The objective of this post graduate lab is to create experts and professionals in information technology with a view on developing skills that are able to match the demands of the complexities of present generation IT industry. This lab is di rected at creating a logical understanding of latest networking technologies and their applications. Issues pertaining to LAN, WAN, Wireless Sensor networks, Data Centre networks, Soft computing, cloud computing and optimization are focused upon in this field of specialization.

#### Windows Lab

This lab aims to introduce the students to the Java programming language. The students should be able to create Java programs that leverage the object-oriented features of the Java language, such as encapsulation, inheritance and polymorphism; use data types, arrays and other data collections; implement error-handling techniques using exception handling, create and event-driven GUI using Swing components; and implement I/O functionality to read from and write to text files. Moreover the students can also work on the database problems using the client server software running on the windows environment. Another important objective of the lab is to impart knowledge on graphics environments and also on web programming.





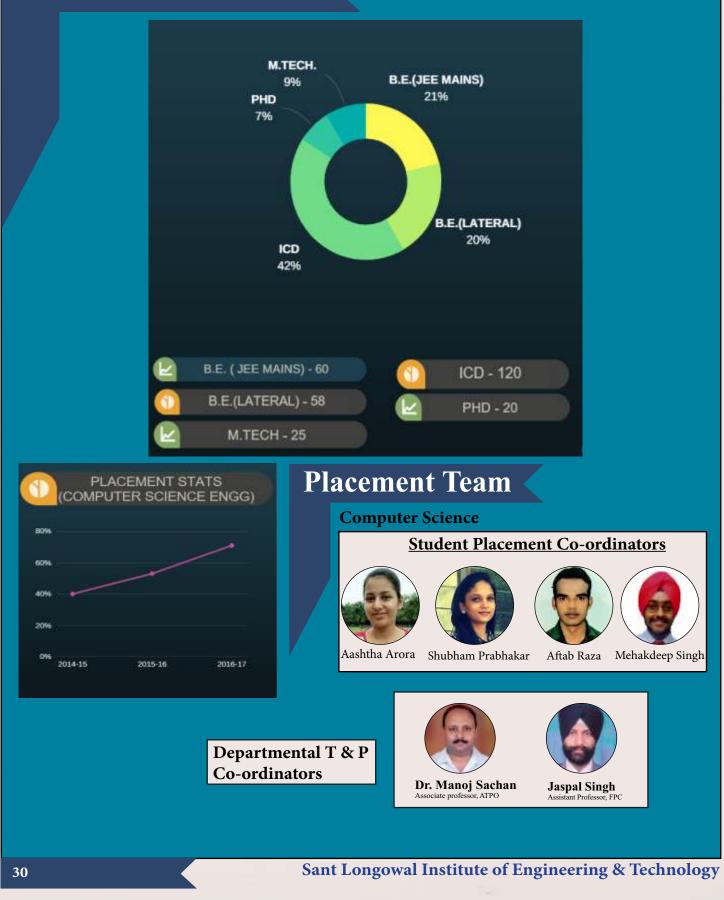
#### **Desktop Publishing Lab**

This lab helps to understand the various steps in designing a creative and dynamic website. They will able to write html, JavaScript, CSS and applet codes. They will have clear understanding of hierarchy of objects in HTML and XML. Finally they can create good, effective and customized websites. The main objective of the lab is to provide the students with knowledge of windows environment and to develop applications for windows platform. Another important objective of the lab is to impart knowledge on graphics environments and also on database applications.

The Desktop Publishing Lab is used to work with following applications:-

Database applications, Web designing applications, Applica tions involving Windows Programming, Developing applica tions in C/C++.

# **Demographics**



# **Department of Electronics & Communication**



With the advent of IC age and with IT making its presence felt in every sphere of human activity, Electronics and Communication has acquired a new and significant place in the present scenario.

The department of Electronics and Communication, SLIET, has overtaken similar institutions in this region towards its endeavors to equip the students with skills and knowledge desirable in the industry and in their changing environments. This has been possible due to unique curricula possessing five year study, punctuated with three industrial trainings in which students go through every sphere of Electronics and Communication.

The well equipped lab, undoubtedly the best in the region and the experienced faculty with the encouraging hands groom the graduates in practical as well as theory. The vast resources of this portal and the five year integrated study give them an unimpeachable edge over the stu dents from other colleges.

# **Our Faculty**



### Dr. J.S. Ubhi

Professor Ph. D. in Electronics and Communication Engg. from Punjab Technical Uni-versity, Jalandhar in January, 2011 Chairperson in the 2011 International Conference of Signal and Image Engi-neering under the aegis of World Congress on Engineering 2011 (WCE 2011), organized by the International Association of Engineers (IAENG) at the South Kensington Campus, Imperial College, London, UK on July 6-8, 2011.



#### Dr. Surinder Singh

B.Tech.(ECE) from Dr. B.R. Ambed. Regional Engg. college, Jalandhar(1997) B.Tech.(ECE) from Dr. B.R. Ambed. Regional Engg. college, Jalandhar(1997) (Now NIT, Jalandhar) M.Tech.(ECE) from G.N.E., Ludhiana(2003) Ph.D.(ECE) from Thapar University, Patiala(2007) Best work in Telecommunication awarded by Punjab Science Academy Publications 50 papers in SCI Journals with Thomson Reuter impact factor approx. 50 paper in International & National Conferences



#### Dr. Amar Partap Singh Pharwaha

(a)B.Tech. (Electronics Engineering) Institute: Department of Electronics Technology, Guru Nanak Dev University, Amritsar, (Punjab) India (b) M. Tech. (Instrumentation) Institute-Regional Engineering College, Kurukshetra University, Kurukshetra (Haryana) India (c) Ph. D. (Electronics & Communications Engineering) Year of passing-2005 Topic: Development & Implementation of Intelligent Soft Instrumentation System



