

Sant Longowal Institute of Engineering and Technology
Longowal-148106, District Sangrur, Punjab India

NAAC-Self Study Report and Evaluative Report of Departments.

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EXECUTIVE SUMMARY

Sant Longowal Institute of Engineering & Technology (SLIET), established by the Government of India, provides technical education in emerging areas of Engineering & Technology. The Institute was established by Government of India on the recommendations of National Expert Committee to provide formal technical education to the students of the country. It caters to the requirement of technical manpower at various levels by adopting the concept of modular system in imparting technical education with emphasis on practical training in industry. Set up in 1989 under Rajiv Gandhi - Longowal accord with an aim to fulfil the cherished dreams of late Sant Harchand Singh Longowal, the Institute has carved for itself a niche place among the professional Institutes and Universities of the country. SLIET is an autonomous body, fully funded by Govt. of India and being managed by SLIET society registered (no. 769 of 1987-88) under the society's registration act 1860. The institute attained the status of Deemed-to-be-University on 11th April, 2007 (Notification No F.9- 42/2001-U.3) by the University Grants Commission (UGC) under Section 3 of UGC. The educational programmes of this institute are nonconventional, innovative, practical oriented and contain all aspects of new education policy (1986) of Govt. of India. The Institute offers programmes at Certificate, Diploma, Degree, Post-graduate (M.Tech., MBA and M.Sc.) and Ph.D. level in Science, Humanities, Management, Engineering and Technology. The M.Tech. Programmes were started in the Institute in 2002. Chaired by eminent industrialist or educationists, its board of governors is constituted of educationists and nominees of center and state government in various capacities. The administrative control of the Institute is vested in the Director appointed by Board of Management (BOM) and MHRD, Govt. of India. The organizational chart for SLIET society is shown in Figure 1, the organizational chart for SLIET University is shown in Figure 2 and chart for planning and monitoring is shown in Figure 3 respectively.

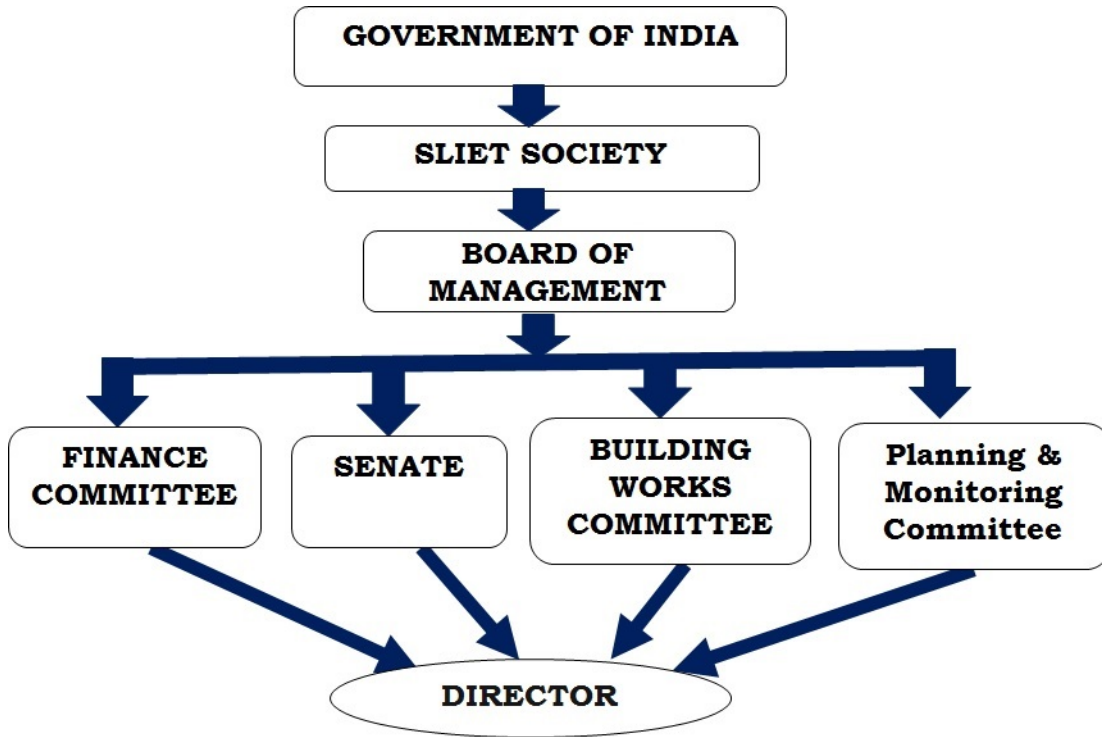


Figure 1: Organization Chart for SLIET Society

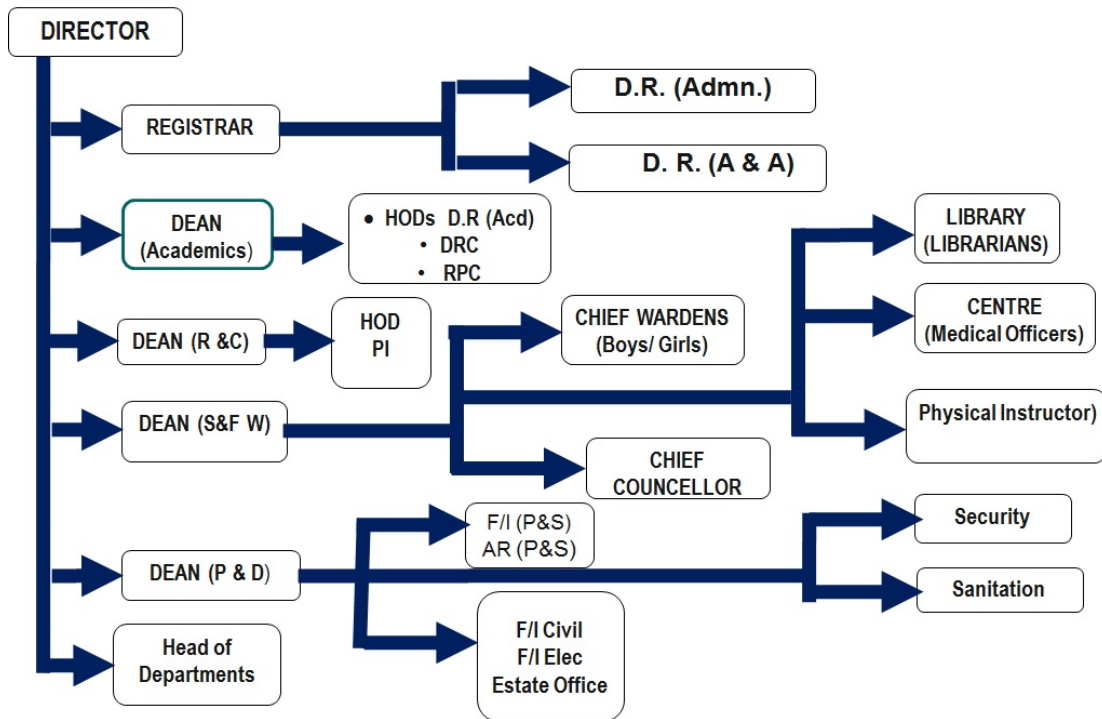


Figure 2: Organization Chart for SLIET University

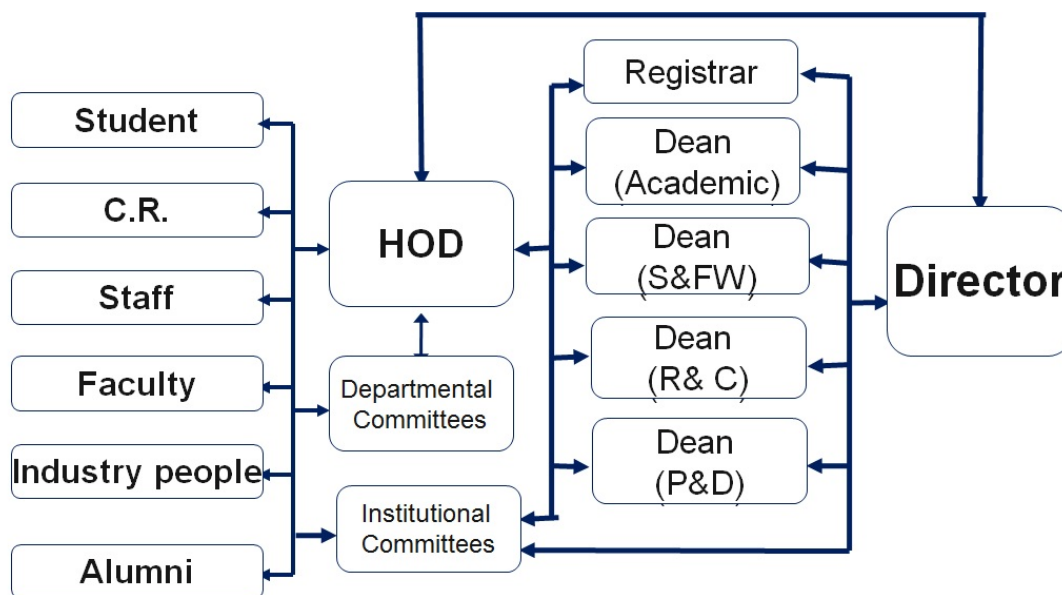


Figure 3: Planning and Monitoring Chart

Accreditation

SLIET, Longowal is empowered to award Certificate, Diploma, UG, PG and Ph.D. degrees to the students on attaining academic autonomy which has been conferred by the University Grants Commission under Section 3 of UGC on 11th April, 2007. All the degree programmes of the institute had been accredited with the National Board of Accreditation (NBA). Three Under-graduate programmes have been reaccredited and process of submission of application for remaining degree programmes is under preparation. The institute, apart from formal technical education, is running non-formal training programmes for the physically challenged and weaker sections of the society to fulfill its social commitments. The university is a center for Quality Improvement Program for faculty members of Technical Institute approved by Government of India. Further, university is offering courses in collaboration with other organization like IGNOU.

Location

The Institute is situated at Longowal (around 08 km from Chandigarh- Bhatinda Highway) in the District of Sangrur, Punjab. It is connected by road to Sangrur (18 km), Ludhiana (120 km), Chandigarh (150 km) and Delhi (360 km). The nearest railway stations are Sangrur (18 km), Dhuri (30 km) and Sunam (16 km) on the Northern Railway. The nearest airports are at Chandigarh, Ludhiana and Bhatinda.

Governance and Leadership

Sant Longowal Institute of Engineering & Technology, Longowal is an autonomous body Registered as a society with registration no. 769 of 1987-88 and is fully funded by the Ministry of Human Resource Development, Government of India. The Director of the Institute is appointed by the MHRD in accordance with the defined procedures in the Memorandum of Association (MoA). The MoA defines the functions, duties and rules of various bodies which include the Board of Management (BOM), Senate, Finance Committee (FC), Building Works Committee (BWC), and Planning & Monitoring Committee. The statutory authorities meet frequently to review plans and update academic and administrative matters. Performance of the departments is discussed in meetings of Head of Departments (HOD), and the Senate. The curricular revision of programmes is discussed in Board of Studies and then in Senate. The Board of Management is the main governing body of the Institute. The issues relating Annual Accounts and Audit Report, Annual Report and Future Policies are taken up by the Institute with MHRD under the supervision of the Hon'ble Chairman, Board of Management.

General

A technical educational institute, Sant Longowal Institute of Engineering & Technology, Longowal (Deemed-to-be-University) has excellent infrastructure. Some points are highlighted below:

- Surrounded by lush green land, the campus of the Institute extends a beautiful and well developed area of 451 acres with many topographically featured picturesque landscape, numerous buildings of various nature and stature and metaled road network.
- Total built up area of the Institute is 1,33,448 square meters.
- The campus presents a spectacle of harmony and natural beauty.
- It is embedded with all the amenities required for complete township.
- The campus area has been divided into various functional zones.
- Academic Zone for Buildings and Workshop: 11 academic departments.
- Residential Zone for Faculty and other supporting staff: Type-I to Type -V; 505 quarters and Director's residence.
- Residential Zone for Students: 10 boys and 04 girls' hostel.
- Service Area Zone: Health Centre, Guest house, Transit accommodation, Estate office, Kendriya Vidyalaya, Gas Agency, Post Office, Bank.

- Plantation/Forest Zone: Children parks, Lake, Oxidation Pond.
- Cultural-cum-Social and Recreational Zone for faculty, staff and students: Students activity center, Faculty Club, Community Centre.
- The Institute enjoys paid privilege of uninterrupted power supply facilitated by Punjab State Electricity Board.

Teaching Departments

The Institute has well-established academic departments of:

1. Chemical Technology
2. Chemistry
3. Civil Engineering.
4. Computer Science & Engineering
5. Electrical & Instrumentation Engineering
6. Electronics & Communication Engineering
7. Food Engineering & Technology
8. Management and Humanities.
9. Mathematics
10. Mechanical Engineering
11. Physics.

All the Departments have well qualified faculty and technical supporting staff. All the laboratories are equipped with the modern equipment.

Central Workshop

The Central workshop is equipped with modern and state-of the-art machinery. An exhaustive practical training is imparted to the students to develop their working skills in well equipped workshops. The administrative control of the department is vested in the Head of Department (HOD) appointed for 3 years following rotation policy.

Academic Programmes

At the time of establishment, Institute was offering 22 courses under 03 academic programmes viz. Certificate, diploma and UG programmes. In the year 2014, a major structural change in the academic structure was implemented keeping the modular pattern of education. Presently, students are admitted into 13 Certificate programs which converge to 07 Diploma programs based on the total credit acquired by the students. In that view,

the university is running 25 courses under 04 academic programmes viz. Certificate-Diploma, UG and PG programmes and Ph.D. Programme. Recently, one Master of Technology (M. Tech.) courses and one Bachelor of Engineering (B.E.) course have been started. All the programmes offered by the Institute are approved by the respective regulatory bodies, like All India Council for Technical Education (AICTE), Ministry of Human Resource & Development (MHRD). One time, all the UG programmes have been accredited by National Board of Accreditation (NBA). Three UG programmes have been reaccredited by NBA in 2016 and the university is in the process of applying for reaccreditation for other programs.

The admissions to Certificate-Diploma Program, Lateral Entry to UG Programs and Ph.D. Programs are made through SLIET Entrance Test (SET) conducted by the Institute at national level. All admissions in the Institute including for Ph.D. programmes are made on merit following reservation policy of the Centre Government. Admission to UG 4-year program is through JEE(Mains), for M.Sc program it is through CCMN along-with other NITs/IITs and CFTIs. The institute holds its own National Level Entrance test for the vacant seats (if any). The admissions to M.Tech programs is being done through CCMT along-with other NITs/IITs and CFTIs. The admission to MBA program is on the basis of CMAT score and the institute may hold its own National Level Entrance test for the vacant seats (if any).

In addition, in order to cover the whole campus under campus-wide networking scheme the University installed Wi-Fi and most of the institute area has been covered wide physical connectivity. As on today the Institute is not only connected with information super highway but also extends the benefit of connectivity to all the end users that include faculty, students and employees.

Certificate-Diploma Programmes (Three Years Duration)

The objective of the Diploma Program is to produce middle level technical manpower. Greater stress is given for practical oriented class work in the Institute with an extensive training in Industry. The following 07 Courses are offered under Diploma programme:

S. No.	Department	Name of Diploma Programme	Name of respective Certificate Programme
1.	Chemical Engineering	Chemical Technology (DCT)	Paper Technology (CPT)
2.	Food Engineering and Technology	Food Technology (DFT)	Food Processing & Preservation (CFP)
3.	Computer Science and Engineering	Computer Science & Engineering (DCS)	Data Entry & Word Processing (CDE)
4.	Electronics and Communication Engineering	Electronics & Communication Engineering (DEC)	Television Mechanic (CTV)
			Servicing & Maintenance of Electronic Instruments (CSME)
5.	Electrical and Instrumentation Engineering	Instrumentation & Control (DIN)	Servicing & Maintenance of Medical Instruments (CSMM)
		Electrical Engineering (DEE)	Electrician (CEN)
6.	Mechanical Engineering	Mechanical Engineering (DME)	Welding (CWG)
			Foundry and Forging (CFF)
			Tool & Die Technology (CTD)
			Auto & Farm Equipment Mechanic (CAF)
			Air Conditioning Mechanic (CAC)
7.	Civil Engineering	Civil Engineering (DCE)	

Degree Programmes (Three Years Duration)

Degree program is a continuation of technical expertise acquired in corresponding diploma programs and offers an opportunity to diploma holders to obtain degree in Engineering and Technology. The following 08 Courses are offered under UG programme:

S.No	Branch of Engineering
1.	Chemical Engineering
2.	Food Technology
3.	Computer Science & Engineering
4.	Electronics & Communication Engineering
5.	Instrumentation & Control Engineering
6.	Electrical Engineering
7.	Mechanical Engineering (Manufacturing Engineering)
8.	Mechanical Engineering (Welding Technology)

Post Graduate Programmes (Two Years Duration)

The objective of Post Graduation Programme is a continuation of technical expertise acquired in Degree Programmes. This will also offer the opportunity to the candidate to acquire skill to work on R&D projects and to promote industry institute interaction. The following 08 Courses are offered under Post Graduation programme:

S.No.	Name of the Department	Name of M.Tech. Programme
1.	Mechanical Engineering	M.Tech. in Manufacturing Systems Engineering (PG-MSE)
2.	Mechanical Engineering	M.Tech. in Welding and Fabrication (PG-WLF)
3.	Food Engineering & Technology	M. Tech. in Food Engineering & Technology (PG-FET)
4.	Computer science and Engineering	M.Tech. in Computer science and Engineering (PG-CSE)
5.	Electrical & Instrumentation Engineering	M.Tech. in Instrumentation and Control Engineering (PG-ICE)
6.	Chemical Engineering	M.Tech. Chemical Engineering (PG-CE)
7.	Electronics & Comm. Engg.	M.Tech. in Electronics & Communication Engineering (PG-ECE)

Besides above, university is offering M.Sc./MBA degree in following science streams:

- M.Sc. in Chemistry
- M.Sc. in Mathematics.
- M.Sc. in Physics.
- Master's in Business Administration.

Academics Structure

SALIENT FEATURES:

- Admission to ICD (Integrated Certificate-Diploma) programme (3-Yr) through All India SLIET Entrance Test (SET) after matric/10th standard exam from a recognized Board/University (Pass in English, Mathematics and Science is compulsory).
- Provision of voluntarily exit after successfully completing 2 years (with requisite number of credits) of ICD Programme. The student will be awarded certificate equivalent to 10+2 (PU Chandigarh, Punjab School Education Board & MHRD)
- Provision of entry in 2nd year of ICD after ITI/Certificate with two years industrial experience.
- Diploma will be awarded to students who will complete 3 years of ICD with the prescribed credits as per teaching scheme successfully.
- 50% of the SLIET Diploma holders fulfilling the requisite criteria will be promoted to 2nd year of B.E.(4-Yr) on the basis of all India Entrance Test (SET) conducted by SLIET longowal.
- Few seats in the 2nd year of B.E.(4-Yr) are open for Diploma holders from any recognized institute of India

Objectives

The objectives of the Institute are:

(a) Education and Training:

- i. To offer flexible, modular, layered, multipoint entry/exit programmes in Engineering & Technology,
- ii. To promote “Self-employment” in all programmes by introducing a component of entrepreneurship & providing guidance and counselling services to help students to take-up self-employment ventures,

- iii. To offer non-formal programmes in different areas of technology to strengthen the scope of Institutional programmes,
- iv. To provide Technical Education facilities for women, through specially designed courses,
- v. To offer continuing education programmes for working personnel from industries at different levels,
- vi. To meet the requirements of small, medium and large scale industries,
- vii. To offer higher level programmes after acquiring necessary competence at lower level programmes of the Institute,
- viii. To provide non-formal education and training to persons from unorganized sectors and school drops-out through its extension services, to enable them to acquire basic technical skills, so that they are successfully employed.

(b) Extension Services:

To offer services to:

- i. Industries in the neighborhood and in the region
- ii. Working personnel
- iii. Passed out students
- iv. I.T.I.'s and Polytechnics
- v. Research and other institutes of higher learning

(c) Research & Development:

- i. To conduct exploratory research to assess manpower requirement leading to integrated educational planning, curriculum development & instructional material development in the identified areas of Science & Technology.
- ii. To conduct research in the inter-disciplinary areas aimed at solving the problems of industry and community. The concept of practice school introduced in the Institute, will enable the students to attain the knowledge of modern technology practices in the Industries within reasonable time frame.

(d) Collaborations:

Number of M.O.U.'s with reputed industries and institutes of higher learning have been signed and some more are in pipe-line, for the purpose of drawing the expertise available with them, for the overall development of the Institute.

STATUS

The Institute is an autonomous body having the status of Deemed University and fully funded by the Government of India. It is controlled by SLIET Society, registered under Societies Registration Act, 1860. The Institute awards its own Certificates, Diplomas and Degrees including M. Tech., MBA, M.Sc. and Ph.D. Further, it is informed that:

- (a) The courses run by SLIET are duly approved by AICTE / UGC.
- (b) Certificates awarded by SLIET were recognized by All India Council for Technical Education (A.I.C.T.E.), New Delhi (Letter No. F,765-65-031(E)/ET/97 dated July 4, 1997 and Letter No.F-765-65/ET/97 dated April 15, 1997). Certificate courses of SLIET are equivalent to 10+2 qualification. Panjab University, Chandigarh vide its letter No.ST/8374 dated 21.9.1999 has recognized the Certificate courses of SLIET for the purpose of admission to B.A./B.Sc./B.C.A. courses (1st year). Department of Technical Education & Industrial Training, Govt. of Punjab, Chandigarh vide its Memo No.13/23/05-1T.S.2/32 dated 4.1.2006 has recognized Certificate Course of SLIET equivalent to 10+2. According to the notification, SLIET students are eligible for the admission to B.E./B. Tech. Programmes of Punjab Technical University, Jalandhar (state-wise). Vide notification no. Notification 42 No. F 18-8/93 T.D.V./T.S.# IV dated March 8, 1995, the certificate courses are declared as equivalent to 10+2 for job purpose.
- (c) Three year Certificate-Diploma (ICD) courses were started from the session 2014-15.
- (d) Two Year Diploma Courses were recognized by AICTE, New Delhi vide F. No. North-West/1-201645070/2014/EOA Dated 04/06/2014. Diploma Courses of SLIET are equivalent to the Diplomas awarded by the various State Boards of Technical Education in the appropriate fields for the purpose of recruitment to the posts and services under Central Government (Notification 42 No. F 18-8/93 T.D.V./T.S.IV dated March 8, 1995). Diplomas awarded by SLIET (except Diploma in Computer Science & Engineering) are exempted from Section-A of AMIE by The Institution of Engineers (India) vide letters No. EEA/AKG/R-22A dated Feb 20, 1995; EEA/AD/R-22A dated July 23, 1996 and EEA/AKG/R-22A dated November 1, 1999.
- (e) B.E. (4-Yr) Courses have been started from session 2014-15.
- (f) M. Tech. Courses are recognized by AICTE, New Delhi vide F. No. North-West/1-201645070 / 2014 /EOA Dated 04/06/2014.

(g) M.Sc. (Physics, Chemistry & Mathematics) is APPROVED by the UGC, New Delhi vide letter no. F 6.66/2004 (CPP-I) dated 04 March, 2011.

Research & Development

A Research and Development cell, under the control of Dean (Research & Consultancy), has been set up by the Institute to monitor exploratory research to assess manpower requirement leading to integrated educational planning, curriculum development and instructional material development in the identified areas of science and technology. The research work is undertaken by the faculty and research scholars of the Institute in the interdisciplinary areas to provide preventive and productive solutions for the problems of industry and community as a whole. Organizations like MHRD, AICTE, DIST, Council for Scientific and Industrial Research (CSIR) and Indian Council for Agricultural Research (ICAR) have funded various research project in the special field of science and technology.

Total projects completed during assessment period amounts to approximately 123 Lacs and few projects amounting to approximately Rs. 77 Lacs are undergoing. Special emphasis is placed on the R&D activities geared towards rural development and sustainable systems. Projects sponsored by Ministry of Nonconventional Energy, MHRD and Department of Science & Technology (DST) among other are being developed for applications targeted towards the rural and all round development products and strategies. The Institute has taken a number of steps to strengthen the areas of Research, Consultancy and Extensions. These include undertaking sponsored major research projects, streamlining doctoral level research process, admission to Ph.D. through Departmental Research Committee (DRC) and Central Research Committee (CRC), condition for publication of research papers in referred journals before submission of Ph.D. thesis and undertaking consultancy and extension activities. There is Departmental Research Committee (DRC) for each of the department and a Central Research Committee (CRC) at the Institute level. The Institute has also moved ahead with promoting ties with industry and profession.

Research is a significant activity in the institute. Students are enrolled as research scholars in the institute as full-time and part-time candidates. Regular M. Tech. is also offered in different departments. Besides this, faculty and research associates are involved in research projects. Faculty is competent enough and undertakes the consultancy assignments for the problems related to the industries in their specialized field. The senior

faculty of the Institute has also been contributing towards supervising /guiding M. Tech. students, Ph.D. scholars and Research Associates. For enhancing the consultancy cell in the Institute, the following efforts have been made.

- Liaison with industries through Industry Institute Interaction Cell.
- Memorandum of Understanding (MoU) signed with various organizations/industries and reputed institutes.
- Regular meeting with the Industrial chamber and other associations.
- Establishment of advanced testing laboratories.

FACILITIES

Spread in and sprawling over more than four hundred acres, Institute is wonderfully blessed with natural beauty and greenery. It expresses through refreshing shades revealing the environment and conditions truly designed to give the human spirit true satiety and comfort. Large plantations carried out at the Institute make the Institute a living beauty, a sign of endless and inexhaustible plenty. Live atmosphere enhances working environment bringing a softening, humanizing touch to the surroundings. Institute plays host to a number of migratory birds giving the glimpse of some of the rarest species of birds in the world. Splendor of the natural environment and beauty of the birds are the perfect setting for a spiritual and academic aesthete. Institute provides an atmosphere which means oneself away from the worries, converging desires promoting the values of thinking and analysis. While a cool shade never fails oneself, a nice and comfortable well equipped guest house adds to the charm of staying at the Institute. Dotted with green parks, strolling areas, gymnasium, swimming pool, herbal nursery, a lake with a created home for doves, the Institute is a mini-paradise extending a warm welcome and symbolizes the 'Modern Gurukul' of 21st Century. All modern facilities to the residents in the campus are available.

Training and Placement Cell

A centralized department of Training & Placement is established in SLIET, Longowal to meet its student's placement and industrial training requirements. The department is keeping strong liaison with reputed industries to provide placement opportunities and impart industrial training to the students of Institute. The department also provides the inputs on soft skills, personality development, leadership, motivation and communication skills etc. to the students in order to meet the expectations of the industry. A good number of industries conduct campus placements at the institute. The department is having state-

of-the-art infrastructure viz. a group discussion room, interview room and a seminar hall. TCS, iGate-Patni, M&M, L&T Infotech, Birlasoft, Infosys, Trident India, ISGEC Yammananagar, Punj Lloyd, Honda Siel Cars India Ltd., ESSAR, CIMCOO, J.P. Group of Industries, Nestle, Hindustan Unilever, SANMAR Group of Industries, L&T, Godrej and Boycee Mfg. Co., Sona Koya, i-Tech Vardhman etc. are some of the recruiting industries of SLIET students through Campus Placement.

- To arrange and monitor industrial training of the students.
- Facilitating students to develop and implement successful job search strategies and in obtaining final placement in reputed companies.
- Act as a link between students and the employment community.
- To arrange industrial trips for students regularly.
- To organize seminars / guest lectures from industry for the benefit of the students.
- Changing the concepts of personal thinking and behaviors concerning work ethics.
- Assist different companies in recruiting candidates as per their requirements.
- Serve the community by providing access to our campus wide activities & career resources.
- Signing Memorandum of Understanding (MoU) with the Industries so as to strengthen the industry institute interaction for mutual accomplishment of goals.

Strengths of T&P Cell

- Training & Placement coordinators throughout the country
- Alumni Association for interacting with the alumni of the Institute
- MoU's signed with a large number of reputed industrial houses, MNCs and organizations.
- Sectional Library
- On & Off Campus placement of the students by MNCs, industries of repute and armed forces.

Training placement cell as well as Entrepreneur development program make efforts to conduct programs for the students to motivate them to start their own business and become job providers instead of job seekers.

Counselling System

To encourage students for self-employment short-term entrepreneurship awareness programmes are organized preferably in their last years of studies. Well established

counseling system is in place for counseling of students. There is a separate course counsellor for each class and it is managed by Chief-Course Counsellor at the level of Professor.

Central Library

The Central Library is housed in a modern building having all kinds of facilities for its best utilization by the faculty, staff and students. The Central Library is having large number of volumes of technical books along with a good collection of books on literature, general awareness, management, social sciences and humanities. The Library building has been allocated a total area of 2800 m². The Central Digital Library has also a separate reading hall with capacity of 200 persons. Internet and online services in the library is used by students and faculty on all days except on holidays. The library remains open from 08:30 a.m. to 09:00 p.m. on all working days and from 08:30 am to 05:00 pm on Saturdays and Sundays. There is reading hall which remains open for 24 hrs. The Library has 95,541 books, with an average addition of around 5400 books per year from last four years.

The central library is having all the modern facilities like multimedia projector (MMP); Coloured Television (CTV); overhead projector (OHP); slide projector etc. A good collection of VCD (video compact disks) as well as CDROM (Compact disc- read only memory) is also available in the library. Efforts have been made so that users may feel comfort while they study or consult library material for their study and research purpose. The central library is subscribing 15 daily newspapers, numerous national and international magazines & periodicals. The faculty, staff and students have access to the full text of journals from Science Direct, ASTM standards & Digital Library, MathSciNet, subscribed by the Central Library. The Central Library is INDEST Consortium member and through INDEST, the faculty, staff and students have online access to the full text of journals from IEEE, Springer, ASME, ASCE, ACM and Nature etc. The NPTEL lectures had been added to the collection, these lectures can be viewed online within the campus. The Central library is under CCTV surveillance. Central library has established a book bank and students are issued books for the whole semester subject to availability. The photocopy services have been provided within the Library and Departments.

Computing Facilities:

The Institute is equipped with latest and powerful hardware & software. The computer laboratories provide computing environment (Linux and Windows Platforms) to the

students and faculty for the pursuit of academic excellence. The various software are catering to the need of students such as Oracle 10g, Power Builder, Developer 2000, Visual Basic, .Net, Qualnet etc. and hardware such as IBM Blade Server, IMB xSeries Server, Acer G510 series Server, workstations and PCs are available. The computer laboratories are also equipped with high end printers, plotters and scanners. All servers, PCs and peripherals are connected to the campus-networking for sharing the resources. Academic Blocks, Administrative Block, other Institute Buildings and all hostels are connected through optical fiber to share the resources and exchange the data.

The students get adequate time to learn and practice on the computing facility. Most of the laboratories remain open from 8:30 a.m. to 10:30 p.m. The Project Laboratory and Internet laboratory remain open for round the clock for final year students. A high performance campus wide networking with 1 Gbps (Giga bits per second) has been commissioned in the Institute to provide Internet connectivity throughout the campus. Most part of the Institute is covered with wi-fi connectivity to provide seamless internet access. All the hostels have been provided with Internet connections.

Internet

The Institute has dedicated 1 Gbps (Giga bits per second) lease line Internet connectivity for the benefit of the students and faculty. Internet facility has been extended to various academic blocks, hostels and other buildings through campus wide networking and wi-fi connectivity.

Hostels

SLIET is completely residential campus with ten Hostels for Boys and four for girls accommodating almost all the students totaling about 3400 which includes about 1000 girls students. All the hostels have been provided with Internet connections with campus wide networking and wi-fi connectivity, modern kitchens, comfortable dining halls and indoor games facilities. Newspaper, magazines, telephone connection, intercom connection and Cable T.V. facilities are also available in the Hostels.

Boys Hostel

- SLIET has 10 Boys Hostels and capacity of each hostel is around 240 students.
- Two, single seater, Boys Hostels are allotted to pre-final and final year Degree students
- One single seater, Boys Hostel is allotted to PG students.

Girls Hostel

- SLIET has 04 Girls Hostels. The capacity of each hostel is 240 students.
- Capacity of PG Hostel is 80 students.
- There are 61, single seater rooms which are allotted to final year Degree students in Girls Hostel No. 1.
- 54, three seater rooms are allotted to Degree 1st year and pre-final year students in Girls Hostel No. 1.
- Three seater Girls Hostel is allotted to all Certificate-Diploma students.

Student Activity Center

- It is a center for channelizing the creative instincts of the students.
- The Institute encourages polymorphic activities through hobbies club, photography club, numismatic club, literary society.
- It houses indoor games like billiards, squash, table tennis, badminton, carom boards and chess etc.
- Student Activity Center has yoga hall, meeting hall, project development center and shopping booths besides a well-equipped gymnasium for the students.

Sports

The sports department of the Institute ensures active participation of students, both boys and girls, in intra-Institute and inter-institutional annual sports competitions. Various sports events such as cricket, basket-ball, lawn tennis and table tennis games are being organized by institute in which women students participate at intra and inter institution or university level. Annual sport meet is a regular feature of the Institute.

Adequate provisions for extra-curricular activities including games and sports are made in the Institute. The Institute has wonderful sports facilities for the students. The Institute regularly organizes Annual Sports and Athletic meet. The Institute has following Sports facilities: -

- Playgrounds and Stadium
- A well-equipped Gymnasium
- Table tennis, Badminton, Volleyball, Football, Hockey, Cricket, Basketball, Lawn Tennis Courts
- Swimming Pool
- Squash

- Billiards

Students of the Institute bring laurel to the Institute in many Inter Engineering Colleges Tournaments.

Alumni Center

- The Association aims to foster an effective relationship between the alumni and the Institute.
- The Association consists of more than 500 members. Several of them are settled abroad.
- An alumni newsletter keeps the alumni informed of the latest development on the campus
- To begin with opening chapters outside the campus: a chapter in Chandigarh and another at USA have been established
- These Chapters organize get together periodically to bridge the gap between the alumni members and to bring them closer.

Health Center

The Institute has its own Health Center to provide necessary medical aid to the students and staff on the campus. Specialists are also visiting the Health Center to provide consultation to the inmates. Ambulance is also, available to assist serious patients. Faculty and staff members are entitled to get treatment from Authorized Medical Attendants (AMA), a specialist doctor of nearby city Sangrur. To meet the emergency, an ambulance is available in the institute.

Transportation Facilities

The Institute transport facilities include 01 bus (44 seater), 03 cars, 01 Multi-utility vehicles, 01 Gypsy, and 01 ambulance. Regarding maintenance of these vehicles the Institute enters into contract with the companies from where these are purchased. Minor repair of vehicles is carried out locally out of contingency funds. The budget for maintenance is provided adequately keeping in view the actual expenditure incurred on maintenance during previous financial year and by assessing the additional expenditure required during the next financial year.

VIP Guest House and Transit Accommodation

Since the institute is at a remote place, so the Institute is having a VIP guest house. In the guest house, there are fully air-conditioned 02 VIP suites and 20 rooms, dining hall, TV hall, kitchen, drivers' rooms, store and reception area. Transit accommodation has 02 rooms with air conditioner and 18 rooms with desert coolers along with waiting hall, dining hall and kitchen.

Bank, Post Office, Telephone Exchange and Shopping centre, Restaurant

A fully computerized branch of Central Bank of India with 04 ATMs, 01 ATM of State Bank of India and a post office are functioning in the campus to cater the needs of the faculty, staff and the students. STD payphone and cyber café facilities are available in the campus. A 800 line EPABX internal telephone facility is available in the institute. Each hostel has been provided with a telephone facility. A moderate shopping center has been set-up to cater the needs of the residents. All major players of mobile companies have established their network around the campus. Canteens and Restaurant is available in the campus to cater the needs of the residents of the Institute.

Extra Curricular Activities

Technical

- TECHFEST: An annual Technical Mega Event at All India level
- Seminars/Workshops/Short Term Courses/Conferences
- Technical Paper Presentation Contests
- Technical Quizzes, Poster & Model Exhibitions

Cultural

- MADHRAM: An annual Institute Level Cultural festival.
- Hostel Nites-Cultural Nights in all the Hostels
- Fresher and Farewell Parties/Functions
- International Cultural Exchange Programmes
- Religious/National Festivals Celebrations

Literary

- SRIJAN: Annual Magazine
- Quizzes, Poster Competitions, Declamation Contests, Debates, Extempores etc.
- Expert Lectures and Workshops

- Communication Skills & Personality Development Programmes

Athletics and Sports

- Adequate provisions for extra-curricular activities are available in the institute.
- Facilities are available for Table Tennis, Badminton, Swimming, Volley-Ball, Football, Hockey, Cricket, Basketball, Lawn Tennis and other indoor games.
- 400 meters Athletic Track is also available.
- Night playing facility is also there in the playgrounds.
- Annual Sports and Athletics Meet
- Indoor and Outdoor games tournaments at Department/hostels/Institute Levels.
- Fun Games & Tournament
- Night Cricket Matches

Professional Bodies/ Societies

- ISTE local chapter
- ISTE students' chapter
- Institution of engineer's local chapter
- Industry institute partnership cell
- Entrepreneurship management development cell
- Energy park
- Eco-awareness, environment friendly and energy conservation group
- SLIET literary society
- Departmental societies of various departments
- SLIET Alumni association
- Career Counseling Cell

Non-Formal Educational Programmes

One of the objectives of the institute is to provide non-formal vocational & technical education to the people of all parts of country. Such endeavors will provide semi-skilled/ skilled workers, which, in turn, will result in development and urbanization of the villages. Keeping this in mind, the following non-formal vocational & technical education programmes existed in the institute.

- Center for Punjab Youth Training & Employment
- Scheme for persons with disabilities
- Community development scheme

- HUDCO building center scheme
- Scheme for women and child development

Scheme for Persons with Disabilities (PWD)

SLIET has been identified by MHRD, New Delhi, and Government of India among 50 institutions in all for imparting integrated vocational and technical education to person with disabilities. Salient features of the scheme are:

- To impart vocational and technical education to person with disabilities.
- Seats are reserved for PWD for admission to formal courses (Certificate-Diploma program)
- Specialized non-formal programmes in various streams for PWD with scholarship and other allowances.
- Admission to PWD is given in the appropriate courses at Certificate-Diploma & Degree level.

Equal Opportunities Cell

The equal opportunities cell has been established in the institute to oversee the effective implementation of policies and programmes for deprived group [SC's, ST's, OBC's (non-creamy layer, minorities)] as per Government of India guidelines, in order to enhance their employability and to provide the guidance.

SC/ST Cell

With a view to extend the benefits of various Government schemes to the weaker sections of the society, a separate cell for SC/ST students has been established in the Institute which not only deals with the cases of students for scholarships, but also keeps them informed about various schemes announced by the Centre and State Governments from time to time for their benefits.

The Institute is progressing steadily in all directions and looking forward to achieve the goal of becoming sheet anchor for the development of technical education in this part of the country.

Strengths-Weakness-Opportunities-Challenges (SWOC)

Strengths

1. Institute is autonomous centrally funded established by MHRD.
2. Good Infrastructure in terms of building, labs and fully residential campus with all physical amenities.
3. Students are admitted through all India entrance examinations.
4. Institute follows modular pattern of education i.e., vertically integrated education system and also has implemented outcome based education policy.
5. Qualified faculty with more than 50% faculty with PhD and having trained in a international institute of repute of India and abroad.
6. Qualified staff and trained in their own domain.

Weaknesses

1. Locational disadvantage being situated in a village and away from district head quarter.
2. Not very well connected with rail and road to other part of India.
3. In spite of advertisement there exists vacancies at higher position of faculty and administration.
4. Due to locational disadvantage the Institute is finding difficulty in making effective linkages with the industries.

Opportunities.

1. Institute has programs at a primary, secondary and tertiary level of technical education such as Certificate-Diploma program, Under graduate, Post Graduate and PhD programs. Therefore, the human resources developed from this institute shall reap the opportunity of various government initiatives, like skill India, Digital India and Startup India, etc.

Challenges

1. Other institute having similar mandates and objectives pose challenges/competition to achieve academic excellence.
2. To make everyone happy is difficult and it is seen in majority of the institute including SLIET and there exist some element of trust deficit among the faculty and staff due to various reasons.

SECTION B

1. Profile of the University

1. Name and Address of the University:

Name:	Sant Longowal Institute of Engineering & Technology	
Address:	Longowal, District Sangrur	
City: Longowal	Pin: 148106	State: Punjab
Website: www.sliet.ac.in		

2. For Communication:

Designation	Name	Telephone with STD code	Mobile	Fax	E-mail
Vice Chancellor (Director)	Prof. Vijender Kumar Jain	O: 01672-253100 R: 01672-253173	9478396960	01672-280057	directorsliet@sliet.ac.in
Registrar:	Prof. Sanjay Marwaha	O: 01672-253115 R:		01672-280057	registrar@sliet.ac.in
Dean (Academics)	Prof. M.B. Bera	O: 01672-253112 R: 01672-253177		01672-280057	deanacad@sliet.ac.in
Steering Committee Coordinator	Prof. Ravindra K. Saxena	O: 01672-253296 R: 01672-253297		01672-280057	rks@sliet.ac.in

3. Status of the University:

State University

State Private University

Central University

University under Section 3 of UGC (Deemed University)

Institution of National Importance

Any other (please specify)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

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4. Type of University:

Unitary

Affiliating

<input checked="" type="checkbox"/>
<input type="checkbox"/>

5. Source of funding:

Central Government	<input checked="" type="checkbox"/>
State Government	<input type="checkbox"/>
Self-financing	<input type="checkbox"/>
Any other (please specify)	<input type="checkbox"/>

6.

a. Date of establishment of the university: 11/04/2007... (dd/mm/yyyy)

b. Prior to the establishment of the university, was it a/an

I. PG Centre	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
II. Affiliated College	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
III. Constituent College	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
IV. Autonomous College	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

V. Any other (please specify)

If yes, give the date of establishment ... 20/06/1989..... (dd/mm/yyyy)

7. Date of recognition as a university by UGC or any other national agency:

	Under Section	dd	mm	yyyy	Remarks
i.	2f of UGC*	--	--	--	--
ii.	12B of UGC *	--	--	--	--
iii.	3 of UGC #	10	04	2007	--
iv.	Any other ^ (specify)	--	--	--	--

* Enclose certificate of recognition.

Enclose notification of MHRD and UGC for all courses / programmes / campus/ campuses.

^ Enclose certificate of recognition by any other national agency/agencies, if any.

8. Has the university been recognized

a. By UGC as a University with Potential for Excellence?

Yes No

If yes, date of recognition : (dd/mm/yyyy)

b. For its performance by any other governmental agency?

Yes No

If yes, Name of the agency and
date of recognition: (dd/mm/yyyy)

9. Does the university have off-campus centres?

Yes No

If yes, date of establishment : (dd/mm/yyyy)

date of recognition : (dd/mm/yyyy)

10. Does the university have off-shore campuses?Yes No

If yes, date of establishment : (dd/mm/yyyy)

date of recognition : (dd/mm/yyyy)

11. Location of the campus and area:

		Location *	Campus area in acres	Built up area in sq. mts
i.	Main campus area	Rural	451 Acres	
ii.	Other campuses in the country	--	--	--
iii.	Campuses abroad	--	--	--

(* Urban, Semi-Urban, Rural, Tribal, Hilly Area, Any other (please specify))

If the university has more than one campus, it may submit a consolidated self-study report reflecting the activities of all the campuses.

12. Provide information on the following:

In case of multi-campus University, please provide campus-wise information.

 Auditorium/seminar complex with infrastructural facilities ✓ Sports facilities*playground ✓ (Cricket Ground - 01 Number,
Football Ground - 01 Number,
Hockey Ground - 01 Number,
Kho-Kho Ground - 01 Number)

* swimming pool ✓ (01 Number)

* gymnasium ✓ (03 Numbers)

* Any other (please specify)

* Volley Ball Court (04 Numbers)

* Basketball Court (02 Numbers)

* Badminton Court (12 Numbers)

* Tennis (Lawn) Court (04 Numbers)

* Handball Court (01 Number)

* Squash Court (02 Numbers)

* Table Tennis (13 Numbers)

 Hostel

* Boys' hostel

i. Number of hostels 10

ii. Number of inmates

iii. Facilities kitchens, comfortable dining halls and indoor games facilities, Wi-Fi Internet connectivity, Newspapers / Magazines and Cable T.V. facilities.

* Girls' hostel

i. Number of hostels 04

ii. Number of inmates

iv. Facilities kitchens, comfortable dining halls and indoor games facilities, Wi-Fi Internet connectivity, Newspapers / Magazines and Cable T.V. facilities.

* Working women's hostel

i. Number of hostels --

ii. Number of inmates --

iii. Facilities --

- Residential facilities for faculty and non-teaching: 511 Quarters available for Faculty and Non-teaching employees
- Cafeteria ✓ (01 Numbers)
- Health centre - Nature of facilities available - inpatient, outpatient, ambulance, emergency care facility, etc.

The Institute has its own Health Centre to provide necessary medical aid to the students and staff in the campus. Apart from the Medical Officers, specialists are also approved as Authorized Medical Attendants (AMA's) for providing consultation to the residents. Ambulance facility is available round the clock to shift the serious patients to the nearby hospitals.

- Facilities like banking, post office, book shops, etc.
A fully computerized branch of Central Bank of India with 04 ATMs, 01 ATM of State Bank of India and a post office are functioning in the campus to cater the needs of the faculty, staff and the students. Book Shop and cyber café facilities are available in the campus. A moderate shopping centre has been set-up to cater the needs of the residents. All major players of mobile companies have established their network around the campus.
- Transport facilities to cater to the needs of the students and staff
- Facilities for persons with disabilities
- Animal house
- Incinerator for laboratories
- Power house
- Waste management facility

13. Number of institutions affiliated to the university: **Not Applicable**

Type of Colleges	Total	Permanent	Temporary
Arts, Science and Commerce			
Law			
Medicine			
Engineering			
Education			
Management			
Others (specify and provide details)			

14. Does the University Act provide for conferment of autonomy (as recognized by the UGC) to its affiliated institutions? If yes, give the number of autonomous colleges under the jurisdiction of the University: **Not Applicable**

Yes No Number

15. Furnish the following information

	Particulars	Number	Number of Students
a.	University Departments		
	Certificate-Diploma	07	1642
	Undergraduate	05	1675
	Post graduate	10	317
	PhD	10	235
	Research centres on the campus	00	Nil
b.	Constituent colleges		
c.	Affiliated colleges		
d.	Colleges under 2(f) and 12B		
e.	NAAC accredited colleges		
f.	NAAC accredited colleges		
g.	Colleges with Potential for Excellence (UGC)		
h.	Autonomous colleges		
i.	Colleges with Postgraduate Departments		
j.	Colleges with Research Departments		
k.	University recognized Research Institutes/Centres		

16. Does the university conform to the specification of Degrees as enlisted by the UGC?

Yes No

If the university uses any other nomenclatures, please specify.