#### Dr. Lakhvinder Singh Solanki

(1)Master of Technology (Electronics & Communication Engineering) Guru Nanak Dev Engineering College, Ludhiana, State Punjab, India (2)Bachelor of Engineering (Electronics & Electrical Communication) Guru Nanak Dev Engineering College, Ludhiana, State Punjab, India



#### Dr. Ajay Pal Singh Associate Professor, FTC B.E. from K.B.N college of engineering

M.E. from GNE Ludhiana Ph.D From SLIET



Dr.Dilip Kumar Associate Professor, FPC

Number of Publications in International Journals: 45 (Elsevier, IET, Springer, Inderscience etc) Number of Publications in International/National Conferences: 30 (IEEE, Springer, ACM etc)



# Pankaj Kumar Das

B.E., M.Tech. (IIT Roorkee), Ph.D. (Pursuing from IIT Delhi)





**Kuldip Singh** 



Vipul Singhal

Vivek Harshey

Sarabjeet Singh

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# FACILITIES



#### **BASIC ELECTRONICS LAB**

This lab is established to provide basic practical training about electronics components and circuits. Students here learn to design basic circuits using combination of resistors, capacitors,inductors and diodes, transistors. They learn how to operate electronic work station in the lab and study the working of other circuits including amplifiers, oscillators in addition to basic differentiators and integrators.

### **BASIC COMMUNICATION LAB**

It caters the students with analog communication kits viz amplitude modulation, frequency modulation, phase modulations and digital communication kits viz pulse code modulation, pulse width modulation and time division multiplexing.





#### AUDIO/VIDEO LAB

A fully furnished lab with all audio and video technological equipment required for ICD and UG students. TV/B&W/TV/VCD/Telephone/DVD/Microphone trainer, etc. are available in the lab to learn about different types of audio/video sys tems.

#### **ADVANCE COMMMUNICATION LAB**

This lab caters the students with analog communication kits viz. amplitude modulation, frequency modulation, phase modulation, AM, FM receivers and pulse communication. Besides analog circuitry, the next fascinating and essential componentfor Electronics and Communication Engineering students is the practical knowledge on digital communications. The lab possesses digital communication kits, digital LCR Q-meter, mobile communication trainers, antenna trainer, USB trainer, hand held oscilloscope etc.





### DIGITAL ELECTRONICS AND MICROPROCESSOR LAB

For fulfilling the needs of studies in digital electronics, microprocessor and related areas .the lab has all basic and advance kit for microprocessor like 8085, 8086, 68000. It has IC testers, EPROM programmer, digital storage oscilloscope, logic anal yser.

#### PCB DESIGN & FABRICATION LAB

The lab is fully capable of undertaking commercial production of single and double sided PCBs. The facilities include vertical process camera, photo resist dip cooling machine with provision for double sided PCBs. This lab includes PCB making machine, electric drilling machine, vertical reprographic camera and test equipment work station.





#### **COMPUTER/ PROJECT LAB**

A well furnished lab identified as department's computer centre and serves software needs of students of Electronics & Communication Department. The lab is equipped with 37 Pentium-IV computers with MATLAB Software, HFSS anten na Simulator, IE3D simulator, COMSOL, Multisim Software, Optisim v11, ORCAD, PSPICE etc. This lab is being used by Ph.D. research scholars for carrying out their research work.

#### **Digital Signal Processing Lab**

The main objective of this lab is to gain the practical hands on experience by exposing the students to various digital signal processing activities. The students gain an understanding of the concepts of DSP processors and their architecture for implementation of DSP algorithms on digital signal processors. The lab is equipped with various tools including FPGA Design Tools which includes Xilinxs and Altera Series of FPGA' s, DSP Development Board based on TMS-320C6711 based DSP chip.





#### **Control Engineering Lab**

This laboratory is to impart the practical knowledge about various process control techniques used in modern process indus tries. This laboratory is equipped with process simulation kit with feed forward and cascade control schemes, electronic logic controllers, relay logic controllers, level and temperature control with PID controller, electronic transmitter , recorders, DCS and PLC (programmable logic controller) trainer kit to carry out advanced experiments in process control engineering lab.

#### BROADBAND COMMUNICATION LAB

This laboratory is useful for Graduate, Post Graduate and Ph.D students. This lab includes Light Runner Optical Ex perimental Kit, OptiSim, FemSiM etc for optical communi cation and network design.





#### MACHINE VISION AND MOTION CONTROL LAB

The lab is focused on research in the area of machine perception particularly in image understanding and motion analysis. The laboratory has a workstation. Each workstation consists of a personal computer with a frame grabber, a CCD camera, lighting and optics setup .The workstation is a standalone system by itself in the sense that all experiments can be run on it. The lab is fully equipped with equipments in cluding Color Camera and Monochrome Camera, NI Vision Development Module with Run Time Module, NI Vision Builder for Automated Inspection, Vision Camera Illumination System, NI ELVIS Trainer Kit, NI Educational lab. (NI ELVIS II Hardware) and NI LabVIEW.