17. Academic programmes offered by the university departments at present, under the following categories: (Enclose the list of academic programmes offered)

Programmes	Number
UG	8
PG	11
Integrated Masters	--
M.Phil.	--
Ph.D.	11
Integrated Ph.D.	--
Certificate	--
Diploma	--
PG Diploma	--
Any other (please specify) Certificate-Diploma program	07
Total	37

18. Number of working days during the last academic year.

162 day

19. Number of teaching days during the past four academic years.

("Teaching days" means days on which classes were engaged. Examination days are not to be included)

20. Does the university have a department of Teacher Education?

Yes No

If yes,

- Year of establishment (dd/mm/yyyy)
- NCTE recognition details (if applicable) Notification No.:
Date: (dd/mm/yyyy)
- Is the department opting for assessment and accreditation separately?

21. Does the university have a teaching department of Physical Education?Yes No

If yes,

- a. Year of establishment (dd/mm/yyyy)
- b. NCTE recognition details (if applicable) Notification No.:
.....
Date: (dd/mm/yyyy)
- c. Is the department opting for assessment and accreditation separately?
Yes No

22. In the case of Private and Deemed Universities, please indicate whether professional programmes are being offered?Yes No

If yes, please enclose approval / recognition details issued by the statutory body governing the programme.

23. Has the university been reviewed by any regulatory authority? If so, furnish a copy of the report and action taken there upon.

Yes, it was reviewed by NBA and performance of the university is reviewed by National Institutional Ranking Framework (NIRF) of Government of India.

24. Number of positions in the university

Positions	Teaching faculty			Non-teaching staff	Technical staff
	Professor	Associate Professor	Assistant Professor		
Sanctioned by the UGC/University/State Government	22	43	115	208	64
Recruited	08	34	92	159	43
Yet to recruit	14	09	23	49	21
Number of persons working on contract basis			46	02	24

25. Qualifications of the teaching staff

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.							
Ph.D.	46	07	17	02	09	02	83
M.Phil.			01			01	02
PG			16	04	23	06	49
Temporary teachers							
Ph.D.					02		02
M.Phil.							
PG					24	12	36
Part-time teachers							
Ph.D.							
M.Phil.							
PG					06	02	08

26. Emeritus, Adjunct and Visiting Professors. NIL

	Emeritus	Adjunct	Visiting
Number	--	--	--

27. Chairs instituted by the university: NIL

	Chairs
School/Department --	

32. Does the university have a provision for external registration of students?Yes No

If yes, how many students avail of this provision annually? Not Applicable

33. Is the university applying for Accreditation or Re-Assessment? If Accreditation, name the cycle.Accreditation: Cycle 1 Cycle 2 Cycle 3 Cycle 4 Re-Assessment: **34. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)**Cycle 1: 10/03/2012 (dd/mm/yyyy), Accreditation outcome/Result **"B"**

Cycle 2: (dd/mm/yyyy), Accreditation outcome/Result

Cycle 3: (dd/mm/yyyy), Accreditation outcome/Result

Cycle 4: (dd/mm/yyyy), Accreditation outcome/Result

* Kindly enclose copy of accreditation certificate(s) and peer team report(s)

35. Does the university provide the list of accredited institutions under its jurisdiction on its website? Provide details of the number of accredited affiliated / constituent / autonomous colleges under the university.**Not Applicable.****36. Date of establishment of Internal Quality Assurance Cell (IQAC) and dates of submission of Annual Quality Assurance Reports (AQAR).**

IQAC 29/04/2013 (dd/mm/yyyy)

AQAR (i) 09/05/2016 (dd/mm/yyyy)

(ii) 08/09/2016 (dd/mm/yyyy)

(iii) (dd/mm/yyyy)

(iv) (dd/mm/yyyy)

37. Any other relevant data, the university would like to include (not exceeding one page).

All the academic programmes offered by the Institute are technical and job oriented. The courses are professional in nature and are approved by the AICTE. At present 03 courses are accredited by NBA and for remaining courses, the university is in the process submission of report for accreditation. The teaching and non-teaching posts are sanctioned and funded by

the MHRD, Government of India. The procedure for selection of teachers is according to the UGC guidelines incorporated in the Institute Rules.

2. Criteria - wise Inputs

1 CRITERION I: CURRICULAR ASPECTS

1.1 Curriculum Design and Development

1.1.1 How is the institutional vision and mission reflected in the academic programmes of the university?

Different academic departments have derived their vision and mission from the Institute vision and mission and are inconsonance.

1.1.2 Does the university follow a systematic process in the design and development of the curriculum? If yes, give details of the process (need assessment, feedback, etc.).

The Institute organizes Curriculum Development Workshop to review existing curriculum. This involves participation from Industry Experts, Academicians and all the faculty members of the respective department. After thorough discussion, a draft is prepared by the department and presented to the respective Boards of Studies. Then, after discussion in the Board of Studies, the proposals are put for consideration at Senate and then is placed in Board of Management for ratification. Inputs from students, alumni and employers are also taken into consideration through curriculum feedback. Institute has revised its course curriculum in 2016 based on OBE system of the educational policy with clearly spelt out vision, mission, course outcomes, program objectives.

1.1.3 How are the following aspects ensured through curriculum design and development?

Employability

While developing the course curriculum national occupational standards (NOS) of specific sector skill councils (SSC) are taken into considerations wherever required to fulfill the need of the industry for employment.

Innovation

An employer looks for a set of skills, knowledge input and attitude in a person they employ. These are provided during the tenure of study of a student at the Institute by ensuring that the necessary skill set and knowledge inputs are disseminated in a manner that the person can be useful to the employer from day one. The students are encouraged to participate in various practical and innovation driven competitions. A number of “student teams” had brought laurels to Institute by winning such events. Mentor faculty awarded such as Dronacharya award , etc.

Research

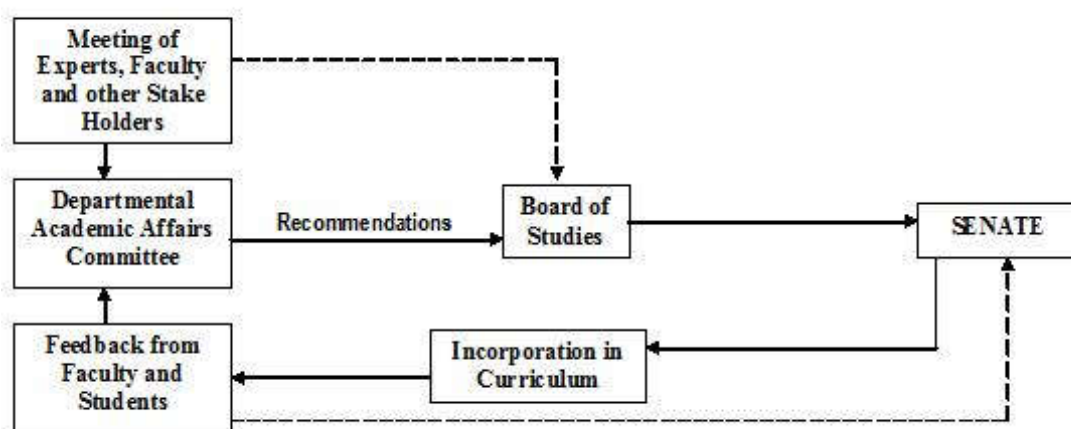
Positive attitude is inculcated among the students by giving inputs which are not course related but touch human life at large. The courses are planned to inculcate the attitude of visualizing the real-life problems in a different way. Teaching learning process adopted in the institute makes the student to understand, apply, analyses and innovate /create process or products. The final project work is planned to apply the research into practical aspects.

1.1.4 To what extent does the university use the guidelines of the regulatory bodies for developing and/or restructuring the curricula? Has the university been instrumental in leading any curricular reform which has created a national impact?

Yes, the Institute adopts guidelines issued time-to-time by AICTE/UGC for Engineering/Technology, Management and Sciences programs.

1.1.5 Does the university interact with industry, research bodies and the civil society in the curriculum revision process? If so, how has the university benefitted through interactions with the stakeholders?

Institute takes the feedback from all the stake holders viz. Industry persons and experts from the academia for the development of curriculum. In the last curriculum revision, a



number of new courses are introduced in almost all the branches of engineering as per the feedback from the industry persons and Alumni.

1.1.6 Give details of how the university facilitates the introduction of new programmes of studies in its affiliated colleges.

Not Applicable.

1.1.7 Does the university encourage its colleges to provide additional skill-oriented programmes relevant to regional needs? Cite instances (not applicable for unitary universities).

Not Applicable.

1.2 Academic Flexibility

1.2.1 Furnish the inventory for the following:

Programmes taught on campus

1. Diploma Program approved by AICTE
2. Programs for Disabled Community (scheme for Persons with disability (PWD) of Government of India).
3. Undergraduate program in Engineering
4. Post Graduate Program in Engineering
5. Post Graduate Program in Sciences.

6. Master's in Business Administration.
7. Ph.D. Programs

Overseas programmes offered on campus

Not Applicable.

Programmes available for colleges to choose from

Not Applicable.

1.2.2 Give details on the following provisions with reference to academic flexibility

- a. Core / Elective options

There is provision of three open elective subjects which are offered by other than parent departments and a number of elective subjects have been offered to UG/PG Programs.

- b. Enrichment courses

Department of Management and Humanities offer such courses on zero credit basis.

- c. Courses offered in modular form

The Institute is established by Government of India to offer modular pattern of education at different levels of study. The Institute is offering Certificate-Diploma program, Under-Graduate Program consisting of students after 10+2 through JEE Mains and Diploma students from our Institute and other Institutes.

- d. Credit accumulation and transfer facility.

The students in certificate program are allowed to accumulate credits for vertical mobility. At present the Institute does not offer credit accumulation and transfer facility for migration purpose to different Institutes/Universities.

- e. Lateral and vertical mobility within and across programmes, courses and disciplines.

The students are allowed for vertical mobility from certificate to diploma program with in the same departments of study based on accumulation of specified number of credits. Further, the meritorious students are allowed for lateral movements across different departments at undergraduate level of study.

1.2.3 Does the university have an explicit policy and strategy for attracting international students?

All programs are open to International Students subject to fulfilment of eligibility criteria through DASA scheme of MHRD, New Delhi.

1.2.4 Have any courses been developed targeting international students? If so, how successful have they been? If 'no', explain the impediments.

All programs are open to International Students subject to fulfilment of eligibility criteria through DASA scheme of MHRD, New Delhi.

1.2.5 Does the university facilitate dual degree and twinning programmes? If yes, give details.

Yes, Institute offers twinning programs in Certificate-Diploma Program. Based on the credits accumulated in a defined time frame the students are eligible to be awarded Certificate and/or Diploma certificates.

1.2.6 Does the university offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?

The Institute does not offer any self-financing programs.

1.2.7 Does the university provide the flexibility of bringing together the conventional face-to-face mode and the distance mode of education and allow students to choose and combine the courses they are interested in? If 'yes,' give operational details.

The Institute is not offering any distance mode of educational programs.

1.2.8 Has the university adopted the Choice Based Credit System (CBCS)? If yes, for how many programmes? What efforts have been made by the university to encourage the introduction of CBCS in its affiliated colleges?

The Institute offers choice based credit system (CBCS) through offering open electives by each academic department and students are free to choose such courses from any department.

1.2.9 What percentage of programmes offered by the university follow: Annual system, Semester system, Trimester system.

The Institute has semester system and credit based system (CGPA).

1.2.10 How does the university promote inter- disciplinary programmes? Name a few programmes and comment on their outcome.

The following subjects have been introduced as interdisciplinary subjects:

- Elements of Electrical Engineering
- Elements of Mechanical Engineering
- Elements of Computer Programming
- Elements of Electronics Engineering
- Engineering Drawing
- Open Electives by all the academic departments.
- Workshop Technology.

1.3 Curriculum Enrichment

1.3.1 How often is the curriculum of the university reviewed and upgraded for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

Every three to four years.

1.3.2 During the last four years, how many new programmes at UG and PG levels were introduced? Give details.

Inter-disciplinary

programmes in emerging areas

Nil, however, only two programs started viz. BE in Electrical Engineering and M. Tech. in Computer Engineering.

1.3.3 What are the strategies adopted for the revision of the existing programmes? What percentage of courses underwent a syllabus revision?

The university revised all the program as per the OBE format as mentioned for point number 1.1.2.

1.3.4 What are the value-added courses offered by the university and how does the university ensure that all students have access to them?

Institute has signed MOU with some of the Research organisations like CSIO, Mohali, IICPT, Thanjavur and implemented the suggestions in the Theory and Laboratory courses both at UG and PG programmes..

1.3.5 Has the university introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?

The Institute is in the process of including and aligning with the National Skills Qualifications Framework (NSQF) and National Occupational Standard (NOS) of various sectors and skill in its course curriculum.

1.4 Feedback System

1.4.1 Does the university have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?

The Institute arranges the feedback through following mechanism:

Students: At the end of each semester, a feedback from every student is taken by the respective departments.

Alumni: Institute organizes alumni meeting in which feedback is taken. There is a provision to have a member of Senate among alumni to have their feedback.

Employer: The Institute organizes curriculum development workshop where employers also invited to give their feedback. During the campus placement drive, the industry representatives also give their feedback on our students with suggestions for improvement which are given due weightage during revision of course.

Community: Knowledgeable expert Community persons are also invited in curriculum development workshop. They give their feedback during interactions.

Academic peers: Through regular interaction with academic peers when they visit the Institute as an examiner. Board of study of each department has an academic peer as member.

Industry: Feedback from an industry expert is also obtained as an expert member of Board of Study. Regular interaction with industry experts by either sending faculty at their location or by inviting them at Institute for delivering expert talk.

Parents: There are formal meeting with parents, during counselling session. However, parent keep in touch through phone/e-mail for suggestion/improvements.

- 1.4.2 Does the university elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods such as conducting webinars, workshops, online discussions, etc. and its impact.

The curriculum revision process involves number of experts/faculty members from the reputed Institutions by conducting the workshop and discussions. Student feedback data are also included while designing the curriculum.

- 1.4.3 Specify the mechanism through which affiliated institutions give feedback on curriculum enrichment and the extent to which it is made use of.

Not Applicable

- 1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the university in ensuring the effective development of the curricula?

The Institute has adopted the OBE system of education. The effectiveness of course is assessed based on direct and indirect method of assessment which included percentage learning attainment and feedback from students.

2 CRITERION II: TEACHING-LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

2.1.1 How does the university ensure publicity and transparency in the admission process?

Publicity:

The Institute provides the wide publicity for the admission process through advertisements in the leading newspapers national and local newspapers. Interaction programs are conducted in the schools for the publicity. The students are allowed to get admission through national level tests like, JEE-mains, PU-CET, CMAT, CAT etc. Further, Institute organises various social programs like TechFest, Madhuram where the students participate from within and outside state and they get the feel about the various Institute programs and activities.

Institute participate in various national level programs and thereby also disseminate information about the Institute. Students have their own Facebook, WhatsApp groups etc. for disseminating information regarding various activities for publicity.

The Institute also publishes Information Brochure regarding all the disciplines for Programmes of study at SLIET.

Transparency in Admission Process of various programmes of Study:

The Institute conducted its own admission test for Certificate-Diploma Programmes, lateral entry to degree programs, Post graduate programs and Ph.D. programs. Admissions to the Ph.D. Programmes are based on written test/ interview of the candidates short-listed by the Departmental Research Committee (DRC) of the Department concerned. The admission process is online with each-and-every information available online for the information of the candidates. Complete details are also placed at SLIET website www.sliet.ac.in. The candidates are allowed to take away the question booklets and answer key is uploaded on website to ensure transparency.

2.1.2 Explain in detail the process of admission put in place by the university. List the criteria for admission: (e.g.: (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common entrance test conducted by state agencies and national agencies (v) other criteria followed by the university (please specify).

The following process is being followed in the institute for admission to various programmes:

Course	Admission
ICD programmes	Institute conducts its own National Level entrance test on first Sunday of the month of June every year. Eligibility: 10th
B.E. Lateral Entry	Institute conducts its own National Level entrance test on first Sunday of the month of June every year. Eligibility: Diploma/ICD
B.E. (4 Year)	The admission is being done on the basis of JEE(Mains) through JoSAA/CSAB (along-with admission to NITs and Other CFTIs)

M.Sc.	The admission is being done through CCMN along-with other NITs/IITs and CFTIs. The institute holds its own National Level Entrance test for the vacant seats (if any).
M. Tech.	The admission is being done through CCMT along-with other NITs/IITs and CFTIs. The institute holds its own National Level Entrance test for the vacant seats (if any).
MBA	The admission is on the basis of CMAT score. The institute holds its own National Level Entrance test for the vacant seats (if any).
Ph.D.	Institute conducts its own National Level entrance test as per guidelines of UGC. Eligibility: Master Degree

2.1.3 Provide details of admission process in the affiliated colleges and the university's role in monitoring the same.

Not applicable

2.1.4 Does the university have a mechanism to review its admission process and student profile annually? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?

The institute may conduct and review the process on the basis of feedback and approval of the Senate.

2.1.5 What are the strategies adopted to increase / improve access for students belonging to the following categories:

Category	Strategies
SC/ST	50% application fee/Scholarships as per Govt of India/State Govts.
OBC	Reservations as per Govt. of India norms is provided to the category.
Women	Application fee is relaxed for the Girls candidates.
Persons with Disabilities	Reservations as per Govt of India and full fee concession to the students admitted under the PWD scheme
Economically weaker sections	Tuition fee waiver (TFW) is provided as per guidelines of AICTE.

2.1.6 Number of students admitted in university departments in the last four academic years:

Categories	Year 1 (2013)		Year 2 (2014)		Year 3 (2015)		Year 4 (2016)	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	115	20	122	29	131	27	77	23
ST	34	5	33	1	35	4	22	5
OBC	267	32	332	66	315	60	111	38
GEN*	743	237	710	229	694	187	693	247
OTHERS	16	5	6	0	6	1	3	1

* The students admitted through vertical entry are included in GEN

2.1.7 Has the university conducted any analysis of demand ratio for the various programmes of the university departments and affiliated colleges? If so, highlight the significant trends explaining the reasons for increase / decrease.

PROGRAMME	NUMBER OF APPLICATIONS	NUMBER OF STUDENTS ADMITTED	DEMAND RATIO
Certificate-Diploma Programme	1755	598	2.93
UG#	#	114	#
UG*	1330	336	3.95
M.Sc.	\$(108)	59	\$
MBA	27	06	4.5
M. Tech.	& (156)	102	&
Ph.D.	530	24	22.08

The admission has been made by central agency JoSAA along-with NITs and CFTIs

*The admission for lateral entry seats conducted by the institute

\$ Admission has been made through CCMN along-with other NITs & IITs. However, 108 candidates applied on SLIET portal for admission against vacant seats & Admission has been made through CCMT along-with other NITs & IITs. However, 156 candidates applied on SLIET portal for admission against vacant seats

2.1.8 Were any programmes discontinued/staggered by the university in the last four years? If yes, please specify the reasons.

Certificate-Diploma in Civil Engineering is discontinued temporarily based on the decision of Senate.

2.2 Catering to Student Diversity

2.2.1 Does the university organize orientation / induction programme for freshers? If yes, give details such as the duration, issues covered, experts involved and mechanism for using the feedback in subsequent years.

Yes

The Orientation program is conducted with 1st month of new session. Issues like academic rules, hostel rules, counselling process, Anti-Ragging, details of extra-curricular activities like NCCC, NSS, sports, Yoga, Meditation other issues concerning the fresher students.

2.2.2 Does the university have a mechanism through which the “differential requirements of the student population” are analysed after admission and before the commencement of classes? If so, how are the key issues identified and addressed?

Such issues are addressed in the Orientation program.

2.2.3 Does the university offer bridge / remedial / add-on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

At present the Institute is not offering any bridge / remedial / add-on courses. However, individual departments are offering few additional courses for the benefit of students beyond teaching duration.

2.2.4 Has the university conducted any study on the academic growth of students from disadvantaged sections of society, economically disadvantaged, physically handicapped, slow learners, etc.? If yes, what are the main findings?

The individual departments and course faculty monitors the academic

Advanced students: They are given additional project work and encouraged to participate in various student symposiums like paper, project & poster presentation, quiz etc. They are encouraged and guided for preparation of various competitive exams. Advanced learners are also given opportunities to do mini-project work. Extra support is given to them for participating in National level contests.

Slow learners: For the slow learners special attention is given during the tutorial classes and lab work. For the advance students, the different teachers applied different strategies. Internet access both in the hostel as well as in the academic building, different R & D facilities, innovative projects are provided to the advanced students to further enhancement of knowledge and sharpen their skills.

2.2.5 How does the university identify and respond to the learning needs of advanced learners?

University identifies such students based on their performance in the classes which includes internal as well as end term examinations and also their curiosity and quest to know subjects. Such students are encouraged to give Seminar/Technical Talks and promoted to represent the Institute.

2.3 Teaching-Learning Process

2.3.1 How does the university plan and organise the teaching, learning and evaluation schedules (academic calendar, teaching plan, evaluation blue print, etc.)?

Academic calendar is circulated semester wise and accordingly teaching plan is formulated. Each course has its credit assigned with theory/tutorial and practical.

2.3.2 Does the university provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?

Yes, effectiveness is ensured by the attendance of students.

2.3.3 Does the university face any challenges in completing the curriculum within the stipulated time frame and calendar? If yes, elaborate on the challenges encountered and the institutional measures to overcome these.

No.

2.3.4 How is learning made student-centric? Give a list of participatory learning activities adopted by the faculty that contributes to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

Credit based subjects are allotted to encourage the students for above purpose. A group of students with a team leader work collectively for the design and development of product or prototype etc. and participate in various competitions.

2.3.5 What is the university's policy on inviting experts / people of eminence to deliver lectures and/or organize seminars for students?

As and when specific department sent the request for extending invitations to eminent scientist to deliver such technical talk/lectures and other lectures for improvement of soft skills are treated as Institute Guest and given honorarium and travelling allowances as per the Institute rules.

2.3.6 Does the university formally encourage blended learning by using e-learning resources?

Institute has started using NPTEL and are now encouraged to use MOOC and SWAYAM platform.

2.3.7 What are the technologies and facilities such as virtual laboratories, e-learning, open educational resources and mobile education used by the faculty for effective teaching?

All e-resources are used by the faculty and students in fair manner.

2.3.8 Is there any designated group among the faculty to monitor the trends and issues regarding developments in Open Source Community and integrate its benefits in the university's educational processes?

Not yet.

2.3.9 What steps has the university taken to orient traditional classrooms into 24x7 learning places?

Not yet.

2.3.10 Is there a provision for the services of counsellors / mentors/ advisors for each class or group of students for academic, personal and psycho-social guidance? If yes, give details of the process and the number of students who have benefitted.

Yes, student counselling system exists with a Chief course counsellor and course counsellors for each trade and programs.

2.3.11 Were any innovative teaching approaches/methods/practices adopted/put to use by the faculty during the last four years? If yes, did they improve learning? What were the methods used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?

Faculty uses multimedia techniques involving graphics/ animations and visuals to make the class room teaching and learning interesting and interactive.

2.3.12 How does the university create a culture of instilling and nurturing creativity and scientific temper among the learners?

Students are allowed to do their project work at the end of respective program where the idea of the students are given in physical shape in terms of process/product/design/prototype.

2.3.13 Does the university consider student projects mandatory in the learning programme? If yes, for how many programmes have they been (percentage of total) made mandatory?

Number of projects executed within the university

Names of external institutions associated with the university for student project work

Role of faculty in facilitating such projects

Yes, all programs have the project work as a part of course curriculum.

2.3.14 Does the university have a well-qualified pool of human resource to meet the requirements of the curriculum? If there is a shortfall, how is it supplemented?

Institute has a short fall of very few faculty and it is managed by the research scholars and PG Students (GATE Fellowship holder as per the norms). They are not given independent course but they assist their mentors.

2.3.15 How are the faculty enabled to prepare computer-aided teaching/ learning materials? What are the facilities available in the university for such efforts?

Institute has a wi-fi connectivity. Each faculty has been provided with computers and software to enable them prepare teaching-learning materials. Institute has the latest e-learning resources.

2.3.16 Does the university have a mechanism for the evaluation of teachers by the students / alumni? If yes, how is the evaluation feedback used to improve the quality of the teaching-learning process?

Yes, very significantly.

2.4 Teacher Quality

2.4.1 How does the university plan and manage its human resources to meet the changing requirements of the curriculum?

Faculty, Technical and non-technical staff are encouraged to attend workshops/seminar/conferences/STTP/refresher courses to update their knowledge and skill.

2.4.2 Furnish details of the faculty

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.							
Ph.D.	46	07	17	02	09	02	83
M.Phil.			01			01	02
PG			16	04	23	06	49
Temporary teachers							
Ph.D.					02		02
M.Phil.							
PG					24	12	36
Part-time teachers							
Ph.D.							
M.Phil.							
PG					06	02	08

2.4.3 Does the university encourage diversity in its faculty recruitment? Provide the following details (department / school-wise).

Department/School	% of Faculty from the same University	% of Faculty from the other University within the state	% of Faculty from the other University outside the state	% of Faculty from other country
Chemical Engineering	08%	50%	42%	NIL
Chemistry	NIL	37%	63%	NIL
Computer Science and Engineering	12.5%	87.5%	NIL	NIL
Electrical and Instrumentation Engineering	NIL	38%	62%	NIL
Electronics and Communication Engineering	08%	83%	09%	NIL
Food Engineering	NIL	58%	42%	NIL
Management and Humanities	NIL	62.5%	37.5%	NIL
Mathematics	NIL	50%	50%	NIL
Mechanical Engineering	04%	36%	60%	NIL
Physics	NIL	75%	25%	NIL

2.4.4 How does the university ensure that qualified faculty are appointed for new programmes / emerging areas of study (Bio-technology, Bio-informatics, Material Science, Nanotechnology, Comparative Media Studies, Diaspora Studies, Forensic Computing, Educational Leadership, etc.)? How many faculty members were appointed to teach new programmes during the last four years?

Following new course have been added:

- BE in Electrical Engineering.
- M. Tech. in Computer Engineering.

2.4.5 How many Emeritus / Adjunct Faculty / Visiting Professors are on the rolls of the university?

Not applicable.

2.4.6 What policies/systems are in place to academically recharge and rejuvenate teachers (e.g. providing research grants, study leave, nomination to national/international conferences/seminars, in-service training, organizing national/international conferences etc.)?

University allow all faculty to attend such programs under Professional development allowance (PDA) as per the provision in 6th pay commission (GOI).

2.4.7 How many faculty received awards / recognitions for excellence in teaching at the state, national and international level during the last four years?

Two faculty members have been recognised for such awards.

2.4.8 How many faculty underwent staff development programmes during the last four years (add any other programme if necessary)?

Academic Staff Development Programmes	Number of faculty
Refresher courses	65
HRD programmes	18
Orientation programmes	Nil
Staff training conducted by the university	Nil
Staff training conducted by other institutions	58
Summer / Winter schools, workshops, etc.	Nil

2.4.9 What percentage of the faculty have

been invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies?

participated in external Workshops/Seminars/Conferences recognized by national / international professional bodies?

presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies?

teaching experience in other universities / national institutions and other institutions?

industrial engagement?

international experience in teaching?

Faculty members are encouraged to participate in various workshops/Seminar/conferences in India and abroad with funding provided from professional development fund (PDA) of Government of India. The details regarding the faculty members presenting papers or visiting as resource persons are available in the departmental profiles of respective academic departments and appended.

2.4.10 How often does the university organize academic development programmes (e.g.: curriculum development, teaching-learning methods, examination reforms, content / knowledge management, etc.) for its faculty aimed at enriching the teaching-learning process?

From time-to-time to update the teaching learning process.

2.4.11 Does the university have a mechanism to encourage

Mobility of faculty between universities for teaching?

Faculty exchange programmes with national and international bodies?

If yes, how have these schemes helped in enriching the quality of the faculty?

No

2.5 Evaluation Process and Reforms

2.5.1 How does the university ensure that all the stakeholders are aware of the evaluation processes that are in place?

All details regarding examination and evaluation are available/updated on the website.

2.5.2 What are the important examination reforms initiated by the university and to what extent have they been implemented in the university departments and affiliated colleges? Cite a few examples which have positively impacted the examination management system.

Examinations are conducted at a centralised place having a CCTV and mobile jammers to prevent examination related malpractices by the students. Seating arrangement and details are provided to the students before examinations. For the smooth conduct of evaluation, each department arranges the centralised evaluations of the end term examinations.

2.5.3 What is the average time taken by the university for declaration of examination results? In case of delay, what measures have been taken to address them? Indicate the mode / media adopted by the university for the publication of examination results (e.g. website, SMS, email, etc.).

University adopts the UGC guidelines in this regard. The results are uploaded on the website.

2.5.4 How does the university ensure transparency in the evaluation process? What are the rigorous features introduced by the university to ensure confidentiality?

After evaluations students are allowed to retain the minor answer sheets. The end semester copies are shown to students as per notification by the respective faculty. All such details are placed at the prominent places in the university for the information of all concerned.

2.5.5 Does the university have an integrated examination platform for the following processes?

Pre-examination processes – Time table generation, OMR, student list generation, invigilators, squads, attendance sheet, online payment gateway, etc.

Examination process – Examination material management, logistics, etc.

Post-examination process – Attendance capture, OMR-based exam result, auto processing, generic result processing, certification, etc.

Yes

2.5.6 Has the university introduced any reforms in its Ph.D. evaluation process?

University follows the norms of UGC. However, PhD thesis are submitted by the candidate with a declaration on plagiarism and same is also submitted by the supervisor to Departmental Research committee. After evaluation and checking, the same is forwarded to PhD cell for final evaluation.

2.5.7 Has the university created any provision for including the name of the college in the degree certificate?

Not applicable.

2.5.8 What is the mechanism for redressal of grievances with reference to examinations?

All the grievances are addressed by the student grievances cell.

2.5.9 What efforts have been made by the university to streamline the operations at the Office of the Controller of Examinations? Mention any significant efforts which have improved the process and functioning of the examination division/section.

At present, all examination related management is controlled by the Academic section. Scheduling of the examination is done by Assistant Registrar (Examination) in the form of Centralised date sheet and put in circulation at least one week prior to the start of the examination to avoid any clashing of date and time. Moreover, few personnel from Academic section are available at the examination halls for facilitating the people.

2.6 Student Performance and Learning Outcomes

2.6.1 Has the university articulated its Graduate Attributes? If so, how does it facilitate and monitor its implementation and outcome?

University has implemented the scheme with effect from academic session 2016-17.

2.6.2 Does the university have clearly stated learning outcomes for its academic programmes? If yes, give details on how the students and staff are made aware of these?

Yes, University has implemented the scheme with effect from academic session 2016-17.

2.6.3 How is the university's teaching, learning and assessment strategies structured to facilitate the achievement of the intended learning outcomes?

University has implemented the scheme with effect from academic session 2016-17.

2.6.4 How does the university collect and analyse data on student learning outcomes and use it to overcome the barriers to learning?

University has implemented the scheme with effect from academic session 2016-17.

2.6.5 What are the new technologies deployed by the university in enhancing student learning and evaluation and how does it seek to meet fresh/ future challenges?

University uses the tools of ICT for above purpose.

3 CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

3.1 Promotion of Research

3.1.1 Does the university have a Research Committee to monitor and address issues related to research? If yes, what is its composition? Mention a few recommendations which have been implemented and their impact.

Yes, there is Department Research Committee (DRC) for each of the department and a Central Research Committee (CRC) at the institute level. At the departmental level, all the professors are the members of DRC. For the CRC, all Heads of Departments are the members with Dean (Academics) as its Chairman.

3.1.2 What is the policy of the university to promote research in its affiliated / constituent colleges?

Not applicable

3.1.3 What are the proactive mechanisms adopted by the university to facilitate the smooth implementation of research schemes/ projects?

advancing funds for sanctioned projects

providing seed money

simplification of procedures related to sanctions / purchases to be made by the investigators

autonomy to the principal investigator/coordinator for utilizing overhead charges

timely release of grants

timely auditing

submission of utilization certificate to the funding authorities

Institute allows the purchase of equipment as per the GFR rules and for this Stores and Purchas section facilitates such purchases. All PIs submit the utilization certificates to the funding agencies after the completion of the project.

3.1.4 How is interdisciplinary research promoted?

between/among different departments /schools of the university and

collaboration with national/international institutes / industries.

The faculty members are free to plan the interdisciplinary research projects. The departments have no restrictions in this regard. Sometimes research collaborations have also been observed with faculty members belonging to other institutions.

3.1.5 Give details of workshops/ training programmes/ sensitization programmes conducted by the university to promote a research culture on campus.

Seminar/Symposia/Workshops are the regular feature of each academic departments. The recommendations emerge out of such activities are discussed at the departmental level and helps in prioritising the research areas of the departmental.

3.1.6 How does the university facilitate researchers of eminence to visit the campus as adjunct professors? What is the impact of such efforts on the research activities of the university?

Till date no adjunct faculty has been appointed in the university, however, the expert talks by the eminent researchers in the respective fields are organised by the different departments.

3.1.7 What percentage of the total budget is earmarked for research? Give details of heads of expenditure, financial allocation and actual utilization.

There is a provision for Research & Development grant from the institute funds. Approximately 15% of the institute annual budget is being used for research that includes consumables, non-consumables and research assistance-ship.

3.1.8 In its budget, does the university earmark funds for promoting research in its affiliated colleges? If yes, provide details.

Not applicable.

3.1.9 Does the university encourage research by awarding Post-Doctoral Fellowships/Research Associate ships? If yes, provide details like number of students registered, funding by the university and other sources.

No

3.1.10 What percentage of faculty have utilized the sabbatical leave for pursuit of higher research in premier institutions within the country and abroad? How does the university monitor the output of these scholars?

No faculty members utilized the sabbatical leave during this period.

3.1.11 Provide details of national and international conferences organized by the university highlighting the names of eminent scientists/scholars who participated in these events.

The details of national conferences organised by different departments are included in the departmental profiles. Such details are appended in the respective departmental profile.

3.2 Resource Mobilization for Research

3.2.1 What are the financial provisions made in the university budget for supporting students' research projects?

Financial provisions for supporting the student's research projects is met out from the funds allocated as mentioned in point number 3.1.7.

3.2.2 Has the university taken any special efforts to encourage its faculty to file for patents? If so, how many have been registered and accepted?

During the assessment period 04 patents have been awarded and 01 patent have been applied for in the name of the faculty members.

3.2.3 Provide the following details of ongoing research projects of faculty:

Year wise	Sanction Number	Name of the project	Name of the funding agency	Total grant received
2012-13	S.O. NO. 12/AICTE/RIFD/MOD (Policy-2)-156) 2012-13	Modification of Paper Technology Laboratory	AICTE	12,00,000/-
2012-13	02(0135)13/EMR-II dt.22/2/2013	Synthesis of value added organic chemicals by electrolytic oxidation of soda black liquor	CSIR	5,39,000/-
2012-13	Sanctioned Order No. SR/SI/IC-17/2011 dt.30/4/2012	Design of Novel polydentate chelators for sensitization of trivalent europium and terbium luminescence	SERB	43,59,000/-
2013-14	S.O.No.20(AICTE/RIFD/RPS (part policy-I)60/2013-14	Enhancement of flexibility of optical Communication Networks	AICTE	15,00,000/-
2013-14	20/AICTE/RIFD/RPS (policy-IV)35/2012-13 dt.18/03/2013	Development of reliable, efficient and cost effective controller for permanent magnet brushless DC motor drive with reduced sensors and improved power quality at utility mains	AICTE	13,00,000/-
2014-15	F.No.5-3/2011-HRD dt.15/10/2014	Creation of Infrastructure facilities under the scheme of HRD	MOFPI	34,40,000/-

3.2.4 Does the university have any projects sponsored by the industry / corporate houses? If yes, give details such as the name of the project, funding agency and grants received.

Sr. No.	Title of the Project	Department	Name of the Industry	Amount sanction	
1	Identification of the chemical marker ...by processing parameter	Food Engineering	Little Bee Pvt. Ltd., Doraha (Ludhiana)	100,000.00	Dr. Vikas Nanda (TEQIP/904 dated 30/10/13)
2	Reconfiguration of optical fiber links ...communication network	Electronics & Communication Engineering	BSNL, Jalandhar	75,000.00	Dr. Surinder Singh TEQIP/905 dated 30/10/13
3	Waste minimization in electroplating industry	Chemical Technology	Aqua System Pvt. Ltd., Mohali	50,000.00	
4	The effect of various types of soil...materials	Mechanical Engineering	Dashmesh Agri Ltd., Amargarh	75,000.00	Dr. Jagtar Singh TEQIP/906 30/10/13
5	Design and development...arc welding set	Electrical & Instrumentation Engineering	Pretco Technologies, Meerut	75,000.00	Dr. Sanjeev Singh TEQIP/908 dated 30/10/13

3.2.5 How many departments of the university have been recognized for their research activities by national / international agencies (UGC-SAP, CAS; Department with Potential for Excellence; DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthroughs achieved by this recognition.

No

3.2.6 List details of

a. Research projects completed and grants received during the last four years (funded by National/International agencies).

Sr. No.	File No.	Project Title	Principal Investigator/Super visor	Funding Agency	Amount
1.	92	Lactulose Production by Permeabilized Yeast Cells Using Immobilized Cell Technology Sanctioned on : 30.12.2008 Financial Year : 2008-09	Dr. P.S. Panesar, Associate Professor (Food Engg. & Technology)	CSIR Project	15 lakhs (approx.) (8 lakhs for equipment and rest as contingency and salary for JRF/SRF) (completed on 31.08.2012)
2.	93	Studies on Mechanical Properties of Rice Husk Based Poly Propylene (PP) Composites Sanctioned on : 12.03.2009 Financial Year : 2008-09	Mr. Vinay Kumar, Asstt. Prof. (Chemical Tech.)	AICTE under Research Promotion Scheme	9.90 lakhs (completed on 23.04.2012)
3.	96	Automated Design of Die From Part Product Model Sanctioned on : 22.03.2009 Financial Year : 2008-09	Dr. Jatinder Madan, ASP (M.E) now shifted to Sh. Amrik Singh, ASP (M.E)	AICTE under Research Promotion Scheme	9 lakhs (Completed 2013)
4.	107	Solution of two point BVP by OCEF using Her mite Polynomials as basis (No.2/48(14)/2009/R& D II/2806 dated 22/03/2010	Dr.V.K. Kukreja	NBHM	Completed 2013-14, Rs.8,69,650/-
5.	108	Bio-Technological Approaches for the Value addition of Kinnow Mandarin waste for bio-pigment production	H.O.D.(FET)/Riba Panesar	CSIR	Completed during the year 2014-15

		S.Order No.B-11583 dated 4/07/2011			
6.	98	Application of TDPAC to study hyperfine interactions in Biomoleclues and nanocrystals Sanctioned on : 03.02.2012 Financial Year : 2011-12	Dr. Sardool Singh Ghumman, Deptt. of Physics, SLIET	AICTE, New Delhi	150000/- (8023/RID/RPS-14 (govt.).II Policy/2011-12 dt. 3/2/2012(completed 2015)
7.	102	Development of process for production, downstream processing and applications of oligosaccharide producer enzymes Sanctioned on : 04.10.2012 Financial Year : 2012-13	Dr. R.S. Singh, Project Coordinator, Punjabi University, Patiala Principal Investigator at SLIET Dr. P.S. Panesar, Professor (Food Engg. & Technology)	DBT, New Delhi (Network project)	Total Rs. 7500000/- (for Punjabi University & SLIET) Sanction Letter No. BT/PR4742/PID/6/635/2012 dt. 4/10/2012(Completed 2014-15)
8.	106	Infrastructure Development & Augmentation of Food Biotechnology Laboratory Sanctioned on 29.07.2013 Period One year	Dr. P.S. Panesar	AICTE, New Delhi under MODROBS	Rs. 2000000/- for one year (File No. 9-165/RIFD/ MODROB/Policy-1/2013-14 dt. 29.07.2013(completed 2014-15)
9.		Modernization and removal of obsolescence scheme (Duration/period 2013-14	Dr. Viney Kumar	AICTE(MODROB)	Completed

B. On going major projects detail

a. Inter-institutional collaborative projects and grants received

- i) All India collaboration
- ii) International

Development of process for production, downstream processing and applications of oligosaccharide producer enzymes Sanctioned on : 04.10.2012 Financial Year : 2012-13	Dr. R.S. Singh, Project Coordinator, Punjabi University, Patiala Principal Investigator at SLIET Dr. P.S. Panesar, Professor (Food Engg. & Technology)	DBT, New Delhi (Network project)	Total Rs. 26,00,000/- Sanction Letter No. BT/PR4742/PID/6/635/2012 dt. 4/10/2012(Completed 2014-15)
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3.3 Research Facilities

3.3.1 What efforts have been made by the university to improve its infrastructure requirements to facilitate research? What strategies have been evolved to meet the needs of researchers in emerging disciplines?

- Purchase/Procurement of equipment.
- Computational facilities.
- Library facilities.
- Journal subscriptions
- online and offline literature.

3.3.2 Does the university have an Information Resource Centre to cater to the needs of researchers? If yes, provide details of the facility.

Institute has subscription to online journals.

3.3.3 Does the university have a University Science Instrumentation Centre (USIC)? If yes, have the facilities been made available to research scholars? What is the funding allotted to USIC?

No

3.3.4 Does the university provide residential facilities (with computer and internet facilities) for research scholars, post-doctoral fellows, research associates, summer fellows of various academies and visiting scientists (national/international)?

Institute provide residential facilities with internet connectivity.

3.3.5 Does the university have a specialized research centre/ workstation on-campus and off-campus to address the special challenges of research programmes?

The different departments have their own computational labs.

3.3.6 Does the university have centres of national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

No.

3.4 Research Publications and Awards

3.4.1 Does the university publish any research journal(s)? If yes, indicate the composition of the editorial board, editorial policies and state whether it/they is/are listed in any international database.

At present the university is not publishing any research journal.

3.4.2 Give details of publications by the faculty:

- Number of papers published in peer reviewed journals (national/international) : **1100**
- Monographs : **08**
- Chapters in Books : **81**
- Books edited : **17**
- Books with ISBN with details of publishers : **44**
- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, EBSCO host, etc.) : **325**
- Citation Index – range / average : **Range 0 to 1914**
- SNIP : details are provided in the departmental profiles for respective academic departments and attached as appended list.
- SJR : details are provided in the departmental profiles for respective academic departments and attached as appended list.
- Impact Factor – range / average : **Range 0 to 7.178**
- h-index : **Range 0 to 21**

3.4.3 Give details of

faculty serving on the editorial boards of national and international journals
faculty serving as members of steering committees of international conferences recognized by reputed organizations / societies

The details of faculty serving in the editorial boards or in steering committees are included in the departmental profiles. Such details are appended in the list of departmental profile.

3.4.4 Provide details of

research awards received by the faculty and students
national and international recognition received by the faculty from reputed professional bodies and agencies

The list of research awards for the faculty members are included in the departmental profiles. Such details are appended in the list of departmental profile.

3.4.5 Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty during the last four years. Does the university participate in *Shodhganga* by depositing the Ph.D. theses with INFLIBNET for electronic dissemination through open access?

Average number of M. Tech. per faculty is 1.23 and average number of Ph.D. per faculty is 3.4
Yes.

3.4.6 What is the official policy of the university to check malpractices and plagiarism in research? Mention the number of plagiarism cases reported and action taken.

All the research scholars and respective supervisor give the undertaking regarding plagiarism. No cases of plagiarism have been reported during the period.

3.4.7 Does the university promote interdisciplinary research? If yes, how many interdepartmental / interdisciplinary research projects have been undertaken and mention the number of departments involved in such endeavours?

The faculty members are free to plan the interdisciplinary research projects. The departments have no restrictions in this regard. There are no interdisciplinary projects funded from the external agency during this period. However, interdisciplinary Ph.D. /M.Tech. research projects are the routine research activities of all academic departments.

3.4.8 Has the university instituted any research awards? If yes, list the awards.

Institute gives "Certificate of Merit" to faculty members receiving patents.

3.4.9 What are the incentives given to the faculty for receiving state, national and international recognition for research contributions?

No.

3.5 Consultancy

3.5.1 What is the official policy of the university for structured consultancy? List a few important consultancies undertaken by the university during the last four years.

Institute promotes the faculty members for the consultancy work. Following consultancy works are undertaken by faculty during the last four years:

Title	Faculty Incharge/PI	Duration/Year	Status/Remarks
Generation of Green acid	Prof. H.R. Ghatak	6the months (May 2013)	Consultancy provided to the Industry and Rs. 40,000/- earned to the Institute.

3.5.2 Does the university have a university-industry cell? If yes, what is its scope and range of activities?

Yes,

The cell make liasoning with the Industries.

Arranges to conduct expert talk for the employability of students.

Conducts Industry-Institute Interaction seminars.

- 3.5.3 What is the mode of publicizing the expertise of the university for consultancy services? Which are the departments from whom consultancy has been sought?

Through Institute website.

- 3.5.4 How does the university utilize the expertise of its faculty with regard to consultancy services?

It is based on Institute consultancy rules.

- 3.5.5 List the broad areas of consultancy services provided by the university and the revenue generated during the last four years.

Food Engineering, Electronics and Communications Engineering, Chemical Engineering, Mechanical Engineering, Electrical and Instrumentations Engineering.

Revenue Generated 5,25,000/-

- 3.6 Extension Activities and Institutional Social Responsibility (ISR)

- 3.6.1 How does the university sensitize its faculty and students on its Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience during the last four years.

Institute has NSS, NCC and various activity groups like, Happy Club. A number of programs, like Blood Donations camps, Swach Bharat Abhiyan etc. have been conducted regularly.

- 3.6.2 How does the university promote university-neighbourhood network and student engagement, contributing to the holistic development of students and sustained community development?

Institute has linkages with the nearby villages through Gurudwaras and clubs of villages are made aware various academic as well as programs of social relevance. Entrepreneurship development programs are conducted in the Institute to inculcate entrepreneurship among the rural youth by developing skill in different traits. As per the activity of Swach Bharat Abhiyan, nukkad Play by the students were conducted in nearby villages to sensitize cleanliness and Hygiene to their surrounding and also fight against drug abuse.

- 3.6.3 How does the university promote the participation of the students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International programmes?

Institute has NSS, NCC and various activity groups and a number of programs, like Blood Donations camps, Swach Bharat Abhiyan etc. have been conducted regularly. Students are allowed to attend NCC camps.

- 3.6.4 Give details of social surveys, research or extension work, if any, undertaken by the university to ensure social justice and empower the underprivileged and the most vulnerable sections of society?

Students organised campaigns on Beti Padao and Beti Bachao abhiyan in nearby areas. A conclave was conducted for district education officer and Principal of various schools in Sangrur District and nearby areas.

3.6.5 Does the university have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?

Institute gives appreciation certificates to such students.

3.6.6 Bearing in mind the objectives and expected outcomes of the extension activities organized by the university, how did they complement students' academic learning experience? Specify the values inculcated and skills learnt.

There is a provision of relaxation in attendance requirements, moreover, such activities are generally conducted during off-academic hours.

3.6.7 How does the university ensure the involvement of the community in its outreach activities and contribute to community development? Give details of the initiatives of the university which have encouraged community participation in its activities.

Various influential persons of nearby villages like Sarpanch, DEOs etc. are invited to make them aware of the initiatives taken by the Institute.

3.6.8 Give details of awards received by the institution for extension activities and/contributions to social/community development during the last four years.

One Faculty member from Mechanical Engineering Department, Dr. Indraj Singh, Associate Professor, was recognised by the District Administration for his contribution to Social Service.

3.7 Collaboration

3.7.1 How has the university's collaboration with other agencies impacted the visibility, identity and diversity of activities on campus? To what extent has the university benefitted academically and financially because of collaborations?