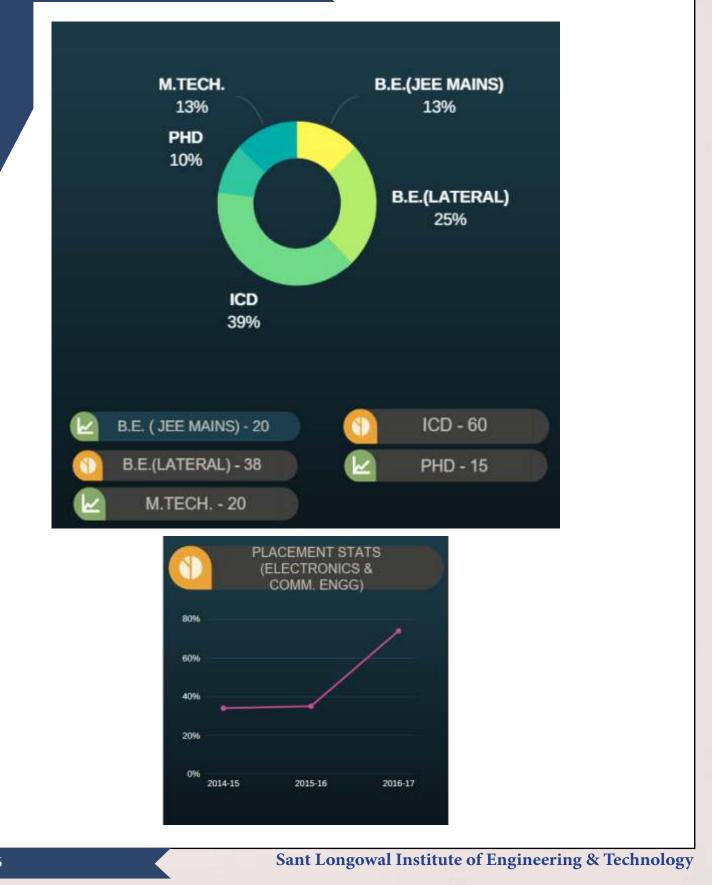
## Placement Team

35

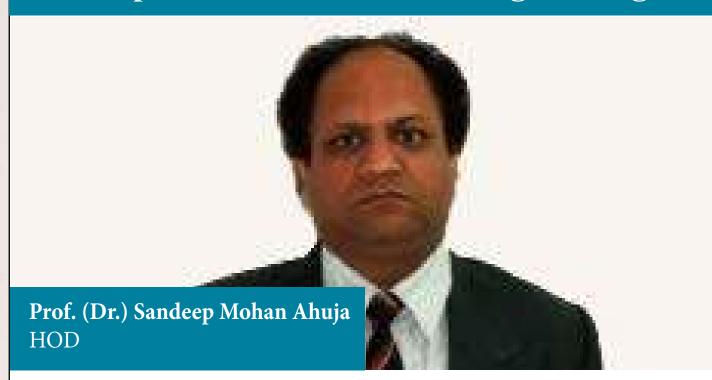
Departmental T & P Co-ordinators



## **Demographics**



## **Department of Chemical Engineering**



Department of Chemical Engineering, SLIET, shall strive for the development and transfer of technical competence in academics through formal and non-formal education, entrepreneurship and quality research to meet the challenge of ever expanding and globalized world.

•On increasing the demand of the Chemical Engineering field in the world of Technology, this department of SLIET, Longowal has been conceived for the creation of technically competent manpower at the levels of Diploma (Chemical Technology), Graduate (B.E. in Chemical Engineering), Post-graduate (M.Tech. in Chemical Engineering), and PhD in Chemical Engineering and allied fields.

•The department has all core labs of Chemical Engineering at UG & PG level. All labs are upgraded to fully functional for multi-usage purposes. Well equipped research labs cater to the needs of full time and part time research scholars. Fully functional labs in the fields of Polymer and Paper Technologies are serving the special need of industries in terms of consultancies and special interests of students to undertake projects and research work.

•The interaction with industries is continuously being done and the industries are given expert advice and consultancy by competent faculties working in different areas of interests. Research projects have been granted to the department by various funding agencies like CSIR, AICTE, and MHRD and nearby industries.

•Apart from above, knowledge dissemination by conducting expert lectures, seminars, workshops, conferences, short term courses is being done by the department throughout the year.

Sant Longowal Institute of Engineering & Technology

## **Our Faculty**



#### Dr. Pushpa Jha

Book author :-Written a chapter on "Pyrolysis and Adsorption Studies on Rice Husk", for the book " Recent Advances in Biomass Gasification and Combustion", Unde the aegis of Ministry of Nonconventional Energy Sources, New Delhi, 1993, Interline Publisher, ISBN:81-7296-012-3 tion", Under AWARD :-

water, Solids, Hazardous Waste" in International Conference on Environment at USM, organisedMalaysia on 14th Dec.2010.



#### Dr. KamleshKumari

Professor BOOK AUTHOR :-

AWARD :-•Punjab University, Chandigarh has conferred the Award of Excellence in Poster Presentation for paper presentation in an International Conference held on Feb 16-18, 2012.

Best Poster Award for a paper in 14th Punjab Science Congress (Under the aegis of Punjab Academy of Sciences, Patiala) held on February 7-9, 2011.



#### Dr. H.R. Ghatak

Professor, FPC Patent :- Process for large scale hydrogen production from renewable sources Books:-

Ghatak H.R.; "Reaction Engineering Principles". CRC Press, Taylor and Francis Publication. ISBN 9781498758567.



#### Dr. Nikhil Prakash

#### BOOK AUTHUR :-

BOOK AUTHUR :-•Nikhil Prakash, 'Commodity Thermoplastics with Bespoken Properties using Metallocene Catalyst Systems, Responsive Materials and Methods'. Ashutosh Tiwari and Hisatoshi Kobayashi (eds.), WILEY-Scrivener Publishing LLC, USA, 2013, 379-398. •Sushil Kumar; Nikhil Prakash and DipaloyDatta, 'Biopolymers based on Carboxylic Acids Derived from Renewable Resources, Biopolymers: Bio-medical and Environmental Applications'. SusheelKalia and Luc Avérous (eds.), WILEY-Scrivener Publishing LLC, USA, 2011, 169-182.



#### Dr. Avinash Thakur Associate Professo

•MHRD- MODROB Project (Period w. e. f. 01.04.2005 to 31.03.2006) entitled Modernization of Chemical Reaction Engg. & Thermodynam nics Lab



#### Gulshan Kumar Jawa e Professor, ATPC

rcesearch Research Project – 01 (as Co-Principal Investigator) – Completed MODROB Project – 01 – Completed Papers presented in seminars/ conferences : National – 06 International – 01



Dr. Amit Rai Assistant Fronces. Publications: 8 sistant Profes



## Dr A. S. K. Sinha Assistant Professor, FPC

BOOK AUTHUR :-BOOK AU THUR :-\*Book Chapter titled "Neem (Azadirachtaindica) as alternative wood fiber source with environmental advantages" published in PAPERCON 2008, TAPPI PRESS, USA, ISBN: 978-160560510-4.

Book Chapter titled "Caustic Soda Delignification of Khar Grass for Separation of Cellulosic Fibers" published in book 'Advances in Environment Research', IPCBEE 2015. DOI:10.7763/IPCBEE. 2015. V87.8; indexed by EI Geobase(Elsevier), Chemical Abstracts Services (CAS), ISBN 978-981-



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Subita Bhagat Assistant Professor, FTC Research-Experimental & Theoretical Studies on Olefin Polymerization with metallocene complex catalytic system.



Vinod Kumar Meena Assistant Professor, FTC

## FACILITIES



#### Computer lab

Students enjoy 12-hour access to the facilities offered by the Department Computing facility, which includes over 32 personal computers and a number of related peripherals. Each of the desktop PCs is licensed to run dozens of software applications, including some of the most sophisticated technical packages available. The lab is updated on a regular basis. Numerical models are developed for modeling chemical processes involving fluid flow, heat and mass transfer with chemical reactions. The mathematical models are solved with the aid of sophisticated software on personal computers Modeling and simulation softwares include, Design Expert 7.0, MATLAB as a numerical tool for modeling fluid flow, heat transfer, and reactions in fluid/solid systems such as porous beds, membranes, reactors, and channels.

#### **Chemical Technology Lab**

This lab is equipped with viscometers, dilatometer, water bath, digital balance etc. to carry out the basic experiments related to the chemical technology.Iodine value, acid test, saponification value, solubility tests on vegetable oils, Molecular Weight determination, synthesis of polymer etc. can be performed here.





#### **CRE and Thermodynamics Lab**

CRE & Thermodynamics Lab is equipped with the basic equipments to demonstrate the students with various types of reactors and to study about the applications of principles of chemical reaction engineering & thermodynamics. The lab is maintained for the students to impart them with the practical exposure and experiences about the lab scale studies of the subject. It consists of the major equipments like CSTR, PFR, Batch Reactor, Adiabatic Reactor, Packed bed reactor and equipment for vapour- liquid equilibrium etc.



#### **Energy Technology Lab**

This lab caters to the needs of students of UG & PG level. Highly sophisticated equipments like Bomb calorimeter, Cloud & Pour Point Apparatus, Biodiesel Production Plant etc are available in this lab. Apart from this students are able to perform all usual test on fuels like coal, petrol, diesel and other biofuels with sim ple glasswares, oven, furnace and flame & fire point apparatus.

#### Environmental Engg. Lab/ Research Lab-II

This lab is developed to provide the research facilities to the students for their research/project work. This lab will have major equipments/instruments like UV-VIS spectrophotometer, Gas chromatograph, Rotary Evaporator, Radiometer, BOD and COD etc. to analyze the wastewater/black liquor/ industrial effluents characteristics and other chemical anal ysis. Presently lab has computational facility for data anal ysis. Recently particle size analyzer and metal ion detector has also been procured. This laboratory will support to carry out any research work specially related with environment and will be used as inter-disciplinary lab.





#### Fluid & Particle Mechanics Lab

The lab is equipped with various apparatus like volumetric flow rate, average velocity, mass flow rate, Stoke's law appara tus, jaw crusher, ball mill, screens, plate and frame filter press, sedimentation set-up, rotary drum vaccum filter. Bernoulli's apparatus to prove Bernoulli's theorem is available.

#### Heat and Mass Transfer Lab

This lab helps the students to understand the basic concepts about heat and mass transfer: Conduction, Convection, Radiation, diffusion and leaching. To enhance the practical knowledge of industrial equipments, students perform the practicals on Shell-&-Tube heat exchanger, Cooling Tower, Open Pan Evaporator, Distillation Column, Solid-Gas and Liquid -Gas contact equipments.





#### Paper Technology Lab

This laboratory caters to the specialized training needs of certificate level and undergraduate students of Paper Technology specialization. The laboratory is equipped with a 20 litre electrically heated circulation digester, a Valley Beater and a SchopperReigler Tester, a BaurMcNett Fiber Classifier, and sheet making facility including a Sheet Former, a Sheet Press, and a Rotary Sheet Dryer facilities like physical and chemical analysis of papermaking raw materials, pulp and black liquor, rheological properties of black liquor are also available.

#### Polymer Processing Lab

This lab is equipped with equipments like automatic injection molding, semi auto rotational molding, semi auto vacuum forming, two-roll mill, and hand molding machines. Variety of materials such as thermoplastics, thermo sets, rubbers can be processed to get the polymer products in the required shapes.

Polymer processing lab helps the students to understand how the raw material get converted into a usable form by employy ing different techniques of moulding.