University has obtained few research projects funded by external agencies, DBT, DST, AITE etc. some of the projects are Joint project between two institutes has created an atmosphere to work in the collaboration for sharing of resources which includes hardware and software.

3.7.2 Mention specific examples of how these linkages promote

Curriculum development

Internship

On-the-job training

Faculty exchange and development

Research

Publication

Consultancy

Extension

Student placement

Any other (please specify)

These linkages have promoted, Institute-Institute and Institute-Industry interaction and have helped sustainable development regarding academic and research domain of the university.

3.7.3 Has the university signed any MoUs with institutions of national/international importance/other universities/ industries/corporate houses etc.? If yes, how have they enhanced the research and development activities of the university?

Yes,

As per MoU, the Institutions allowed the students and faculty to use the research facilities of these Organisations/Institutions.

3.7.4 Have the university-industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

No

4 CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

4.1.1 How does the university plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

University maintains the norms of AICTE regarding space of lab and class rooms required for the various programs. Faculty member and staff are provided with working place with all teaching aids etc. For all these facilities are planned at a centralised by the place by the office of Dean (Planning and development) assisted by Estate Office.

4.1.2 Does the university have a policy for the creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.

Under the TEQIP projects, 07 class rooms are upgraded into ICT enabled class rooms.

4.1.3 How does the university create a conducive physical ambience for the faculty in terms of adequate research laboratories, computing facilities and allied services?

Each department has computational labs with required computational resources and proper air-conditioning to provide conducive atmosphere for studies and research.

4.1.4 Has the university provided all departments with facilities like office room, common room and separate rest rooms for women students and staff?

Yes, except separate rest rooms for women students and staff since university is residential.

4.1.5 How does the university ensure that the infrastructure facilities are disabled-friendly?

Most of the building are renovated/modified for disabled / orthopedically challenged people through the project sanctioned by Government of India.

4.1.6 How does the university cater to the requirements of residential students? Give details of

Capacity of the hostels and occupancy (to be given separately for men and women)

Sr. No		Name of Hostel	Occupancy
1	Girls Hostel	Girls Hostel No. 01	240
		Girls Hostel No. 02	240
		Girls Hostel No. 03	249
		Girls PG Hostel	81
2	Boys Hostels	Boys Hostel 01	240
		Boys Hostel 02	240
		Boys Hostel 03	252
		Boys Hostel 04	240
		Boys Hostel 05	240
		Boys Hostel 06	252
		Boys Hostel 07	240
		Boys Hostel 08	240

		Boys Hostel 09	252
		Boys Hostel 10	250

Recreational facilities in hostel/s like gymnasium, yoga centre, etc.

TV room, Reading rooms, indoor games like chess, carom board, table tennis and in addition the badminton and volleyball are also available. Few hostels are equipped with Gymnasium and Tennis courts.

Broadband connectivity / wi-fi facility in hostels.

The Total hostel area is equipped with Wi-Fi facility.

4.1.7 Does the university offer medical facilities for its students and teaching and non-teaching staff living on campus?

The Health centre provides all the basic medicines to the students and staff of the institute. The Health centre has its own laboratory where all the routine investigations are done. The institute Health centre is also equipped with Indoor ward and minor operation theatre.

4.1.8 What special facilities are available on campus to promote students' interest in sports and cultural events/activities?

University has an indoor and outdoor sports facility with adequate Infrastructure.

4.2 Library as a Learning Resource

4.2.1 Does the library have an Advisory Committee? Specify the composition of the committee. What significant initiatives have been taken by the committee to render the library student/user friendly?

The Library is managed by a committee consisting of faculty members and librarian headed by the Chairman, Library committee who is at the level of Professor.

The recommendations of the library committee implemented are as under:

- Establishment of Book-bank for students.
- Establishment of digital library.
- Bar coding on the library material.
- Automation of library including issue-return etc.
- Subscription of e-resources.

4.2.2 Provide details of the following:

Total area of the library (in Sq. Mts.): 2800 sq mts

Total seating capacity 200

Working hours (on working days, on holidays, before examination, during examination, during vacation) :

8.30 am to 9.00 pm

8.30 am to 5.00 pm (Holidays)

Reading hall is open round the clock.

Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources) :

Ground floor: Digital Library, Reading area including stack rooms.

First Floor: Reading hall is open around the clock.

Clear and prominent display of floor plan; adequate sign boards; fire alarm; access to differently-abled users and mode of access to collection

Yes

4.2.3 Give details of the library holdings:

- a) Print (books, back volumes and theses) : 95,541
- b) Average number of books added during the last three years: 5409.
- c) Non Print (Microfiche, AV) : No
- d) Electronic (e-books, e-journals) : 16
- e) Special collections (e.g. text books, reference books, standards, patents) : ASTM Standards.
- f) Book Banks: Yes
- g) Question Banks: No

4.2.4 What tools does the library deploy to provide access to the collection?

OPAC

Electronic Resource Management package for e-journals

Federated searching tools to search articles in multiple databases

Library Website

In-house/remote access to e-publications

The library provide access through OPAC.

4.2.5 To what extent is ICT deployed in the library? Give details with regard to

Library automation : Yes

Total number of computers for general access: 30

Total numbers of printers for general access : 01

Institutional Repository: No

Content management system for e-learning : Online access.

Participation in resource sharing networks/consortia (like INFLIBNET): Yes

4.2.6 Provide details (per month) with regard to

Average number of walk-ins: 750

Average number of books issued/returned: 400

Ratio of library books to students enrolled : 27

Average number of books added during the last four years : 5245

Average number of login to OPAC : 5

Average number of login to e-resources : 1000

Average number of e-resources downloaded/printed : 1000

Number of IT (Information Technology) literacy trainings organized : No

4.2.7 Give details of specialized services provided by the library with regard to

Manuscripts: No

Reference : Yes

Reprography/Scanning: Yes

Inter-library Loan Service : No

Information Deployment and Notification : Yes

OPACS : Yes

Internet Access : Yes

Downloads : Yes

Printouts : Yes

Reading list/ Bibliography compilation : Yes

In-house/remote access to e-resources : Yes

User Orientation : No

Assistance in searching Databases : Yes

INFLIBNET/IUC facilities : Yes

4.2.8 Provide details of the annual library budget and the amount spent for purchasing new books and journals.

	Annual Budget	Book Purchase	Journals
2012-13	110 Lac	19 Lac	6.8 Lac
2013-14	90 Lac	21 Lac	16000/-
2014-15	130 Lac	14 Lac	8.5 Lac
2015-16	180 Lac	27 Lac	9.7 Lac

4.2.9 What initiatives has the university taken to make the library a ‘happening place’ on campus?

Congenial atmosphere to exchange ideas and views on their topics of interest.

4.2.10 What are the strategies used by the library to collect feedback from its users? How is the feedback analysed and used for the improvement of the library services?

For any grievances, suggestion boxes are installed in the library.

4.2.11 List the efforts made towards the infrastructural development of the library in the last four years.

- CCTV system has been installed.
- Purchase of New Computers.
- Erection of New Racks for Books and Periodicals.
- Comfortable Seating arrangement for better reading of the users.

4.3 IT Infrastructure

4.3.1 Does the university have a comprehensive IT policy with regard to

- IT Service Management
- Information Security
- Network Security
- Risk Management
- Software Asset Management
- Open Source Resources
- Green Computing

University has the policies for IT Service Management, Information Security and Network Security

4.3.2 Give details of the university's computing facilities i.e., hardware and software.

- Number of systems with individual configurations: 1000 with latest configuration
- Computer-student ratio: 1:3
- Dedicated computing facilities : Yes
- LAN facility: Yes
- Proprietary software : Yes
- Number of nodes/ computers with internet facility : 1500
- Any other (please specify)

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

Institute has already in process for the ERP and National Academic Depository.

4.3.4 Give details on access to on-line teaching and learning resources and other knowledge and information database/packages provided to the staff and students for quality teaching, learning and research.

Institute has Video Conferencing System and Classroom with projectors.

4.3.5 What are the new technologies deployed by the university in enhancing student learning and evaluation during the last four years and how do they meet new / future challenges?

Institute has provided 1 Gbps dedicated leased line internet facilities with the high end wi-fi systems at every hostels, also institute has installed projectors in classroom for better learning and institute has purchased software's like Matlab and other Microsoft academic software's.

4.3.6 What are the IT facilities available to individual teachers for effective teaching and quality research?

Teachers have interactive system with Video Conferencing System along with academic software's.

4.3.7 Give details of ICT-enabled classrooms/learning spaces available within the university? How are they utilized for enhancing the quality of teaching and learning?

There are total 07 ICT enabled class rooms in the Institute.

4.3.8 How are the faculty assisted in preparing computer- aided teaching-learning materials? What are the facilities available in the university for such initiatives?

Students are given PPT and seminars which they deliver on interactive environment like e-podium. Each and every department has its own seminar halls.

4.3.9 How are the computers and their accessories maintained?

Maintained through Computer Repairing and Maintenance Lab & Administrative Computer Services System Section

4.3.10 Does the university avail of the National Knowledge Network connectivity? If so, what are the services availed of?

Yes, university has availed the National Knowledge Network Connectivity and has been provided with 1 Gbps lease line connectivity.

4.3.11 Does the university avail of web resources such as Wikipedia, dictionary and other education enhancing resources? What are its policies in this regard?

The web resources such as Wikipedia, NPTEL lectures etc. are being used by faculty, staff and students through cyberoam/UTM user accounts provided to them.

4.3.12 Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the university.

A total of 117 Lacs were spent on software and purchase of computers during the financial year 2015-16.

4.3.13 What plans have been envisioned for the gradual transfer of teaching and learning from closed university information network to open environment?

Institute is planning to offer some courses under SWAYAM digital India initiative and other MOOCs platforms in coming future.

4.4 Maintenance of Campus Facilities

4.4.1 Does the university have an estate office / designated officer for overseeing the maintenance of buildings, class-rooms and laboratories? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience.

Yes, beautification of gardens, repair and maintenance of roads, proper signage, and cleanliness drive for the realization of Swachh Bharat Abhiyan.

4.4.2 How are the infrastructure facilities, services and equipment maintained? Give details.

Every department has been sanctioned a sufficient fund for the service and maintenance of equipment. Some equipment are also put under Annual Maintenance Contract (AMC).

5 CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the university have a system for student support and mentoring? If yes, what are its structural and functional characteristics?

Does the university have a system for student support and mentoring? If yes, what are its structural and functional characteristics?

Yes, the institute has student support and mentoring system in the form of student counselling system. The structure of the counselling system is:

- Each class after admission to the ICD/BE program shall be assigned to a Class Counsellor.
- The students will have the same counsellor throughout their duration of study.
- Counsellor will meet students once in a week for which a slot in timetable is provided.
- Students are expected to keep constantly in touch with their counsellor so that he may watch their progress and guide them accordingly.

The functions of class counsellor are:

- To help students in planning their courses and activities during study.
- To guide, advice and counsel students on academic program.

5.1.2 Apart from classroom interaction, what are the provisions available for academic mentoring?

Individual faculty members monitor the academic performance of students. Individual course counsellors are also recording and monitoring the academic performance of students.

5.1.3 Does the university have any personal enhancement and development schemes such as career counselling, soft skill development, career-path-identification, and orientation to well-being for its students? Give details of such schemes.

Yes, periodically, the university conduct the careers counseling /other training activities for SLIET students to improve their soft skills / career of path identification and orientation. Industry-Institute interaction, Expert talks on number of soft skills are conducted by the Institute regularly.

5.1.4 Does the university provide assistance to students for obtaining educational loans from banks and other financial institutions?

Yes, Institute provide assistance to students for obtaining educational loans from banks and other financial Institutions.

5.1.5 Does the university publish its updated prospectus and handbook annually? If yes, what are the main issues / activities / information included / provided to students through these documents? Is there a provision for online access?

The Institute publish its Information Brochure every year and information is also accessible to the stake holders on Institute website.

5.1.6 Specify the type and number of university scholarships/freeships given to the students during the last four years. Was financial aid given to them on time? Give details (in a tabular form) for the following categories: UG/PG/M.Phil/Ph.D./Diploma/others (please specify).

For Diploma and UG Programs

1. SC and OBC scholarship under Dr. Ambedkar Scheme Punjab State Government.
2. SC/ST OBC scholarship under BIHAR state Government.
3. For Handicap Students under National Handicapped Finance and Development Corporation (NHFDC).
4. ISHAN UDAY Scheme Particularly for North East students from University Grants Commission (SECTION & AWARD BUREAU).
5. INDIAN- POSTAL Services for the students of their employs.
6. Minority scholarship.
7. SC, ST & OBC Scholarship from Jharkhand State Govt.
8. SC, ST & OBC Scholarship from Himachal State Govt.
9. SC Scholarship from Uttar Pradesh State Govt.
10. SC, ST & OBC Scholarship from Telangana State Govt.
11. SC, ST Scholarship from Assam State Govt.
12. SC, ST Scholarship from Nagaland State Govt.
13. SC, ST & OBC Scholarship from Haryana State Govt.
14. Minority Scholarship from Arunachal Pradesh State Govt.
15. Scholarship for the students of Railways employs wards (Rail Coach Factory).
16. Scholarship for the students of Material GRATROP Organization, Diesel Locomohve Varanasi, 221004.
17. Scholarship for students of CENTRAL SECTOR SCHEME OF SCHOLARSHIP.
18. Scholarship for the students of CRPF Wards.
19. Scholarship for the students of North East Directorate of Welfare of Plain Tribe and Backward classes.
20. Scholarship for the Punjab student's ward of Punjab Building and construction Workers Welfare, Board.
21. Western air command higher education subsidy scheme, command education section.
22. Golden jubilee Foundation, Manger, PIR OF LIC, SHAHDOL, Madhya Pradesh.
23. Indian oil education Scholarship Scheme.
24. Umbrella Scheme for ST students only Started from (2016).
25. State scholarship of Utarakhand State.
26. State scholarship of Rajasthan State.
27. PMSSCAPF & Assam Rifles.
28. PMSSS for j & k students.
29. Scholarship of Delhi Govt.

5.1.7 What percentage of students receive financial assistance from state government, central government and other national agencies (Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)?

A total of 1110 students of the University are getting the scholarships mentioned at point number 5.1.6.

5.1.8 Does the university have an International Student Cell to attract foreign students and cater to their needs?

No

5.1.9 Does the university provide assistance to students for obtaining educational loans from banks and other financial institutions?

Yes, Institute provide assistance to students for obtaining educational loans from banks and other financial Institutions. The Institute verified certificate required by the banks for loan purpose.

5.1.10 What types of support services are available for

physically challenged / differently-abled students

SC/ST, OBC and economically weaker sections

students participating in various competitions/conferences in India and abroad

health centre, health insurance etc.

skill development (spoken English, computer literacy, etc.)

performance enhancement for slow learners

exposure of students to other institutions of higher learning/ corporates/business houses, etc.

publication of student magazines

The Institute does not have an international student cell to attract foreign students and to cater their needs. However, the admission to foreign national is available through Direct Admission for Students Abroad (DASA).

For physically challenged students/differently abled students, a scheme of Government of India, MHRD is being run at SLIET. Under this scheme 100 students are trained in non-formal courses like cutting & tailoring, plumbing, mobile repair, data entry operations. In addition, 25 seats are available for formal courses in Certificate - Diploma Programme. Students are charged no fee for the courses. Students also get variety of incentives like scholarship, mid-day meal, toolkits etc.

For the smooth movement of the students, barrier free environment has been created in the institute.

The Health centre provides basic emergency kits to students participating in various competitions/conferences in India & abroad.

There is provision of Annual Magazine Srijan which is managed by the students.

5.1.11 Does the university provide guidance and/or conduct coaching classes for students appearing for Civil Services, Defence Services, NET/SET and any other competitive examinations? If yes, what is the outcome?

Faculty member / Senior students perform such functions at their own in different departments.

5.1.12 Mention the policies of the university for enhancing student participation in sports and extracurricular activities through strategies / schemes such as

additional academic support and academic flexibility in examinations

special dietary requirements, sports uniform and materials

any other (please specify)

University provides the Travelling allowance, Daily allowance, sports kits to the participants of inter engineering, inter university or any other state/national level participation. There is a provision of special diet for in-house sports events for the participants.

5.1.13 Does the university have an institutionalized mechanism for students' placement? What are the services provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

The university have a complete structure to monitor training and placement activities of the students. Each & every department has placement coordinator/ training coordinator, who work in close liaison with industry, department and concerned students. These all the activities are supervised by Training & Placement Officer of the Institute under the guidance of HOD (T&P) of the institute & other SLIET authorities.

As mentioned above, the university conduct the invited talks by calling the expert to prepare students for interview and to make them employable.

5.1.14 Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus during the last four years).

S.No.	Year	Total no. of interested students for placement	No. of students placed
1	2012-13	260	120
2	2013-14	240	122
3	2014-15	250	146
4	2015-16 (upto May, 2016)	250	100

List of companies:

S.No.	Name of Companies
1	TCS, New Delhi
2	Godrej & Boyce Mfg. Co.
3	Honda Siel Cars India Ltd., Noida
4	Trident Group Barnala
5	Amazon
6	Software AG
7	GE India, Pune

8	Nestle, Moga (Punjab)
9	ISGEC Yamunanagar
10	Mahindra & Mahindra
11	L&T Hazira
12	Indsoftre Pvt. Ltd., Noida
13	Ebizon Netinfo Pvt. Ltd., Noida
14	Axis Bank
15	Sona Koyo Steering Systems Limited (SKSSL)
16	Shri Ram Panels
17	Guru Nanak Auto Enterprises Ltd
18	Acropetal Technologies Limited
19	Claas India Pvt Ltd
20	Compage Automation System Pvt. Ltd.
21	GVK Power
22	Afcons Infrastructure
23	The Oilstone Technologies (JLT), Dubai
24	M/s. Cheema Boilers Ltd. Mohali
25	Avery India Limited
26	Reliance Dairy Foods Ltd
27	Indian Army
28	Indian Navy
29	Jindal Steel
30	NEC Technologies
31	Eclerx Services Ltd, Chandigarh
32	Jindal Saw
33	Ralson
34	Ashahi India Glass Ltd., Gurgaon
35	HP India Sales Pvt. Ltd.
36	Om Careers Ludhiana
37	Eastman Impex Ludhina
38	Hardeo Group, Moonak Distillers & Bottlers Pvt. Ltd.
39	Intersoft Professional, Chandigarh
40	Impinge Solutions Limited, Mohali
41	Virtusapolaris, Hyderabad
42	Spray Engg. Devices. Ltd., Mohali

5.1.15 Does the university have a registered Alumni Association? If yes, what are its activities and contributions to the development of the university?

Yes, registration number DIC/DRA/10723 of 2017. The association organizes regular alumni meets and Institute-Industry meet etc.

5.1.16 Does the university have a student grievance redressal cell? Give details of the nature of grievances reported. How were they redressed?

Yes, Institute has grievance redressal cell for redressal of grievance of students, parents and other. Regarding this committee is as under:

1. Dean (SFW)
2. Dean (Academics)
3. Chairman SET
4. Chief Counsellor.
5. Deputy Registrar (A&A).

Students reported about grievance like hostels affairs, academic etc.

The same grievance has been resolved after discussing with concerned department.

5.1.17 Does the university promote a gender-sensitive environment by (i) conducting gender related programmes (ii) establishing cell and mechanism to deal with issues related to sexual harassment? Give details.

1.	Does the university promote a gender-sensitive environment by conducting gender related programme?	The ICC circulates guidelines to promote gender-sensitive environment from time to time.
2.	Does the university promote a gender-sensitive environment by establishing cell and mechanism to deal with issues related to sexual harassment?	The institute constitutes the internal complaint committee to deal with the complaints/issues related to sexual harassment. The deal with the complaints/issues related to sexual harassment, the institute followed the mechanism given in the Sexual Harassment of Woman at work place (Prevention, Prohibition and Redressal) Act, 2013 and MHRD (University Grants Commission), New Delhi notification the 2 nd may 2016.

5.1.18 Is there an anti-ragging committee? How many instances, if any, have been reported during the last four years and what action has been taken in these cases?

An anti-ragging committee is existing and no reports has been reported in the last four years except few indiscipline incidents.

5.1.19 How does the university elicit the cooperation of all its stakeholders to ensure the overall development of its students?

The institute has student chapter of many academic societies and recreation clubs for the overall developments of its students.

5.1.20 How does the university ensure the participation of women students in intra- and inter-institutional sports competitions and cultural activities? Provide details of sports and cultural activities where such efforts were made.

Girls students are encouraged to participate in all the athletics meet. The girl students are sent for inter engineering, inter university events to other institute/universities. Equal opportunities are provided to girl students.

5.2 Student Progression

5.2.1 What is the student strength of the university for the current academic year? Analyse the Programme-wise data and provide the trends for the last four years.

The total student strength for the current academic year is as follows:

1. ICD (2014, 2015 and 2016 batch): 1475 students
2. Diploma (2015 batch): 167 students
3. UG (2014, 2015, and 2016 batch): 1675 students
4. PG (2015 and 2016 batch): 317 students
5. Ph.D. 235 students

Student Progression	%*
U.G. to P.G.	15%
U.G. to M. Phil.	Nil
P.G. to Ph.D.	20%
Ph.D. to Post-Doctoral	Nil
Employed	
▪ Campus Selection	60%
▪ Other than campus recruitment	20%

*All numbers in percentage and approximately averaged for all departments.

5.2.2 What is the programme-wise completion rate during the time span stipulated by the university?

	2013	2014	2015	2016
Certificate	0.59	0.46	0.43	--
Diploma	0.88	0.88	0.89	0.89
Degree	0.85	0.88	0.96	0.90
M. Tech.	0.66	0.80	0.91	0.94

5.2.3 What is the number and percentage of students who appeared/ qualified in examinations like UGC-CSIR-NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defense, Civil Services, etc.?

Approximately 8~10% students qualify GATE examination for engineering streams.

5.2.4 Provide category-wise details regarding the number of Ph.D./ D.Litt./D.Sc. theses submitted/ accepted/ resubmitted/ rejected in the last four years.

	2012-13	2013-14	2014-15	2015-16
	Submitted/ accepted	Submitted/ accepted	Submitted/ accepted	Submitted/ accepted
Physics	2	5	2	2
Chemistry	1	4	-	5
Math	3	-	3	7
FET	-	-	3	5
C.E.	-	-	2	1
Mech	-	4	1	5
M&H	-	-	1	8
ECE	-	1	4	2
CSE	-	1	-	5
EIE	-	-	1	1

5.3 Student Participation and Activities

5.3.1 List the range of sports, cultural and extracurricular activities available to students. Furnish the programme calendar and provide details of students' participation.

Institute organizes a number of major and minor activities within the Institute and sends the different teams to other Institutes. Major activities are part of the academic calendar whereas minor activities are conducted at short notices at regular intervals.

5.3.2 Give details of the achievements of students in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. during the last four years.

Students participate in various inter-university events and won laurels to the university. Few of such events are listed as follows:

S.NO.	EVENT	PLACE	DATE
1.	INTER TECHNOLOGY DEEMED UNIVERSITY CHESS TOURNAMENT (B&G) BOYS SECURED 3 rd POSITION	PEC, CHANDIGARH	4TH 5TH OCT 2013
2.	INTER TECHNOLOGY DEEMED UNIVERSITY TABLE TENNIS TOURNAMENT (B&G) GIRLS SECURED 4 th POSITION	NIT, KURUKSHETRA	26TH 27TH OCT 2013
3.	INTER TECHNOLOGY DEEMED UNIVERSITY LAWN TENNIS TOURNAMENT (B&G) GIRLS SECURED 2ND POSITION	THAPAR, PATIALA	30-31 OCT, 2013

4.	INTER TECHNOLOGY DEEMED UNIVERSITY BASKETBALL TOURNAMENT (B&G) GIRLS SECURED 2ND POSITION	NIT, JALANDHAR	28/2/14 TO 1/3/14
5.	INTER TECHNOLOGY DEEMED UNIVERSITY VOLLEYBALL TOURNAMENT (B) BOYS SECURED 2ND POSITION	THAPAR, PATIALA	28/2/14 TO 1/3/14
6.	INTER TECHNOLOGY DEEMED UNIVERSITY CHESS TOURNAMENT (B&G) GIRLS SECURED 3RD POSITION	NIT, KURUKSHETRA	14-15 SEP 14
7.	INTER TECHNOLOGY DEEMED UNIVERSITY BASKETBALL TOURNAMENT (B&G) GIRLS SECURED 3RD POSITION	NIT JALANDHAR	13-14 FEB 15
8.	INTER TECHNOLOGY DEEMED UNIVERSITY ATHELETIC TOURNAMENT (B&G) 400MTS BOYS-3RD 800MTS BOYS-3RD LONG JUMP BOYS-1ST TRIPPLE JUMP BOYS-1ST & 3RD 4X400MTS RELAY-2ND 100MTS GIRLS-3RD LONG JUMP-1ST	TAHPAR, PATIALA	24,25 APRIL 15
9.	INTER TECHNOLOGY DEEMED UNIVERSITY LAWN TENNIS TOURNAMENT (B&G) GIRLS SECURED 2ND POSITION	THAPAR, PATIALA	24,25 APRIL 15
10.	INTER TECHNOLOGY DEEMED UNIVERSITY VOLLEYBALL TOURNAMENT (B) BOYS SECURED 3RD POSITION	NIT, KURUKSHETRA	6-7 SEP 15
11.	INTER TECHNOLOGY DEEMED UNIVERSITY FOOTBALL TOURNAMENT (B) SECURED 4TH POSITION	NIT, KURUKSHETRA	31/1/16 TO 1/2/16
12.	INTER TECHNOLOGY DEEMED UNIVERSITY ATHELETICS TOURNAMENT (B&G) 5000MTS BOYS-2ND 800MTS BOYS-3RD	THAPAR, PATIALA	15-16 APRIL 2016

	LONG JUMP-3RD LONG JUMP GIRL-3RD		
13.	INTER TECHNOLOGY DEEMED UNIVERSITY VOLLEYBALL TOURNAMENT (B&G) BOYS SECURED 1ST GIRLS SECURED 4TH	NIT, KURUKSHETRA	1-3 OCT 16
14.	VOLLEYBALL TOURNAMENT (URJA) BOYS SECURED 1ST POSITION	THAPAR, PATIALA	17-19 FEB 2017

5.3.3 Does the university conduct special drives / campaigns for students to promote heritage consciousness?

The university keeps on spreading awareness and connects the students through following activities under NSS/Cultural committee/SPIC-MACAY etc.:

For Tangible Heritage:

- Recreational trips
- Swachh Bharat Abhiyaan (cleanliness drives in rural areas)

For Intangible Heritage:

- Cultural events
- SPIC-MACAY classical/Indian heritage programme
- Hobby club activity: Stamp collection/Fine arts etc.

5.3.4 How does the university involve and encourage its students to publish materials like catalogues, wall magazines, college magazine, and other material? List the major publications/ materials brought out by the students during the last four academic sessions.

Students contribute to magazines floated by various departments. Annual Magazine Srijan is also published which is managed by the students.

5.3.5 Does the university have a Student Council or any other similar body? Give details on its constitution, activities and funding.

There is student council for Certificate-Diploma, UG and PG students. There is representation of two students from each class in respective councils.

5.3.6 Give details of various academic and administrative bodies that have student representatives on them. Also provide details of their activities.

The students are members of following academic/administrative/social committees:

1. Cultural Committee.
2. Institutional publicity and media interaction.
3. Institute profile, newsletter and magazine committee.
4. Sports Committee,
5. Happy Club.
6. SLIET Literary society.
7. Rajbhasha vikas samite.
8. Library committee.

9. Adventure club.
10. Book club etc.

6 CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the vision and the mission of the university.

Vision:

SLIET shall strive to act as an international podium for the development and transfer of technical competence in academics through formal and non-formal education, entrepreneurship and research to meet the changing needs of society.

Mission:

- Formal, flexible, modular, credit based multi-point entry Programmes in engineering and technology in the areas like Rural development, educational planning, information and management sciences.
- Education and Training in modern technology areas
- Promotion of self-employment among the students
- Extension services to the industry, working population, passed out students, social organization and institution of research and higher learning.
- Close interface with the industry to conduct research on the basis of manpower requirements leading to integrated educational, planning, curriculum development and instructional material preparation in the identified area of science, technology and inter-disciplinary areas
- Promotion of Institute-Institute linkages for sustainable development of academics and research.

6.1.2 Does the mission statement define the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, the institution's tradition and value orientations, its vision for the future, etc.?

Yes, Institute has engaged itself in translating vision and mission into reality by offering various programs of science, technology and management to produce knowledge and skilled human resource to the industries and ever changing societies by adopting modular pattern of education at a peripheral level and integrating to the higher level.

6.1.3 How is the leadership involved:

in ensuring the organization's management system development, implementation and continuous improvement?

in interacting with its stakeholders?

in reinforcing a culture of excellence?

in identifying organizational needs and striving to fulfil them?

The Governance of the university lies with the Board of Management, Senate, Finance committee, Building works committee. Director being the chief executive officer of the university and along with Deans, Heads of Departments and Section officer implements the rules and regulations as laid down in the MOA of the University for sustained development of the academic, research and extension activities. Various academic as well as extra co-curricular activities of the universities are run by various clubs and students are the members of such committees/clubs besides registered Alumni Association.

6.1.4 Were any of the top leadership positions of the university vacant for more than a year? If so, state the reasons.

Yes. Search cum selection committee of the Ministry has already conducted the interview and soon the new Director of the University will be appointed.

6.1.5 Does the university ensure that all positions in its various statutory bodies are filled and meetings conducted regularly?

Yes.

6.1.6 Does the university promote a culture of participative management? If yes, indicate the levels of participative management.

Yes, university have formulated a number of committees for various academic and extra curricular activities involving faculty, staff and students.

6.1.7 Give details of the academic and administrative leadership provided by the university to its affiliated colleges and the support and encouragement given to them to become autonomous.

Not applicable

6.1.8 Have any provisions been incorporated / introduced in the University Act and Statutes to provide for conferment of degrees by autonomous colleges?

Not applicable.

6.1.9 How does the university groom leadership at various levels? Give details.

University nominates or sends the faculty and staff to attend / participate leadership or skill enhancement, Capacity enhancement programs offered by various Government / Private agencies.

6.1.10 Has the university evolved a knowledge management strategy? If yes, give details.

No.

6.1.11 How are the following values reflected the functioning of the university?

Contributing to national development

Fostering global competencies among students

Inculcating a sound value system among students

* *Promoting use of technology*

Quest for excellence

Above values are already incorporated in the university vision and mission. University engage itself through various activities for the realization of above value system with the Faculty, Staff and Students.

6.2 Strategy Development and Deployment

6.2.1 Does the university have a perspective plan for development? If yes, what aspects are considered in the development of policies and strategies?

Vision and mission

Teaching and learning

Research and development

Community engagement

Human resource planning and development

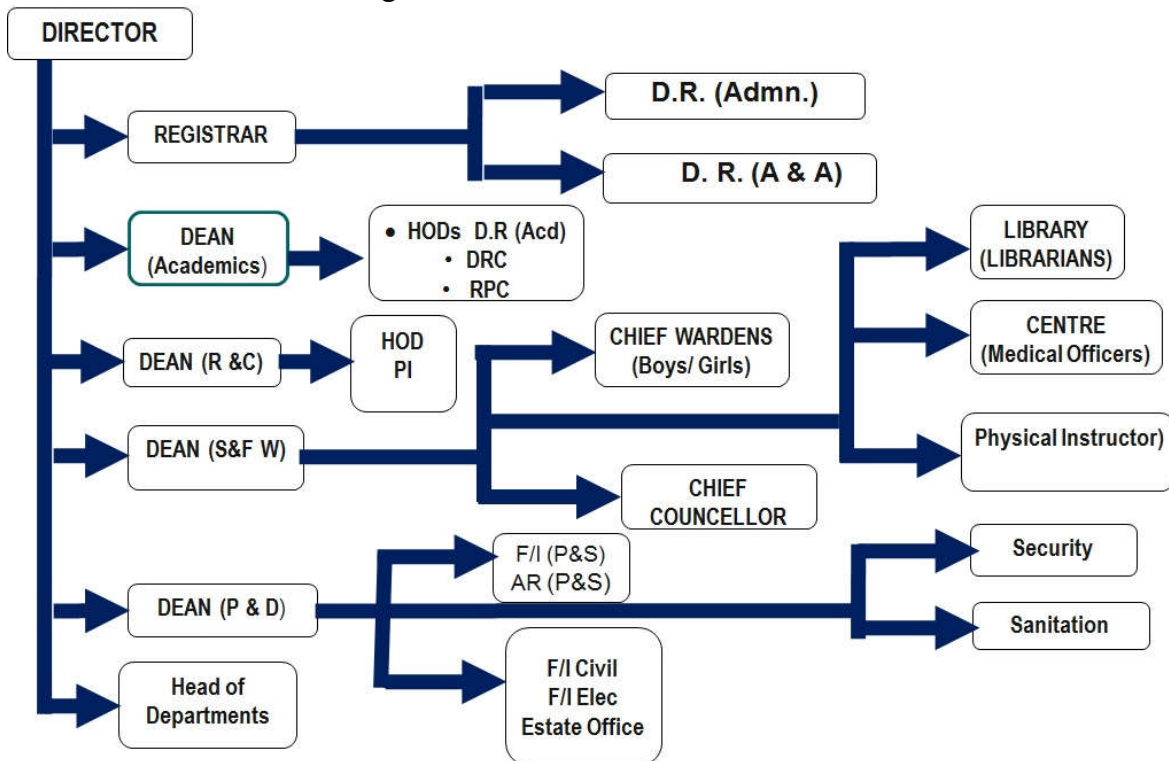
Industry interaction

Internationalisation

Yes, university have a perspective planning. Vision and mission are not modified till date. University makes its vision document as well as road map to achieve its mission. The improvement in the teaching and learning is an ongoing process and curriculum are revised time to time as per the need of the society and industry. The university has a system in place where faculty are encouraged to participate in various training programs in India and abroad, presentation of research paper in various seminars/workshops/symposia etc. Book writing, Monograms writing as a part of human resource development. Each department has their research groups which are involved in research and development activities. The research groups undertake research current research trends and also performs some consultancy works to the Industry. As a result of above, few patents are being applied and granted.

6.2.2 Describe the university’s internal organizational structure and decision making processes and their effectiveness.

The flow chart for internal organizational structure is as under



6.2.3 Does the university have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?

The University has Departmental Academic Affairs Committee (DAAC) in each department which puts the monitors the academics and related quality aspects in respective departments.

6.2.4 Does the university encourage its academic departments to function independently and autonomously and how does it ensure accountability?

Yes each department has autonomy as each department has DAAC, Board of studies, DRC. They ensure the accountability of the faculty and students in the respective department. Moreover, annual confidential report of faculty and APAR of staff is evaluated each year and accordingly corrective measures are taken.

6.2.5 During the last four years, have there been any instances of court cases filed by and against the institute? What were the critical issues and verdicts of the courts on these issues?

Yes, there are few court cases.

6.2.6 How does the university ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyse the nature of grievances for promoting better stakeholder-relationship?

University has public grievance cell to address the grievances of its employees. Moreover, the university is funded by MHRD therefore public grievance cell is monitored by ministry itself.

6.2.7 Does the university have a mechanism for analysing student feedback on institutional performance? If yes, what was the institutional response?

Yes, student feedback are received from the Alumni and students feedback are discussed at length in the DAAC, DRC and Senate etc. and accordingly decisions are taken and implemented.

6.2.8 Does the university conduct performance audit of the various departments?

The university is in the process of implementation.

6.2.9 What mechanisms have been evolved by the university to identify the developmental needs of its affiliated institutions?

Not applicable.

6.2.10 Does the university have a vibrant College Development Council (CDC) / Board of College and University Development (BCUD)? If yes, detail its structure, functions and achievements.

Not applicable.

6.3 Faculty Empowerment Strategies

6.3.1 What efforts have been made to enhance the professional development of teaching and non-teaching staff?

All faculty members are entitled for professional development fund as per government of India for research needs of respective faculty. Staff members are deputed to attend the training courses with in the country.

6.3.2 What is the outcome of the review of various appraisal methods used by the university?
List the important decisions.

The promotion of the faculty and staff is based on the annual appraisal report.

Decision of Senate are implemented for all academic purpose.

Directives of Board of Management are implemented wherever applicable.

Central Research Committee (CRC) decision are implemented in regard to research matters.

6.3.3 What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have benefitted from these schemes in the last four years? Give details.

University have number of welfare schemes as applicable for government employees.

6.3.4 What are the measures taken by the University for attracting and retaining eminent faculty?

There is no such policy.

6.3.5 Has the university conducted a gender audit during the last four years? If yes, mention a few salient findings.

No.

6.3.6 Does the university conduct any gender sensitization programmes for its faculty?

Faculty and staff are sensitized through various notices/circulars.

6.3.7 What is the impact of the University's Academic Staff College Programmes in enhancing the competencies of the university faculty?

Not applicable.

6.4 Financial Management and Resource Mobilization

Recurring expenditure for the year 2009-10 to 2014-15.

Financial Year	Salary Component	Other than Salary Component
2009-10	2176.06	859.09
2010-11	1927.53	1074.52
2011-12	2100.90	1088.93
2012-13	2221.32	1356.74
2013-14	2486.63	1541.23
2014-15	3038.63	1672.38

6.4.1 What is the institutional mechanism available to monitor the effective and efficient use of financial resources?

- Delegation of financial powers to Dean/Registrar/Deputy Registrar.
- Regular appraisal of financial information/data to MHRD, New Delhi.
- Annual Accounts of the Institute i.e., Balance sheet, Income & Expenditure and Receipts and Payments Accounts is to be approved by Finance Committee/Board of Management.

6.4.2 Does the university have a mechanism for internal and external audit? Give details.

Internal Audit is conducted by the Chartered Accountant and External Audit is conducted by the AG Punjab, Chandigarh on behalf of CAG, New Delhi.

6.4.3 Are the institution's accounts audited regularly? Have there been any major audit objections, if so, how were they addressed?

Yes, Institute Annual Accounts have been regularly audited. The annual Accounts have been audited up to 2015-16. There is no major audit objection.

6.4.4 Provide the audited income and expenditure statement of academic and administrative activities of the last four years.

Copy of Audited income and expenditure statement of the Institute of the last four years are enclosed.

6.4.5 Narrate the efforts taken by the university for resource mobilization.

Increase in Licence fee of house allotted to employees. Increase in Licence fee of shops. Minor increase in fees of students. Efforts are being made by faculty for consultancy projects.

6.4.6 Is there any provision for the university to create a corpus fund? If yes, give details.

Yes, A sum of Rs. 414.70 Lakhs as fixed Deposit and a sum of Rs. 74.16 Lakhs as Saving Bank Account of Corpus Fund is available.

6.5 Internal Quality Assurance System

6.5.1 Does the university conduct an academic audit of its departments? If yes, give details.

At present, university has not performed any academic audit.

6.5.2 Based on the recommendations of the academic audit, what specific measures have been taken by the university to improve teaching, learning and evaluation?

Not applicable.

6.5.3 Is there a central body within the university to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

Yes, Internal Quality Assurance Cell exists in the Institute.

1. Chairman, Director of the Institute is Chairman of IQAC.
2. Members (11): Deans (4), Registrar (01), Professors (05), and TEQIP Coordinator (01)
3. External Members (03).

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

Issues related to academics are observed by the internal members and discussed in detail meetings and appropriate decision has been taken for the implementation having prior approval from statutory body of the Institute (i.e., Senate and Board of Management)

6.5.5 How many decisions of the IQAC have been placed before the statutory authorities of the university for implementation?

Some of the decisions undertaken by IQAC are given below:

- Improve the attendance of students in the class.
- To strengthen the conduct of laboratory classes

- Study materials for ICD students
- Introduction of feedback system
- Revival of examination cell/system
- Centralized computer centre operational 24x7 with biometric entry
- Implementation of total quality management (TQM) for students in laboratories.
- Innovation centre
- Mentoring and Counselling centre
- Online admission test will be conducted phase wise for Ph.D. and M. Tech. students, whose examination centre shall be allocated at SLIET Longowal
- It was also agreed for upgradation of the Class rooms, phase wise
- Each faculty member must submit subject wise learning attainments and shall be the part of the course file.

6.5.6 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Yes, there are three external members. At-least one member attends the meeting scheduled by IQAC.

6.5.7 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?

Not yet, will initiate shortly.

6.5.8 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres, etc.?

Implementation of total quality management (TQM) for students in laboratories.

Implementation of subject wise learning attainment (OBE).

Instrumentation centre is under development.

7 CRITERIA VII: INNOVATIONS AND BEST PRACTICES

7.1 Environment Consciousness

7.1.1 Does the university conduct a Green Audit of its campus?

University have massive plantation.

7.1.2 What are the initiatives taken by the university to make the campus eco-friendly?

Energy conservation

Use of renewable energy

Water harvesting

Check dam construction

Efforts for Carbon neutrality

Plantation

Hazardous waste management

e-waste management

any other (please specify)

University have massive plantation, separate lake, number of green gardens, cleanliness etc. Further, lots of water bodies are created and a number of migratory birds visit the campus each year which makes the environment eco-friendly.

7.2 Innovations

7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the university.

University has adopted the OBE system of educational policy and it is expected to the overall functioning of the academics. University has signed MoU with few organisations of repute as well as industries and as a result of which tangible visibility on placement has been seen.

7.3 Best Practices

7.3.1 Give details of any two best practices which have contributed to better academic and administrative functioning of the university.

Best practice -1

1. Title of the Practice
Outcome based education (OBE)

2. Objectives of the Practice

India has become a permanent member of Washington Accord. As an educational institution, we are adopting the “Outcome Based Education (OBE) Process” to ensure that the required outcomes (knowledge, skills and attitude / behaviour) are acquired by the learners of a programme. With the OBE process in mind, our educational system has been framed to provide the needful scope for the learners through the CBS that will pave the path to strengthen their knowledge, skills and attitude / behaviour. The course curricula are designed based on outcome based education (OBE) system indicating Programme education objectives (PEO), programme outcomes (PO’s), Course objectives and course outcomes (CO’s), so that proper mapping of the course could be done to assess level of learning attained at the end of the programme.

Objectives:

- a. The objectives of the all the academic programmes at Sant Longowal Institute of Engineering and Technology (SLIET) (Deemed University), Longowal are:
 - To provide the highest level of education in Technology and Science and to produce competent Engineers and Technocrats.
 - The programmes are designed to achieve the objectives of learning attainment by the learner/ student so that they are able to conceptualize, apply, analyse, innovate and create process or products by imbibing the engineering and technological skills, inculcate human values, sense of courage and integrity, gain awareness and are responsive to the needs and aspirations of the rural/urban societies.
 - Inculcate entrepreneurship among students

3. The Context

In general, bringing changes in the system is slow process. Faculty and staff are to be motivated and trained by arranging workshops on above mentioned practice.

4. The Practice

OBE system involves examination of voluminous data pertains to academic performances of the student, teaching learning process, and evaluation pattern adopted. Calculation of % learning attainment consumes lot of time of the faculty, nevertheless outcome of the course helps the teacher to make strategies to improve further to attain higher degree of leaning attainment. Examinations are conducted under the surveillance of CCTV and mobile jammer.

Ph.D thesis are evaluated by the expert from India and foreign country. Which has resulted quality research publication and dissemination of information regarding Ph.D programmes of the institute to other institute of repute.

5. Evidence of Success

Institute has implemented OBE system of the education policy from 2016 academic session.

Academic Performance based on % learning attainment of each course taught by the faculty are being calculated. However, % learning outcome of the programmes shall be calculated and evaluated after the end of the programme to assess the extent of the success.

6. Problems Encountered and Resources Required

Academic data management of OBE system is great challenge faced by the faculty. Institute has already taken up initiatives for additional staff / data management system requirement to implement the system for success.

Best practice -2

1. Title of the Practice

Annual confidential report (ACR)/ Annual performance and appraisal report(APAR)

2. Objectives of the Practice

In order to bring transparency, performance and accountability in the system, best practice mentioned above shall help the administration to evaluate the performance of the faculty and staff in one hand and on the other hand helps in making strategies to motivate /put on training to perform better.

3. The Context

Performance evaluation and fixing of accountability of the non-performer are the tools used to put the system in place.

4. The Practice

ACR of the faculty has been modified suitably to incorporate details of the research publication by the faculty in the journals with “impact factors”, number of STC, seminar, conference, workshops organized/ chaired /attended. Similarly, APAR for staffs are designed meticulously to evaluate the performance of the staff based on points/ score earned by the staff and are used for the promotion into higher order.

5. Evidence of Success

Like in any other institute/University, implementation of ACR and APAR in the institute has brought changes regarding working and performances of the employee has improved.

6. Problems Encountered and Resources Required

Many a time evaluation of the staff based on ACR /APAR does not give real picture about the staffs and a result of this the difference between performers and non-performers become problematic.

Evaluation Report of the Department

1. Name of the Department: **Department of Chemical Engineering**
2. Year of Establishment: **1991**
3. Is the Department part of a School/ Faculty of the university? : **Yes**
4. Names of programmes offered (UG, PG, M.Phil., PH.D., Integrated Masters; Integrated Ph.D., D.Sc. D.Litt., etc)

Name of the Program	Specialization	Duration
Integrated Certificate - Diploma (ICD)	Diploma in Chemical Technology (Certificate in Paper Technology)	3 years
B.E.	Chemical Engineering	4 years
M.Tech.	Chemical Engineering	2 years
Ph.D.	Chemical Engineering	Minimum 3 years

5. Interdisciplinary programmes and departments involved: **NIL**
6. Courses in collaboration with other universities, industries, foreign institutions, etc: **NIL**
7. Details of programmes discontinued, if any, with reasons
 - B.E. in Chemical Engineering (Specialization in **Paper Technology**) -**3 years**
 - B.E.in Chemical Engineering (specialization in **Polymer Technology**)- **3 years**
 - Certificate in Paper and Printing Technology- **2 years**
 - Diploma in Chemical Technology -**2 Years**

Reasons for discontinuation:

- (i) Due to restructuring of academic scheme that is –four year degree program in chemical engineering with increase intake and lateral entry after diploma program.
 - (ii) Certificate and diploma programs (as above) have been integrated as ICD program.
 - (iii) Feedback from the stakeholders (Industries, Academia and Alumni etc).
 - (iv) Market demands & Acceptability.
8. Examination System: Annual/ Semester/ Trimester/ Choice Based Credit System:

Semester System (with continuous assessments)

9. Participation of the department in the courses offered by the other departments.

Department offers following courses for other departments of institute:

- “Environmental Science” to all departments in ICD program.
- “Environment science and Engineering” in degree programs of other departments.
- Open elective courses to all other departments.