#### **Polymer Testing Lab**



Polymer testing lab is equipped with melt flow index, Low temperature brittleness tester, Environmental stress cracking resistance (ESCR) instruments, various equipment related to AICTE research project such as Universal tensile testing machine, Impact tester, Abrasion tester, Single screw extruder are also lying in polymer processing lab.

#### **Process Dynamics and Control Lab**

The lab is well equiped to provide laboratory application of funda mental principles of chemical process dynamics and control. This in cludes study of open-loop dynamics of typical chemical engineering processes and closed-loop experiments involves control loop design, controller tuning etc.





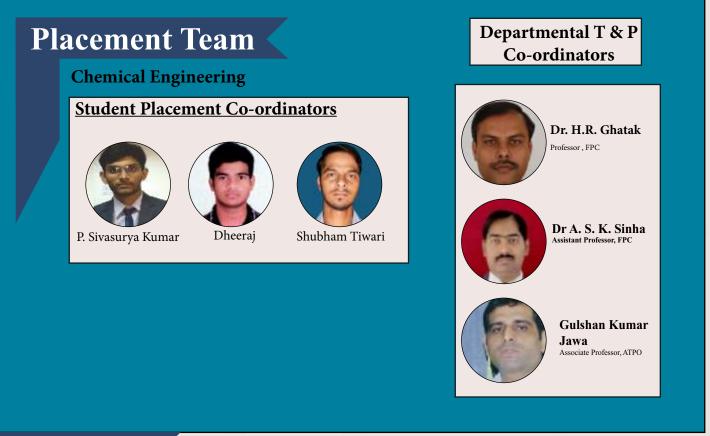
#### **Research Lab**

HPLC, (Heat Deflection Temperature) HDT, High pressure reactor, Limiting Oxygen Index are some of the instruments presently available in this lab. This lab is being used mostly for research purpose and has the facility to characterize/analysis the polymer sample/materials.

## **Demographics**







## **Department of Food Engineering and Technology**



The department was established in 1992 to provide technical education in the field of Food Engineering and Technology. It caters to the Technical manpower requirements at various levels by adopting a new concept of modular system in technical education with emphasis on practical training in industry. The major goals of the department are to impart quality educa tion in the field of Food Science, Technology and Engineering. The department has the state of art R&D facilities. The innovative process development and transfer of technology is aim of the department. The department is imparting time to time training to rural youth to make them self-sustainable. The interaction with industries is continuously being done and the industry is given the expert advice and consultancy by the department. Various research projects have been granted to the department by various funding agencies like CSIR, AICTE, MHRD, ICAR, DST, DBT and nearby industries. A SPWD program is also handled by the department. Apart from this, knowledge dissemination by conducting seminars, workshops and short-term courses is being done throughout the year. Recently, some faculty members have been included in the international Panel of Project Reviewers and Research Group of other countries like Portugal and USA. The Department has signed MOU with CIPHET, Ludhiana and in process of signing MOU with other reputed institutions /Universities in India and Abroad.

## **Our Faculty**



#### Dr. Sukhcharn Singh

Professor • Ex-Vice-president, AFST, Mysore

EX-Vice-president, AFS1, Mysore
 Young Science Congress
 Co-author of
 Coreal Grains: Evaluation, Value Addition and Quality Management (2013)
 D.C. Saxena, C.S.Riar, S. Singh and N. Jindal (ISBN: 9789381450857)
 Food Grain Process Technology (2009) C. S. Riar, N. Jindal, S. Singh and D
 C Saxena (ISBN: 9788131305737)



# Dr. Charanjit Singh Riar Professor, FTC •National Journal: 04 •International Journal: 32 •Proceedings: 01 •Conferences/Seminars: 38 •Teaching experience: 21 years



#### Dr. D.C. Saxena

Professor PATENT: 1.A NUTRITIOUS SNACK FROM RICE INDUSTRY WASTE AND METH-0D THEREOF 2.MOULDING PELLETS FROM BIO-WASTE AND PROCESS THEREOF

AWARDS

AWARDS: -•AP Prize FOOMA Japan 2014 Academic Plaza from The Japan Food Machinery Manufacturers' Association. •Fellow–95 of International Union of Food Scientists & Technologists awarded in IX World Congress of Food Scientists & Technologists at Budapest,



#### Dr. H.K. Sharma

 Professor
 Conferred V IGYAN RATNA SAMMAN for the year 2010-11 from Council of Science and Technology (CST), Lucknow, U.P
 Conferred "Professor Jiwan Singh Sidhu Award for excellence in Teaching" at IIT, Kharagpurfrom Association of Food Scientists and Technologists, India [AFST(I)]. •TOTAL PUBLICATIONS: 169



#### Dr. M.B. Bera

Professor •PG certificate (Food Tech) awarded by Hebrew University, Jerusalem, Israel in Professional Experiences: More than 32 years (Since 1980) in the area of Food Engineering & Technology and Food Biotechnology
Young Scientist award of Madhya Pradesh Council of Science & Technology



#### Dr. Pradyuman Kumar

Professor •Young Scientists Award – 2005 by AFST (I), Mysore •More than 170 papers in International & National Referred Journals and Intern

•International Referred Journals: 63 •Invited Lecture: 12 •Proceedings of International Conferences: 09



Dr. Kamlesh Prasad Professor , FPC Academic and Research – 23 Yrs Six books published from international publisher



#### Dr. Vikas Nanda Professor •Co-chairman of International Honey Commission. •More than 20 years of Academic Experience •20+ Reasearch Papers Published



#### Dr. Navdeep Jindal

D1. WaVdCED JIHUAI Associate Professor, ATPOv •AWARD -N. Jindal and D. C. Saxena. First Prize in the Poster Session at the 3rd International Conference on Food Technology (INCOFTECH) held at IICPT, Thanjavur (India). January 4- 5, 2013. •TOTAL Publication =10