10. Number of teaching posts sanctioned, filled and actual (Professors/ Associate Professors/ Asst. Professors/ others)

Year: 2010-11

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	03	01	01
Associate Professors	05	04	05
Assistant Professors	13	07	06
Others	-	10 (Ad-hoc)	10 (Ad-hoc)

Year:2011-12

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	03	-	-
Associate Professors	05	04	06
Assistant Professors	13	07	05
Others	-	08(Ad-hoc)	08(Ad-hoc)

Year:2012-13

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	03	-	02
Associate Professors	05	04	04
Assistant Professors	13	07	05
Others	-	08(Ad-hoc)	08 (Ad-hoc)

Year:2013-14

	Sanctioned	Filled	Actual (Including CAS & MPS)
Professor	03	-	02
Associate Professors	05	04	04
Assistant Professors	13	09	07

Others	-	04(Ad-hoc)	04(Ad-hoc)
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Year:2014-15

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	03	-	04
Associate Professors	05	04	02
Assistant Professors	13	08	06
Others	-	05(Ad-hoc)	05(Ad-hoc)

Year: 2015-16

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	03	-	04
Associate Professors	05	04	02
Assistant Professors	13	08	06
Others	-	03(Ad-hoc)	03 (Ad-hoc)

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of years of Experience	No. of Ph.D./M.Phil . Students guided for the last 4 yrs.
Dr. S.M Ahuja	Ph. D.	Professor	Chemical Engineering (Industrial Pollution Control and Energy Conservation)	9 yrs teaching +11 yrs industry	1 M.Tech
Dr. Pushpa Jha	Ph. D.	Professor	Chemical Engineering (Waste management and Recycling, Bio-Resource Technology & Alternate source of Energy)	20 years	2 M.Tech,2 Phd
Dr. Kamlesh Kumari	Ph. D.	Professor	Chemical Engineering (Controlled Drug/	21 years	01 Phd

			Fertilizer release through polymeric biomaterials, Treatment of Industrial Effluents using Chitosan and its derivatives)		
Dr. H.R Ghatak	Ph. D.	Professor	Chemical Engineering (Pollution control, Bio-refinery)	21 yrs teaching +4 yrs industry	3 M.Tech
Dr. Avinash Thakur	Ph. D.	Associate Professor	Chemical and Bio-chemical Engineering	20 years	2 M.Tech
Er. Gulshan Kumar Jawa	M.E.	Associate Professor	Chemical Engineering	19½ yrs teaching + 3 yrs industry	Nil
Er. N.K Kaushley	M.E.	Assistant Professor	Chemical Engineering	19½ years	Nil
Dr. A.S.K. Sinha	Ph. D.	Assistant Professor	Chemical Engineering (Paper Manufacturing, Solid Waste Management Tech.)	17 yrs teaching + 5 yrs industry	1 M. Tech
Er. Subita Bhagat	M.Tech	Assistant Professor	Chemical Engineering (Polymer Technology)	10½ years	Nil
Er. V.K Meena	M.E.	Assistant Professor	Chemical Engineering	10½ years	Nil
Dr. Vinay Kumar	Ph. D.	Assistant Professor	Chemical Engineering (Polymer and Plastics)	9 yrs teaching + 10 yrs others	Nil
Dr. Nikhil Prakash	Ph. D.	Assistant Professor	Chemical Engineering (Modeling, Simulation & Optimization, Polymer Science & Engineering, Reaction Engineering, Process Dynamics & Control)	13 yrs	2 M.Tech
Dr. Amit Rai	Ph. D.	Assistant Professor	Chemical Engineering	2½ yrs teaching +1½	Nil

			(Supercritical Fluid Extraction, Modelling & Simulation, optimization)	yrs industry	
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12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

Name	Designation	Date	Special lecture/workshop on topic
Mr. Kamaljit Ghai	Manager Testing, CIPET Amritsar	30 th April, 2015	Polymer composites and latest advancement.
Prof. KK Pant	Professor in IIT, Delhi (Chemical Engineering)	19 th Feb., 2015	Catalytic Conversion of Biomass material to full & it's up gradation.
Mr. Yogesh Mann	DGM & Head, UEM Pvt. Ltd. Noida	25 th Sept. 2014	Waste water treatment, Recycle and Reuse with special focus on advanced biological technology
Mr. Davinder Mittal	AGM-Operations at HPCL- mittal Energy Ltd	06 th Jan., 2016	Refinery Configurations
Mr. Gurbakhsish Singh Gill	SDO at Punjab Pollution Control Board	12 th April, 2016	Environmental Pollution and Control
Prof. S.K Sharma	Prof. at PU Chandigarh	06 th Oct., 2016	Statistical Techniques using SPSS

13. Percentage of classes taken by temporary faculty-programme -wise information

Years	Programs	% of load taken by Ad-hoc / contract faculty
2010-11	Certificate	86
	Diploma	59
	Degree	35
2011-12	Certificate	85
	Diploma	60
	Degree	35
2012-13	Certificate	78
	Diploma	46
	Degree	39
2013-14	Certificate	60
	Diploma	65
	Degree	25
2014-15	Certificate	42
	Diploma	59
	ICD (1 st yr. Only)	100
	Degree	12
	PG	Nil
2015-16	ICD (1 st & 2 nd yr. Only)	60
	Diploma	73
	Degree	14

	PG	Nil
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14. Programme-wise student Teacher Ratio

Years	Programs	Student-teacher ratio	Average
2010-11	Certificate	21.6	21.7
	Diploma	21.6	
	Degree	21.8	
2011-12	Certificate	21.6	21.7
	Diploma	21.6	
	Degree	21.8	
2012-13	Certificate	21.6	21.7
	Diploma	21.6	
	Degree	21.8	
2013-14	Certificate	21.6	21.7
	Diploma	21.6	
	Degree	21.8	
2014-15	ICD	28.3	22.0
	Certificate	21.6	
	Diploma	16.2	
	Degree	28.3	
	PG	15.6	
2015-16	ICD	29.7	19.3
	Diploma	10.8	
	Degree	21.1	
	PG	15.6	

15. Number of academic support staff (technical) and administrative staff: Sanctioned filled and actual.

Year 2010-11

	Filled		Actual
	Regular	Adhoc/contract	
Sr. Technician	01	Nil	01
Technician	01	5	06
Lab Attendant	01	Nil	01
Office clerk	01	Nil	01
M.T.S.	02	Nil	02

Year 2011-12

	Filled		Actual
	Regular	Adhoc/contract	
Sr. Technician	02	Nil	02
Technician	01	03	04
Lab Attendant	01	Nil	01
Office clerk	01	Nil	01
M.T.S.	02	Nil	02

Year 2012-13

	Filled		Actual
	Regular	Adhoc/contract	
Sr. Technician	02	Nil	02
Technician	01	03	04
Lab Attendant	01	Nil	01
Office clerk	01	Nil	01
M.T.S.	01	Nil	01

Year 2013-14

	Filled		Actual
	Regular	Adhoc/contract	
Sr. Technician	02	Nil	02
Technician	01	02	03
Lab Attendant	01	Nil	01
Office clerk	01	Nil	01
M.T.S.	01	Nil	01

Year 2014-15

	Filled		Actual
	Regular	Adhoc/contract	
Sr. Technician	02	Nil	02
Technician	01	04	05
Lab Attendant	01	Nil	01
Office clerk	01	Nil	01
M.T.S.	01	Nil	01

Year 2015-16

	Filled		Actual
	Regular	Adhoc/contract	
Sr. Technician	02	Nil	02
Technician	01	04	05
Lab Attendant	01	Nil	01
Office clerk	01	Nil	01
M.T.S.	01	Nil	01

16. Research thrust areas as recognized by major funding agencies

- Electro-chemical process
- Polymer composites
- Polymer testing and Characterization

17. Number of faculties with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project -wise.

Details of Research Projects Completed/ Ongoing

Name of Investigator	Title of the Project	During Year	Amount Sanctioned (Rs. in lacs)	Funding Agency
Dr. Vinay Kumar	Mechanical Properties of Rice husk Polypropylene (PP) Composites	2009-12	9.90	AICTE
Dr. Vinay Kumar	Modernization of Polymer Testing & Characterization lab	2012-13	12.20	AICTE
Dr. H.R Ghatak	Synthesis of Value added organic chemicals by Electrolytic oxidation of Soda Agro-Residue Black liquor	2014-17	11.37	CSIR

18. Inter-institutional collaborative projects and associated grants received

a) National Collaboration b) International Collaboration

NA

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE;DBT, ICSSR, AICTE, etc ; Total grants received.

AICTE - Rs. 22.10 Lacs

CSIR - Rs. 11.37 Lacs

20. Research facility/centre with

State recognition

National recognition

International recognition

NA

21. Special research laboratories sponsored by/created by industry or corporate bodies

NA

22. Publications:

Sr.No	Faculty Name	Year	Publications										
			Numbers of papers published in peer reviewed journals (national / inter)	Mono graph	Chapters in books	Edited Book	Books with ISBN with details of publishers	N0s listed in International Database	Citation Index-range /average	SNIP	SJR	Impact Factor-range/average	h-index
1	Dr. Pushpa Jha	2010-11											
		2011-12	03									0.144-0.15 Avg. = 0.147	
		2012-13	01									0.076	
		2013-14											
		2014-15	02									0.35-0.9 Avg. = 0.625	
		2015-16											
2	Dr. Kamlesh Kumari	2010-11	02			01	Nova publishers (978-1-61728-831-9)					2.69	
		2011-12	01								0.913		
		2012-13	02			01	Pearson (978-81-317-8991-9)				0.355-2.784 Avg. = 1.570		
		2013-14	04								0.500-0.825 Avg. = 0.663		
		2014-15											
		2015-16											
3	Dr. H.R. Ghatak	2010-11	01					09 scopus		1.067	0.708	1.938	
		2011-12	01		01			11 scopus		3.109	3.120	6.798	
		2012-13						11 scopus					

		2013-14	01					12 scopus		1.707	1.064	3.449	
		2014-15	02					14 scopus		0.729-1.727 Avg. = 1.228	0.64-1.722 Avg. = 1.181	1.760-4.000 Avg. = 2.880	
		2015-16						14 scopus					7 scopus 8 google research
4	Dr. S.M. Ahuja	2010-11	02		1		CORP-000185					2.02	
		2011-12	01		1		978-93-80144-55-9						
		2012-13	01										
		2013-14											
		2014-15											
		2015-16	01										
5	Dr. Avinash Thakur	2010-11											
		2011-12											
		2012-13											
		2013-14											
		2014-15											
		2015-16											
6	Mr. G K Jawa	2010-11											
		2011-12											
		2012-13											
		2013-14											
		2014-15											
		2015-16											
7	Dr. A.S.K. Sinha	2010-11	02									0.144-1.613 Avg. = 0.879	

		2011-12	02									0.144	
		2012-13	01									0.82	
		2013-14	03									1.613	
		2014-15	01		01		Jeju, South korea (978-981- 09-6150-3)					0.144	
		2015-16											
8	Mr. N.K. Kaushley	2010-11											
		2011-12											
		2012-13											
		2013-14											
		2014-15											
		2015-16											
9	Ms. Subita Bhagat	2010-11											
		2011-12											
		2012-13											
		2013-14											
		2014-15											
		2015-16											
10	Mr. Vinod Kr Meena	2010-11											
		2011-12											
		2012-13											
		2013-14											
		2014-15											
		2015-16	01										6.01
11	Dr. Vinay Kumar	2010-11	03			01	978938001 2100 Studium press, New Delhi					0.89	
		2011-12	02			01	978380012					1.23	

							Studium press, New Delhi						
		2012-13	01									0.63	
		2013-14	02									1.29	
		2014-15	01									0.3	
		2015-16											
12	Dr. Nikhil Prakash	2010-11											
		2011-12	01			01	WILEY- Scrivener (97811181 64792)						
		2012-13	01										
		2013-14				01	WILEY- Scrivener publisher		01				01 google researc h
		2014-15											
		2015-16											
13	Dr. Amit Rai	2010-11											
		2011-12											
		2012-13											
		2013-14	01									2.980	
		2014-15	01						11			3.758	
		2015-16	04						29			3.50	03

23. Details of patents and income generated

Patents Granted	Prof. H.R.Ghatak : “Process for large scale hydrogen production from renewable sources”. (Indian patent No. 261567).
Income	NIL

24. Areas of consultancy and income generated

Name of Faculty	Consultancy detail	Income generated
Prof. H.R. Ghatak	Regeneration of Green Acid in collaboration with IOL Chemicals and Pharmaceuticals Ltd. Barnala, India. Concept demonstration and bench scale success was established.	Rs. 40,000

25. Faculty selected nationally/internationally to visit laboratories/institutions in India and abroad

Nil

26. Faculty serving in

a) National committees b) International committees c) Editorial Boards d) any other (please Specify)

S. No.	Name of Faculty	Activity Details
1.	Prof. S.M. Ahuja	Expert member of District level Environment Impact assessment committee constituted by Divisional Commissioner Patiala (from 20.01.2016 to 20.1.2019)
2.	Prof. S.M. Ahuja	Expert member, of a committee Constituted by Chairman Punjab pollution Control Board to conduct a detailed study in a practical environment to examine the aspect of health hazard for the workers / labourers engaged in storing / handling / loading of rice husk in the prescribed closed room type enclosure. (19.10.2012)
3.	Prof. S.M. Ahuja	Member of working group Constituted by Secretary , Department of science Technology and Non-Conventional Energy, Punjab for carrying out “ techno-Economic feasibility study for pollution abatement of dry rice shellers.(14.09.2011)
4.	Prof. H.R.Ghatak	Expert member for District Level Expert Appraisal committee (DEAC) committee constituted by Divisional Commissioner Patiala (from 20.01.2016 to 20.1.2019)

27. Faculty recharging strategies (UGC, ASC, Refresher/ orientation programs, workshops, training programs and similar programs).

Sr. No.	Name of Faculty	Post	Recharging Strategies	Name	Duration (Days)	Date	Location
1	Dr. Pushpa Jha	Professor	STC	Product and process Optimization Using designed Experiments	3 days	March 18-20, 2016	IIT, Delhi
			International Conference	CHEMCON 2015	4 days	Dec 27- 30, 2015	IIT, Guwahati
				Thermodynamics analysis of Model separation process	5 days	Nov 24-28,2014	IIT, Madras
			Conference	CHEMCON-2013	4 days	Dec 27,30 2013	ICT,Mumbai
			International Conference	Application of Agro-Residues for Phenol Removal from Effluents.	2 days	March 30-31, 2012	GNITC, Ibrahimpatnum
			International Conference	Characterization of Agro-Residue for Thermo-chemical Applications	4 days	Sept. 10-13, 2012	Porto, Portugal

			National Conference	Application of Babool for sorption of phenol from aqueous solutions	3 days	Dec. 28-30, 2011	MSRIT, Bangalore
			National Conference	Proceeding of Advances in Chemical Engineering	2 days	Feb 27-28, 2011	Thapar Univ. Patilala
			National Conference	Biodiesel Research and future Trends	02	Feb 27-28, 2011	Thapar University, Patiala
			International Conference	Design & Fabrication of briquetting machine for Saw Dust	03	Dec 13-15, 2010	USM, Penang, Malaysia
			International Conference	Environment	3 days	Dec. 13-15 ,2010	Malaysia
			International Conference	Advanced Renewable Energy sources	3 days	Jun 24-26, 2010	NIT, Bhopal
			Conference	Thermo-Chemical Characterization of agro residues for its effective utilization as a source of renewable energy	03	June 24-26, 2010	NIT, Bhopal
2	Dr. Kamlesh Kumari	Professor	Short Term Course	Personality Development	05	January 13-17, 2014	NITTTR, Chandigarh

Conference	National Conference on Advanced Materials and Radiation Physics (AMRP-2013)	02	November 22-23, 2013	SLIET, Longowal
International Conference	"Frontiers in Nanoscience, Nanotechnology and Applications" NanoSci Tech-2012	4 days	Feb. 15-18, 2012	PU Chandigarh
National Conference	Waste Management and Recycling (WMR - 2011)	2 days	Dec. 9-10, 2011	SLIET, Longowal
National Conference	Advanced Materials and Radiation Physics (AMRP-2011)	2 days	Nov 4-5, 2011	SLIET, Longowal
National Conference	Synthesis and characterization of nanocomposite materials from recycled PET	02	Feb 27-28, 2011	Thapar University, Patiala
National	Recent Advances in computational techniques in electrical engineering	02	Feb 25,26, 2011	SLIET, Longowal
National Conference	Sangeeta Sharma, and Dhiraj Sud, Decolourization of Synthetic dyes containing wastewater employing agriculture Biomass	03	Feb 7-9,2011	SLIET, Longowal
National Conference	Three Plate Mould Manufactured for Starch/Chitosan tablets	03	Feb 7-9, 2011	Sliet, Longowal
International conference	Synthesis and characterization of cross linked blends of chitosan-starch	02	November 26-27, 2010	Panjab University, Chandigarh
International Conference	Polymer Science and Engineering	2 days	Nov 26-27 2010	PU Chandigarh
	Wireless & Wi-Max issues:Present Scenario	12 days	July 5-16, 2010	SLIET, Longowal
				Chandigarh

				Solution for Current Analytical Challenges	1 day	23 April	
3	Dr. S. M Ahuja	Professor	International Conference	Common Problems in the Industrial Cyclone Separators and Other Related Equipment CHEMCON-2014	4 days	Dec 27-30, 2014	PU Chandigarh
			National Conference	" A Practical Solution for reducing Rice husk Consumption in the Furnaces of Rice-Shellers" (WMR-2011)	2 days	Dec. 9-10, 2011	SLIET, Longowal
			International Conference	Chemical and Molecular Engineering	3 days	Jan 15-17, 2012	Zurich, Switerland
			National Conference	Energy Saving opportunities in Steel Reheating Furnaces (AMEE-2012)	2 days	Jan 6-7, 2012	SLIET, Longowal

			STC	Soft Computing in Process and Product Optimization	5 days	Feb 6-10, 2012	SLIET, Longowal
			National Conference	Need for Automation in Re-rolling mills,	2 days	Feb4-5, 2011	SLIET, Longowal
				Proceeding of Advances in Chemical Engineering	2 days	Feb 27-28, 2011	Thapar Univ. Patilala
				Energy Conservation in Re-heating furnaces	3 days	Feb 7-9, 2011	SLIET, Longowal
4	Dr. Avinash Thaur	Associate Prof.	National Conference	IICHe i.e. CHEMCON-2011	3 days	Dec 27-29, 2011	Banglore
5	Sh. G.K Jawa	Associate Prof.	Short Term Course	Entrepreneur & soft skills organized	05 days	18-22 March 2014	SLIET, Longowal

			National Conference	IChE i.e. CHEMCON-2011	3 days	Dec 27-29, 2011	Banglore
			National Conference	Advances in Mechanical Engineering Energy and Environment (AMEEE-2012)	2 days	Feb 6-7 2012	SLIET, Longowal
			National Conference	Waste Management and Recycling (WMR - 2011)	2 days	Dec. 9-10, 2011	SLIET, Longowal
			National Conference	Introduction to Research Methology	10 days	June 25-July 04, 2012	NITTTR, Chandigarh
6	Dr. Vinay Kumar	AP	International Conference	Effect of Mesh size of wood flour & Mg on Mechanical properties of wood flour based polypropylene (WFPP) composites	3 days	Oct 11-13, 2014	Mahatma Gandhi University, Kottayam, Kerala
			Conference	Effect of Mesh Size of Wood Flour on Mechanical Properties of Wood Flour Polypropylene (WFPP) Composites		February 19-21 , 2014	APA14, New Delhi
			STC	Advanced Techniques in Micro Structural Characterization		Dec 26-30, 2012	IIT Roorkee
			STC	Innovation in maintenance Management	5 days	May 21-25, 2012	IIT, Delhi
			International Conference	Advancement in Polymeric materials APM-2011	03	March 25,27 2011	CIPET, Chennai
			Nano-	5 days	May 11-15,	North Maharastra	

			Technology		2011	Unv. Jalgaon	
			National Conference	Recent Advance in Polymers	03	August 17-18 2010	MIT, Aurangabad
7	Dr. ASK Sinha	AP	International Conference	Analysis of pulverized coal fly ash particle size, density and structure for use as wet end fillers in rice straw based paper”	12 days	April,2014	Mahatma Gandhi University, Kottayam, Kerala
			International congress of environmental research (ICER-13)	Study of Manufacturing of Composite Using Old newspaper Sheets and Phenol Formaldehyde Resin		December 2013	Maulana Azad College, Aurangabad, Maharashtra, India
			Conference	Production of furfural and lignin as by product from rice straw using catalyzed acetic acid pulping for production of cellulosic fibres for paper industries		March 2011	IICHE Kochi
8	Mr. V.K Meena		STC	Soft Computing in process & Product Optimization(SCPPO-2012)	5 days	Feb.6-10,2012	SLIET, Longowal
				Modeling Simulation of manufacturing and dynamical system	5 days	Jan 3-7 2011	SLIET, Longowal
9.	Ms Subita Bhagat	AP		Synthesis & Characterization of TiO ₂ reinforced epoxy composites	3 days	Nov 1-3, 2014	Asian Plant Science, Lumbini, Nepal
				Effect of filler parameter on Microstructure and Mechanical properties of TiO ₂ reinforced epoxy composites	3 days	Feb 19-21, 2014	Asian Polymer Assosiation-2014 IIT-Delhi
10.	Dr. Nikhil Prakash	AP	International Conference	Propylene Polymerization with Metallocene/ Methylaluminoxane Catalysts: Mechanisms, Modeling and	5 days	Oct 28 - Nov 2, 2014,	Hilton, Atlanta, USA

				Simulation			
			International Conference	Kinetic Modeling of Propylene Polymerization with Me ₂ Si [Ind] ₂ ZrCl ₂ /MAO Catalyst System	5 days	Oct 28 - Nov 2, 2014,	Hilton, Atlanta, USA

28. Students projects
- Percentage of students who have done in-house projects including interdepartmental projects **100%**.
 - Percentage of students doing projects in collaboration with other universities/ industry /institute.
Nil
29. Award/Recognitions received at the national and international level by
- Faculty:
 - Prof. H.R. Ghatak had been awarded with ‘Certificate of Merit’ for invention “Process for large scale hydrogen production from renewable sources” and subsequent grant of patent.
(Awarded by SLIET, Longowal in the year 2016)
 - Doctoral/ post doctoral fellows: **Nil**
 - Students:
 - Neha, GCT/ 11 has secured Third position in TECHNICHE-2.0 under **The Institute of Engineers (India)**, SLIET Student Chapter during 2011-2012
 - Ravi Kumar Verma, GCT/114145 won **First prize** in paper presentation on **Photo Bioreactor** in Techfest -2013 held at SLIET, Longowal
 - Ashish Chauhan, GCT/ 114152 won **Second prize** in paper presentation in Techfest -2013 held at SLIET, Longowal
 - Preeti Prabha, GCT/115102 won **Third prize** in paper and Poster presentation during Techfest -2013 held at SLIET, Longowal
 - Devender Singh, GCT/ 114148 won **Second prize** in **Model Making on Absorption of Heavy Metal Ions** in Techfest -2013 held at SLIET, Longowal
 - Devender Singh, GCT/ 114148 won **Second prize** in **Model Making on Absorption of Heavy Metal Ions** in Techfest -2013 held at SLIET, Longowal
 - Anushikha, GCT/115106, has won **Third prize** in **Departmental Technique** held during Techfest- 2013
 - Neha, GCT/115109 has won **Third prize** in **Departmental Technical Event (Sudoku)** held during Techfest- 2013.
 - Preeti Prabha, GCT/11 won **Third prize** in paper and Poster presentation during Techfest - 2012 held at SLIET, Longowal
 - Abhishek Pandey, GCT/11 won **Third prize** in paper presentation in Techfest -2012 held at SLIET, Longowal
 - Kamlesh Kumar, GCT/ 11 won **Second prize** in Technical Quiz in Techfest -2012 held at SLIET, Longowal
 - Subhashini, GCT/103230, has won **Third prize** in **Coalescence Technical Event** held during Techfest- 2012
 - Anushikha, GCT/115106 and Somya GCT/115104 have won **Second prize** in **poster presentation** held during Techfest- 2012

- Swati raj, GCT/123113, has won Third prize in poster presentation (**Science & Tech**) held during Techfest-2013.
- Madhu kumari, GCT/123127, has won Third prize in poster presentation (**Science & Tech**) held during Techfest-2013.
- Madhu, GCT/123126, has won **Second** prize in **musical chair (informal events)** held during Techfest-2013.
- Vishavjeet keshav, GCT/123009, has won **Second** prize in **Choreography-cultural** held during Techfest-2013.
- Vishavjeet Vijeta patel has won **Second** prize in **mastermind challenge** held during Techfest-2013.
- Vishavjeet Vijeta patel, has won **First** prize in **seminar and workshop committee (general science quiz)** Held during Techfest-2013.
- Vishavjeet Vijeta patel has won **First** prize in **aptica** held during Techfest-2013.
- Suraj raj (GCT/103227), has won **Third** prize in **western group dance (cultural)** held during Techfest-2013.
- Geetanjali Thakur (GCT/123125), has won **Third** prize in **tug of war (informal event)** held during Techfest-2013.
- Priya kumari, has won **First** prize in inter-engineering deemed universities **chess Tournament** organized by PEC university of education, Chandigarh on 16th and 17th September, 2012.
- Manisha Thakur (GCT/103240) has got **Third** position in inter technology university **badminton (girls) tournament** organised by Dr.B.R.ambedkar institute of technology, jalandhar from 16-17 September, 2012.
- Neelam has won **First** prize in best out of waste event organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13.
- Madhu kumari (GCT/123127) has won **Third** prize in multimedia quiz organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13.
- Swati raj (GCT/123113) has won **Second** prize in multimedia quiz organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13.
- Swati raj (GCT/123113) has won **Second** prize in best out of waste event organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13
- Manisha Thakur (GCT/103240) has secured **First** position in **the volleyball (SLIET OPEN)** event during academic session 2012-13.
- Geetanjali thakur (GCT/123125) has secured **First** position in the **volleyball (SLIET OPEN)** event during academic session 2012-13.
- Priya kumari (GCT/103251) has secured **Second** position in **chess (SLIET OPEN)** event during academic session 2012-1

30. Seminars/ Conferences/ Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.

S. No	Year	Name of the event organised	Program Coordinator	Funding Agency
1.	06 Oct, 2016	One Day workshop on Statistical Techniques using SPSS	G K Jawa/ Avinash Thakur	TEQIP-II

2.	Sept. 22-23, 2016	National Seminar on Chemical Industry in India - Opportunities and Challenges (CIIOC-2016)	G K Jawa/ Avinash Thakur	TEQIP-II
3.	Dec. 9-10, 2011	National Conference on Waste Management and Recycling (WMR-2011)	Dr. Pushpa Jha	SLIET
4.	Feb. 5-6, 2010	National Seminar on Chemical Industry in India - Opportunities and Challenges (CIIOC-2010)	G K Jawa/ Avinash Thakur	SLIET

31. Code of ethics for research followed by the departments:

The department is very particular about active research and encourages its students and faculty members to maintain high standards in the research. In order to carry forward the legacy of the department, different tools for checking the plagiarism are used to ensure the quality and originality of the research work. The benchmarks are taken into consideration as per Thomson Reuters, Scopus etc. for publication in good impact factor journals. The students and the faculty members of the department are encouraged to carry out the research for betterment for the society and development of nation in particular in the responsible manner.