Dr. Charanjiv Singh Saini

PDL Charactery Shifts Samilar Samilar Associate Professor, FTC
A total of 18 years experience in teaching and research.
Research Papers published in refereed journals (National/International) =27
International Conference: =8
National conference-8



## **FACILITIES**



The Department of Food Engineering & Technology has fully equipped eleven labs catering to the needs of Under and Post gradu ate programs and the Food Industry. The major equipments/facilities available are as follows:

#### Storage & Packaging Lab

The facilities include:

- 1.Box compression strength tester 5.Multi stem thermometer
- 2.Bursting strength Tester
- 3.Drop Tester
- 6 Puncture Resistance tester 7.Shrink Packaging M/c
- 4.Incubator with humidity control 8.Tensile Testing M/c

#### Food Rheology Lab

- The facilities include: 1.Alveo- Consistograph 2.Falling No. Apparatus 3.Powder Flow analyzer 4.Rapid Visco Analyzer 5.Rheometer
- 6.Rheo-optic Analyser 7. Texture Analyzer
- 8.Viscometer
- 9. Amino-acid Analyser





#### **Dairy Technology Lab**

- The facilities include: 1.Butter churner
- 2.Butter worker
- 3.Butter working table
- 4.Centrifugal milk test m/c
- 5.Circulating water bath
- 6.Cream separator
- 7.Deep freezer
- 8.Digital PH Meter
- 9.Incubator Shaker

#### 10.Milk Homogenizer 11.Milk Stirrer 12.Milk testing equipment 13.Milk testing m/c (hand ) 14.Muffle furnace 15.Reverse Osmosis 16. Rotary Vacuum Evaporator

#### Dr. Sarkar Memorial Research Lab

9.F.T.I.R.

- 1. Atomic Absorption Spectrophotometer 7. Fermenter 8.Freeze Dryer
- 2. Automatic Digital Refratometer
- 3.Centrifuge machine
- 4.Color Spectrophotometer
- 5.Differential Scanning Colorimeter
- 6. High Pressure Homogenizer







#### Advanced Quality Control Lab

- The facilities include:
- 1.5 Point calibration pH Meter
- 2.Gas Chromatograph
- 3.HPLC System
- 4.Ultrasonic Bath
- 5.UV-Vis Spectrophotometer
- 6. Water Activity Meter

#### **Bakery & Confectionary Lab:**

The facilities include: 1.Baking Oven 2.Bread Slicer 3.Fermenter 4.Microwave Oven 20 lit 5.Mixer 6.Moulder & Sheeter 7.Pasta Making M/c





#### **Food Engineering Lab**

The facilities include:

- 1.Digital multi stem thermometer
- 2.Filter Press
- 3.Heat conduction app.
- 4.Refrigerator Tutor
- 5. Thermal Radiation app.
- 6.Thermocouple
- 7. Venturimeter, Orifice Flow meter & Pitot tube

#### Food Processing Lab (Pilot Plant)

The facilities include: 1.Aeration App. 2.Autoclave 3.Baking oven 4.Boiler 5.Cabinet Dryer 6.Exhaust Box steam heated 7.Reformer & Flanger

8.Seamer
9.Seed grader
10.Steam jacketed kettle 100 lit
11.Steam jacketed kettle 300 lit
12.Steam jacketed kettle 50 lit
13.Trionocular Microscope





**Unit Operation Lab** 

10.Lab scale Rice Sizing Device

11.Laboratory aspirator 12.Paddy Dehusker

13.Seed blower

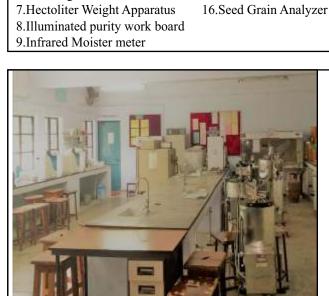
14.Seed collector

15.Seed Counter

#### Fruit & Vegetable Processing Lab The facilities include: 1.Crown corking m/c 9.Pulper 2.Deep freezer 3. Digital PH meter

4.Food processor 5.Fruit mill

#### 8.Potato peeler 10.Spray Dryer 11.Tray dryer 12.Vacuum filling m/c 6.Hydraulic juice press 13.Vacuum Oven



## **Biotechnology Lab**

- The facilities include:
- 1.Autoclave (Fully automatic)
- 2..Centrifuge
- 3..Cooling Centrifuge 4.Digital Balance AUX-220gm/0.1mg
- 5.Digital PH meter
- 6.Electrophoresis mini sub system
- 7.Gas Chromatograph
- 8.Gel dryer with Vacuum Pump 9. Horizontal Laminar Air Flow
- model C-32
- 10..B.O.D. Incubator 11.Centrifuge machine
- 12.Microplate shaker
- 13.Digital Naphelometer
- 14..Digital Weighing
- 15.Fumigator
- 16.Gel Documentation
- 17.Gel Rocker

18.PCR

#### Food Analysis & Quality Control Lab

The facilities include:

The facilities include: 1.Ball Grinding Mill

4.Grain divider

5.Rice polisher

6.Grinding Mill

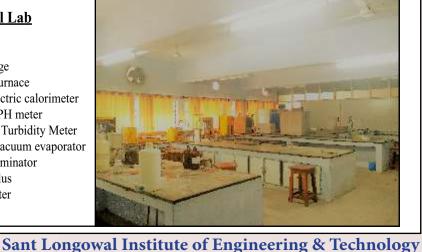
2.Dehusker (Rice Sheller)

3.Flour Mill/Burr plate Mill

- 1.Bomb calorimeter
- 2. Millipore Vacuum Filtration Assembly
- 3.Digital PH meter
- 4.Fibra Plus

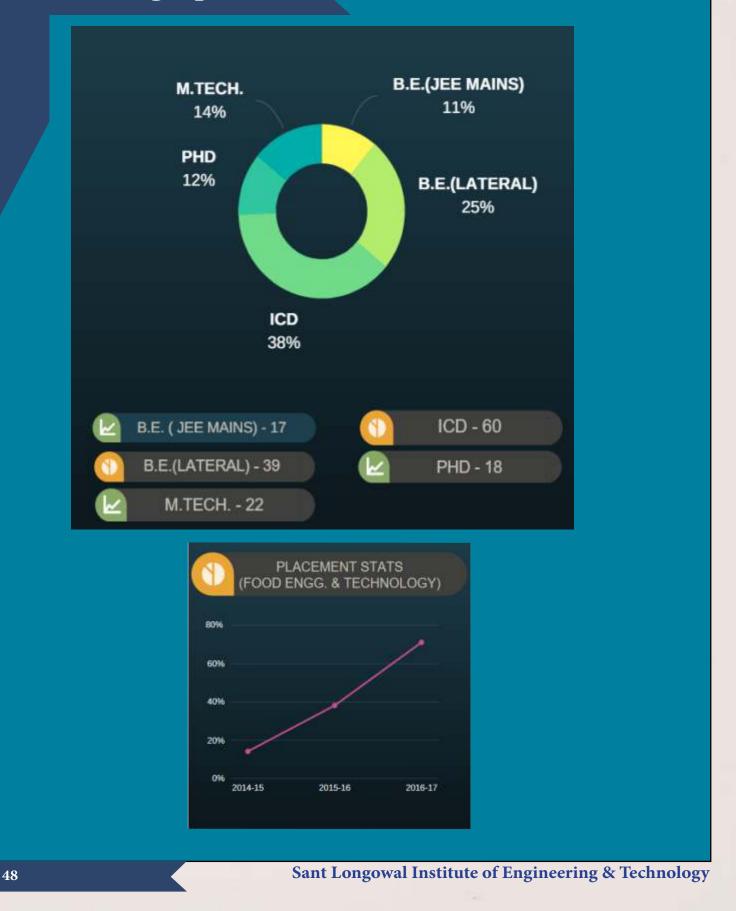
- 5.Infrared moister balance
- 6.Infrared Moisture Tester
- 7.KEL-PLUS (Supra Lx)
- 8.Laboratory Centrifuge M/C
- 9.Laboratory centrifuge Machine
- 10.Melting Point Apparatus

- 11.Centrifuge
- 12.Muffle furnace
- 13.Photoelectric calorimeter
- 14. Pocket PH meter
- 15.Portable Turbidity Meter
- 16.Rotary vacuum evaporator
- 17.Seed germinator
- 18.SOCS Plus 19. Tintometer





## Demographics



## Achievements



The department of food engineering and technology was established in 1992 to provide technical education. The FET department is well known for its cutting-edge research and teaching programmes, prides itself on creat ing an environment that facilitates in not only the academic but the overall development of the students. The de partment consists of 11 doctorates in various field.

Some of the awards received by the faculty are:

1.Dr. M.B. Bera: Young Scientist Award

2.Dr. D.C. Saxena: Prof. Jiwan Singh Sindhu Award, Fellow of International Union of Food Scientists and Technologists

- 3.Dr. H.K. Sharma: Young Scientist Award, Second Best Research Paper in ICFoST (1987).
- 4.Dr. P.S. Panesar: BOYSCAST Fellowship(2005), Young Scientist Fellowship.
- 5.Dr. Vikas Nanda: Co-chairman of International Honey Commission.
- 6.Dr. Sukhcharan Singh: Young Scientist Award (2007).
- 7.Dr. Pradyuman Kumar: Young Scientist Award (2007)





The department organizes national con ferences, seminars, eminent guest lectures, quizzes competition etc. to provide its students an apt platform for self-development across all areas. Many short-term courses and workshops such as "National Vocational Education Qualification Framework", "Training Course in Food Safety" etc. have been organized by the department. For better skill development of students, Society of Food Technology (SOFT) is run and managed by the students

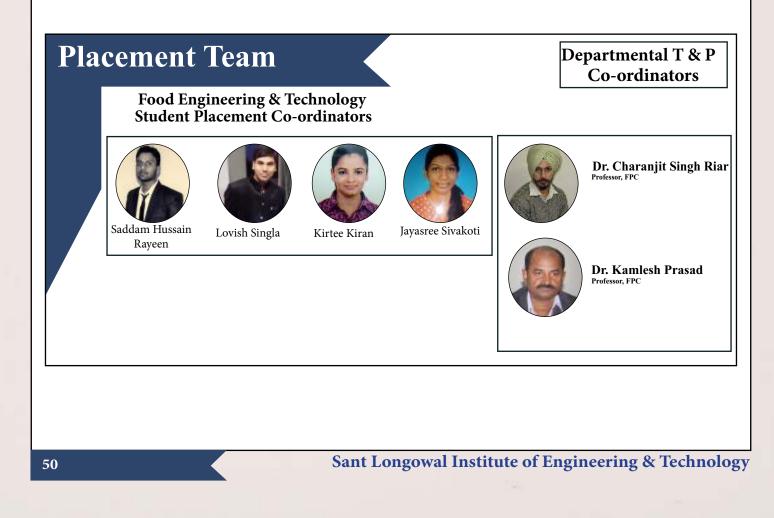
under faculty advisor. We have been continuously ranked among the elite by our peers and our constant pursuit of excellence has made our institute a focal point in technical education for students and faculty members alike.

The department has managed to successfully conduct the following national conferences in the last 3 consecutive years:

1. TEQIP-II sponsored National Conference "Technologies in Sustainable Food Systems" on October 7-8, 2016.

2. National Conference on "Innovative Techniques in Food Product and Processing Technologies" on Oct 09-10, 2015.

3. National Conference on "Innovative Techniques in the development of functional foods and Nutraceutical",



## **Supporting Departments**

<b>Department of Physics</b>
Professor: A.S. Dhaliwal, Ph.D. Kiranjit Singh Kahlon, Ph.D. K.S. Mann, Ph.D. (H.O.D.) M.M. Sinha, Ph.D. (H.O.D.) M.M. Sinha, Ph.D. S.S. Verma, Ph.D. Assosiate Professor: S.S. Ghumman, Ph.D. Assistant Professor: Kanika Aggrawal, M.Sc. M.tech Prabhdeep Kaur, Ph.D.
Department of Management & Humanities

Professor: B.K. Kanungo, Ph.D. Dhiraj Sud, Ph.D Harish Kumar Chopra, Ph.D. Ram Pal Chaudhary, Ph.D. (H.O.D.) Assosiate Professor: Damanjeet Singh Cannoo, Ph.D. Assistant Professor: Hemant Kumar, Ph.D. Himanshu Rani, M.phil Payal Malik, Ph.D.

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#### **Professor:**

Jaspreet Kaur Bhangu, Ph.D. Mahesh Kumar Arora, Ph.D. Predeep Kumar Jain, Ph.D. **Parveen Kaur Khanna,** 

-Ph.D. (H.O.D.)

Pawan Kumar, Ph.D. Sanjeev Bansal, Ph.D.

#### Assosiate Professor:

Sanjeev Kumar Garg, Ph.D. Assistant Professor: Mandeep Ghai, Ph.D.

## **Faculty Members**

### **Dept. of Mechanical Engg.**

#### **Assosiate Professor:**

Indraj Singh, Ph.D., Jaspal Singh Gill, M.tech, FTC Kanwalpreet Singh, M.E. (On EOL) M.A. Akhtar M.Tech., FTC Rakesh Kumar, M.Tech Suresh Chandra Verma, M.E.

#### Assistant Professor:

Ankita Omer, M.Tech. Anuj Bansal, M.E., FTC Harish Kumar Arya, M.Tech., FTC Jonny Singla, M.Tech., FPC Lalit Ahuja, M.Tech., FPC Surinder Kumar, M.Tech., FTC Sunil Kumar, M.Tech. Sumit Kumar, M.Tech., FTC Vivek Kumar, M.Tech.

\*FTC-Faculty Training Co-ordinator \*FPC- Faculty placement Co-ordinator \*TPO- Training & Placement O壽到 cer

\*ATPO- Assistant Training & Placement O翿 cer

#### Dept. of Electrical & Instrumentation

Assosiate Professor: Gurmeet Singh, M.E. Pratibha Tyagi, M.Tech., ATPO Rajinder Kaur, M.Tech.

#### Assistant Professor:

Ashwani Kumar Aggarwal, Ph.D., FTC Barasha Mali, M.Tech. Raj Kumar Garg, Ph.D., FTC Sunil Kumar, M.Tech.

## Dept. of Chemical Engineering

Assistant Professor: Vinay kumar, Ph.D. Naveen Kumar Kaushley, M.tech

Sant Longowal Institute of Engineering & Technology

## **Industry-Institute Interaction - 2017** Pictures of Various Activities









Inauguration



Addressed by Chairman (BOM)



Addressed by Head (T&P)



Addressed by Director SLIET



Discussion Session with Experts from Industry

Sant Longowal Institute of Engineering & Technology

Technical Session





Thanks to our some recruiters





Recruiters of few alumni



Recruiters of few alumni with head (T&P) & chairman Alumni Association along with convener (I.I.I.C.-Mechnical) Dr. Manoj Goyal



Concentration of B.E.-2017 Students during Technical Session

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Recognition of efforts to successful conduct of I.I.I.-2017 by Honorable chairman (BOM) to Director SLIET

## SOME OF OUR RECRUITERS



Contact Us 🔁

#### Prof. (Dr.) Ravi Kant mishra

Head, Department of Training & Placement Office Phone : 01672-253133, 134, 01672-280021 Mobile : 94171-17990 Email : headtp@sliet.ac.in

#### Prof. (Dr.) Sukhcharan Singh

Training & Placement Officer Mobile : 95015-83366 Email : sukhcharans@yahoo.com

#### **Student Training & Placement Representatives**

#### **Shubham Shreshth**

(Mechanical Engineering) Mob.: 98727-15935 Email : shubham\_gme144014@sliet.ac.in

#### Ankita Sharma

(Electronics & Engineering Communication) Mob.:94599-57192 Email : ankita.sharma564@gmail.com

#### Avijeet Mishra

(Mechanical Engineering) Mob.:90415-28952 Email : avijit.viccy@gmail.com

#### Aastha Arora

(Computer Science) Mob.: 98154-15673 Email : aastharora1170@gmail.com Ankur Sengar (Electrical Engineering) Mob.: 98727-14396 Email : ankur\_gee1445015@sliet.ac.in

#### Padala Siva Surya Kumar (Chemical Engineering)

Mob.: 86993-14443 Email : suryakumarpadala@gmail.com

#### **Shivam Maury**

(Electrical Engineering) Mob.: 98727-12920 Email : shivammaury@gmail.com

#### Saddam Husain Rayeen

(Food Engineering & Technology ) Mob.: 98159-48929 Email : rayan.saddan786@gmail.com