32. Student profile programme-wise:

Name of the Programme (refer to question no.4)	Applications received	Selected		Pass Percentage	
		Male	Female	Male	Female
CPPT-10	47	39	08	21	88
DCT-10	46	31	15	90	100
GCT-10	51	41	10	51.2	70
GCT(P)-10	28	20	08	35	Zero
Ph.D - 10	01	Zero	01	---	---
CPPT-11	47	32	15	9.37	6.66
DCT-11	38	33	05	90.9	100
GCT-11	49	36	13	61.1	92.3
GCT(P)-11	43	37	06	24.3	50
PG POL-11	03	02	01	100	100

CPPT-12	45	36	09	41.6	88.8
DCT-12	31	23	08	56.5	87.5
GCT-12	49	34	15	85.3	93.3
GCT(P)-12	35	28	07	71.4	85.7
CPPT-13	22	15	07	20	14.3
DCT-13	30	23	07	95.6	85.7
GCT-13	48	42	06	76.2	66.6
GCT(P)-13	16	14	02	35.7	50
DCT-14	22	13	09	84.6	100
ICD-14	45	36	09	-	-
GCT-14(3Y)	37	30	07	-	-
GCT-14(4Y) (Direct + LEET)	61	51	10	-	-
PGCE-14	08	06	02	100	100
ICD-15	52	46	06	-	-
GCT-15(4Y) (Direct + LEET)	53	34	19	-	-
ICD-16	61	48	13	-	-
GCT-16	11	07	04	-	-
Ph. D-16	02	02	-	-	-

33. Diversity of students

Name of the programme(refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
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CPPT-11	NIL	74.46	25.53	NIL
DCT-11	21.05	71.05	28.94	NIL
GCT-11	26.53	30.61	69.38	NIL
GCT(P)-11	18.60	53.48	46.51	NIL
PG POL-11	NIL	33.3	66.6	NIL
CPPT-12	NIL	8.88	91.11	NIL
DCT-12	45.16	83.87	16.12	NIL
GCT-12	26.53	30.61	69.38	NIL
GCT(P)-12	25.71	31.42	68.57	NIL
CPPT-13	NIL	27.27	72.72	NIL
DCT-13	33.3	56.7	43.3	NIL
GCT-13	27.08	41.66	58.33	NIL
GCT(P)-13	18.75	31.25	68.75	NIL
DCT-14	100	9.0	91.0	NIL
PGCE-14	12.5	12.5	8.8	NIL

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

Year	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
No of Students who qualified NET	N/A					
SET	Nil	Nil	Nil	Nil	Nil	Nil
GATE	Nil	05	05	07	06	03

35. Students progression

Year	% in 2010-11	% in 2011-12	% in 2012-13	% in 2013-14	% in 2014-15	% in 2015-16
UG to PG	21%	11%	10%	10%	19%	9%
PG to Ph.D	Nil	Nil	Nil	Nil	Nil	38%
Ph.D to Post-Doctoral	Nil	Nil	Nil	Nil	Nil	Nil
Employed (Campus Selection)	31%	22%	22%	23%	16%	Nil
Employed (Other than Campus Selection)	48%	67%	47%	53%	23%	36%
Entrepreneurs	Nil	Nil	Nil	4%	Nil	Nil

36. Diversity of staff

Percentage of faculty who are graduates		
	B.E./B.Tech.	M.Tech. / Ph.D.
of the same university	Nil	23%
from other universities within the State	7.7%	46%
from universities from other States	92.3%	31%
from universities outside the country	Nil	Nil

37. Number of faculty who were awarded M. Phil, Ph.D., D.Sc. and D.Litt. during the assessment period.: **06**

Name of the faculty	Degree Awarded	Year
Dr. H.R Ghatak	Ph.D.	2011
Dr. Avinash Thakur	Ph.D.	2015
Dr. ASK Sinha	Ph.D.	2015
Dr. Nikhil Prakash	Ph.D.	2014
Dr. Vinay Kumar	Ph.D.	2012
Dr. Amit Rai	Ph.D.	2015

38. Present details of department infrastructural facilities with regard to

a) Library:

The department has its own Library for Chemical Engineering students, A number of text books, reference books, hand books and monographs are available in the Departmental Library.

b) Internet facilities for staff and students **Yes**

c) Total number of class rooms **10**

d) Class rooms with ICT facility **03**

e) Students laboratories **10**

f) Research laboratories **04**

S. No	Name of Laboratories	Name of Equipment's
1	Fluid & Particle Mechanics Lab	Rotary Vacuum Filter, Fluidized Bed Apparatus, Jaw crusher, Cyclone Separator, Stoke Law, Pipe fitting Apparatus, Friction in pipe Apparatus, Sieve shaker, Ball mill, Filter press, Centrifuge, Analytical balance, Bernoulli's Apparatus, Red wood Apparatus, Venturi meter & Notches Setup, Solid handling Bench wise, Aquoin self-contained Apparatus, Sedimentation
2	CRE & Thermodynamics	Muffle Furnace, Hot Air Oven, Isothermal CSTR, Cascade CSTR, Isothermal Plug flow reactor, Isothermal batch Reactor, Isothermal semi batch reactor, Adiabatic Batch Reactor, Packed bed reactor, Combined flow reactor, Electronic Balance, Shaking cum BOD incubator, pH Meter, Electronic balance, (Shimadzu Make)
3	Polymer processing Lab	Hydraulic press, Rotational moulding machine, Semi-automatic vacuum forming machine, Automatic injection moulding, Cutting machine, Melt flow index, Two Roll mill(2), Tablet making machine, Hand operated injection moulding, Hand compression moulding, Hand blow moulding, Digital pH, Izod impact tester, High vacuum pump, Brook field dial viscometer, Top loaded single pan digital balance, Balance triple beam, Vernier calliper, Water still, Grease gun, Mini drafter.
4	Heat & Mass Transfer Lab	Thermal conductivity, , Emissivity measurement, Stefan Boltzmann, Unsteady state heat transfer, Heat transfer in forced convection, heat transfer through lagged pipe, Shell & tube heat exchanger, Bubble cap distillation, Humidification & dehumidification, Heat transfer in natural convection, Thermal conductivity of Liquids,
5	Paper Tech. Lab	Lab research digester, Lab beater, Lab sheet former, Lab sheet press, Lab sheet dryer, Bayer Mcnettfiber

		classifier, Pulp disintegrator, Hot air oven, Muffle furnace, Microfiber projector, Vibrating strainer, Brookfield viscometer, Electronic balance. Folding endurance tester, teasing tester, Gloss meter, Burst tester, Paper incinerator, SPS tester, Cobb tester, Calliper meter, Quadrant Scale, Reflectance mete3
6	Chemical Technology Lab	Muffle furnace(2), Hot air oven, Water Bath, Water bath, Flash point App, Magnetic stirrer with hot plate(4) , Water still, Cylinder Oxygen, Cylinder Nitrogen, Flask shaker, Hot plate(2), Melting point, Vacuum pump, Microscope, Electronics balance, Analytical Balance(4), Advance Autoclave(2), Stop watch
7	Process Dynamic & Control lab	Study of IP to PI convertor, First order system, Second order System, Control valve characteristics, Air purge system, Interacting& non Interacting system
8	Polymer Testing lab	Impact tester, Hot air oven (2), Tensile testing machine (2), Limiting oxygen index, Abrasion tester, Environmental stress cracking resistance tester, Hardness tester (2), Magnetic stirrer with hot plate, Low temp brittleness tester, Muffle furnace, Melt flow index, Cylinder Nitrogen (2), Electronics Balance, Dhona Balance.
9	Computer Lab	Workstation HP(5), Computer Linovo(17), Computer HP(9), UPS(2), Interactive board Globus(1), Projector Globus(1),Printer HP(3), D link WiFi(1), Server(1), CAD CAM software, Computer Acer (2), 24 Port hub(1),16 Port hub(1),
10	Energy Lab	Cloud & Pour point Apparatus, Bomb calorimeter
11	Hi-Tech Lab/Research Lab-I	Tablet coating pan, Hot air oven, Universal Hot air oven, Multipurpose high pressure reactor, Constant temp oil bath, pH/mv meter, Rotary vacuum evaporator, Dissolution rate test Equipment, Heat deflection temp, Constant temp bath, Magnetic stirrer with hot plate (4), Refrigerator (2), Cylinder Argon, Cylinder Nitrogen,

		Kjeldha distillation & digestion combined, Electronics balance, Refractometer (2), Binary microscope, High performance liquid chromatography.
12	Environmental/ Research Lab-II	UV spectrophotometer, Millipore water purifier, Hot air oven, Digital bomb calorimeter, Refrigerator, BOD incubator, Cylinder Nitrogen(1), Cylinder oxygen(1), Grade 1 nitrogen cylinder (1), Grade 1 zero air cylinder, Grade 1 Hydrogen cylinder, Gas chromatograph, pH meter, Water analyser kit, COD kit, Evaporator app, Microscope, melting point app., Peristatic pump, Ion Exchanger tester, Particle size Analyser, Galvanostat potentiometer, Ion Exchanger tester (ORION Dual Star pH/ISE Benchtop) Particle size Analyser, Electronic balance (Shimazdu Make)
13	Research Lab - III	Fermenter, UV-VIS Spectrophotometer, VLE
14	Research Lab - IV	Portable Biodiesel Plant

39. List of doctoral, post-doctoral students and Research Associates

(a) from the host institution/University

Sr.No.	Name of Research scholar	Status
1	Dr.H.R.Ghatak	Completed in 2011(Part-Time)
2	Dr.Avinash Thakur	Completed in 2014(Part-Time)
3	Dr.Virpal Singh	Completed in 2015(Regular)
4	Mr.Bhajan Dass	Pursuing (Regular) Thesis Submitted
5	Ms.Subita Bhagat	Pursuing (Part-Time)
6	Dr.A.S.K.Sinha	Completed in 2015(Part-Time)
7	Mr.V.K.Meena	Pursuing (Part-Time)
8	Mr.Pawan Kumar	Pursuing (Part-Time)
9	Ms.Navneet Kaur	Pursuing (Part-Time)
10	Mr.G.K.Jawa	Pursuing (Part-Time)
11	Mr.Kaleem Ahmad	Pursuing (Regular)
12	Mr.Anil Kumar	Pursuing (Regular)
13	Mr.Sandeep Singh	Pursuing (Part-Time)
14	Mr.Sandeep Tirpathi	Pursuing (Part-Time)
15	Dr.Ratanpal Singh	Completed in 2010 (Regular)

(b) from the other institutions/Universities

Sr.No.	Name of Research scholar	Status
1	Dr.Vinay Kumar	Completed in 2012(Part-Time)
2	Dr.Amit Rai	Completed in 2015(Part-Time)
3	Dr.Nikhil Prakash	Completed in 2014(Part-Time)

40. Number of post graduate students getting financial assistance from the university.

Class	During year	No. of Students
PG-14	2014-16	8

41. Was any need assessment exercise undertaken before the development of new programme(s)? if so, highlight the methodology.

It was observed that there was an immediate need to restructure the Certificate & Diploma course to ICD (Integrated Certificate - Diploma) course and 3 year B.E. programme to 4 year B.E. programme to make it competitive with the other leading institute in India. For this purpose, the methodology was adopted

- Feedback from the students, industry people, academic experts and alumni.
- Feedback from the departmental faculty
- Benchmarking the syllabus with other universities
- Discussion during the board of members (BoM) meetings

42. Does the department obtain feedback from

(a) Faculty or curriculum as well as teaching -learning-evaluation? If yes, how does the department utilize the feedback?

The department asked to all the faculty members to frequently review and modify the syllabus of each subject in accordance with the need of society and industries.

(b) Student on staff, curriculum and teaching -learning-evaluation and how does the department utilize the feedback?

The department had taken the feed-back from every student for every faculty and concern subjects at the end of each semester and the information had been shared with all faculty members to developed and/or modify the teaching methodology such as class room lecture, power point presentation, seminars etc.

(c) alumni and employers on the programmes offered and how does the department utilize the feedback?

The department stays in continuous contact with alumni & neighbouring industries to developed various elective subjects coherently.

43. List the distinguished alumni of the department (Maximum 10)

S. No.	Alumni Name	Designation	Company/ Organization
1	Vijay Singla	Executive Director	IOLCP, Barnala
2	Davinder Mittal	AGM (Operations)	HPCL-Mittal Energy Limited (HMEL)
3	Damandeep Singh	President	IOLCP, Barnala
4	Onkar Singh Viridi	Proprietor	Metro Environ Engineer's
5	Dr. Sushil Kr. Kansal	Professor	UICET, Panjab University, Chandigarh
6	Mr. Harinder Singh	SDO	Punjab Pollution Control Board
7	Dr. Ram Parkash Bharti	Associate Prof.	IIT, Roorkee
8	Sandeep Himalayan	Unit Head	Ramky Enviro Engineers Ltd., Chandigarh Area.
9	Kavinder Agarwal	General Manager	GCP Applied Technologies, Manesar
10	Ms. Shakreja	Asstt. Manager	Dorf Ketal, Mumbai

44. Give detail of student enrichment programmes (special lecture/workshop/seminar) involving external experts

➤ Expert Talks

Name	Designation	Date	Expert Talk on topic
Mr. Kamaljit Ghai	Manager Testing, CIPET Amritsar	30th April, 2015	Polymer composites and latest advancement.
Prof. KK Pant	Professor in IIT, Delhi (Chemical Engineering)	19th Feb, 2015	Catalytic Conversion of Biomass material to full & it's up gradation.
Mr. Yogesh Mann	DGM & head, UEM Pvt. Ltd. Noida	25th Sept. 2014	Waste water treatment, Recycle and Reuse with special focus on advanced biological technology
Mr. Davinder Mittal	AGM-Operations at HPCL-mittal Energy Ltd	06th Jan. 2016	Refinery Configurations
Mr. Gurbakhsish Singh Gill	SDO at Punjab Pollution Control Board	12th April, 2016	Environmental Pollution and Control

➤ Seminar/ workshop/Conference

Events	Date	Topic
One Day Workshop	06 Oct, 2016	Statistical Techniques using SPSS
National Seminar	Sept. 22-23, 2016	Chemical Industry in India - Opportunities and Challenges (CIIOC-2016)
National Conference	Dec. 9-10, 2011	Waste Management and Recycling (WMR-2011)
National Seminar	Feb. 5-6, 2010	Chemical Industry in India - Opportunities and Challenges (CIIOC-2010)

45. List the teaching methods adopted by the faculty for different programmes.

The faculty at SLIET University adopt a number of strategies for ensuring lifelong learning by the student. The methods adapted may be broadly enumerated as under

Class room discussion: Encouraging students to ask questions is a technique adopted by most teachers. When this is inadequate, the teachers start asking questions and elicit answers, thus improving class room participation.

Presentations by students: It ensures that some topics are prepared by students in smaller groups and (through their presentations and discussions) the material gets covered.

Tutorials: This is a problem solving activity where a teacher gets a smaller class and can observe individuals and smaller groups and help them to get over their difficulties.

Field Visits: Particularly useful for students of Diploma, UG and PG students. To give practical exposure to students about working culture and problem of industries.

Assignments: These are always helpful in getting the students to understand the fundamentals. Many faculty members give individual assignments to ensure that they are not copied from one another. Some faculty members also follow a method of asking questions from each student at the time of submission to ensure understanding.

Mentoring interested students to take up challenging projects and encouraging them to write papers for conferences etc is a very effective way to ensure lifelong learning.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- Internal exams are conducted on time and the results are published within a week. The college further ensures that the parents and guardians are informed of the results.
- Seminars which are mandatory under the University guidelines are conducted with an objective to help the critical thinking ability of students. Students are encouraged to discuss and debate rather than mere presentation of facts. A student who actively participates in discussions is awarded special marks.
- Assignments on various subjects are Attendance is taken in each session to ensure the best outcome in teaching-learning.

- A special programme to monitor the regularity of classes is introduced in the form of Log book entry where in the student registers the name of the professor along with the time during which the class is taken.

47. Highlight the participation of students and faculty in extension activities.

Paper/Poster presentation/ Model Making

1. Ravi Verma & Devinder Singh, GCT/11, participated in Paper Presentation in Technical Fest, **CYANIDE 2012 on Non-conventional Sources of Energy.**
2. Ashish Chauhan, GCT/11, participated in Paper Presentation in Indian Plastic Institute, Students Chapter on 28th August 2013, on the topic **Sustainable Plastic Development.**
3. Neha, GCT/ 11 has secured third position in TECHNICHE-2.0 under **The Institute of Engineers (India)**, SLIET Student Chapter during 2011-2012
4. Ravi Kumar Verma, GCT/114145 won **first prize** in paper presentation on **Photo Bioreactor** in Techfest -2013 held at SLIET, Longowal
5. Ashish Chauhan, GCT/ 114152 won **second prize** in paper presentation in Techfest -2013 held at SLIET, Longowal
6. Preeti Prabha, GCT/115102 won **third prize** in paper and Poster presentation during Techfest -2013 held at SLIET, Longowal
7. Devender Singh, GCT/ 114148 won **second prize** in **Model Making on Absorption of Heavy Metal Ions** in Techfest -2013 held at SLIET, Longowal
8. Devender Singh, GCT/ 114148 won **second prize** in **Model Making on Absorption of Heavy Metal Ions** in Techfest -2013 held at SLIET, Longowal
9. Anushikha, GCT/115106, has won 3rd prize in **Departmental Technique** held during Techfest- 2013
10. Neha, GCT/115109 has won 3rd prize in **Departmental Technical Event (Sudoku)** held during Techfest- 2013.
11. Preeti Prabha, GCT/11 won **third prize** in paper and Poster presentation during Techfest -2012 held at SLIET, Longowal
12. Abhishek Pandey, GCT/11 won **third prize** in paper presentation in Techfest -2012 held at SLIET, Longowal
13. Kamlesh Kumar, GCT/ 11 won **second prize** in Technical Quiz in Techfest -2012 held at SLIET, Longowal
14. Subhashini, GCT/103230, has won 3rd prize in **Coalescence Technical Event** held during Techfest- 2012
15. Anushikha, GCT/115106 and Somya GCT/115104 have won 2nd prize in **poster presentation** held during Techfest- 2012
16. Swati raj, GCT/123113, has won 3rd prize in poster presentation (**Science & Tech**) held during Techfest-2013.
17. Madhu kumari, GCT/123127, has won 3rd prize in poster presentation (**Science & Tech**) held during Techfest-2013.
18. Madhu, GCT/123126, has won 2nd prize in **musical chair (informal events)** held during Techfest-2013.
19. Vishavjeet keshav, GCT/123009, has won 3rd prize in **Choreography-cultural** held during Techfest-2013.
20. Vishavjeet Vijeta patel has won 2nd prize in **mastermind challenge** held during Techfest-2013.

21. Vishavjeet Vijeta patel, has won first prize in **seminar and workshop committee (general science quiz)** Held during Techfest-2013.
22. Vishavjeet Vijeta patel has won first prize in **aptica** held during Techfest-2013.
- Suraj raj (GCT/103227), has won 3rd prize in **western group dance (cultural)** held during Techfest-2013.
23. Geetanjali Thakur (GCT/123125), has won 3rd prize in **tug of war (informal event)** held during Techfest-2013.
24. Priya kumari, has won first prize in inter-engineering deemed universities **chess Tournament** organized by PEC university of education, Chandigarh on 16th and 17th September, 2012.
25. Manisha Thakur (GCT/103240) has got third position in inter technology university **badminton (girls) tournament** organised by Dr.B.R.ambedkar institute of technology, Jalandhar from 16-17 September, 2012.
26. Neelam has won 1st prize in best out of waste event organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13.
27. Madhu kumari (GCT/123127) has won 3rd prize in multimedia quiz organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13.
28. Swati raj (GCT/123113) has won 2nd prize in multimedia quiz organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13.
29. Swati raj (GCT/123113) has won 2nd prize in best out of waste event organised by team of **SLIET COMPUTER SOCIETY** in the session 2012-13
30. Manisha Thakur (GCT/103240) has secured 1st position in **the volleyball (SLIET OPEN)** event during academic session 2012-13.
31. Geetanjali thakur (GCT/123125) has secured 1st position in the **volleyball (SLIET OPEN)** event during academic session 2012-13.
32. Priya kumari (GCT/103251) has secured 2nd position in **chess (SLIET OPEN)** event during academic session 2012-13.

48. Give details of "beyond syllabus scholarly activity" of the department.

- Participation in NCC, NSS
- Participation in Paper and poster presentation in seminars
- Participation in sports like Cricket, Football, badminton, Volleyball, Chess etc
- Participation in Model making, Multimedia Quiz in Techfest
- Participation in cultural events like group dances, Bhangra, Choreography and Informal events like Tug of War.
- Membership and participation in Organisations like IChE, IE(I), ISTE etc.

49. State whether the programme/department is accredited/graded by other agencies? If yes, give details

Yes, Accredited by NBA in 2015 (B.E in 3 years)

50. Briefly highlight the contributions of the department in generation new knowledge, basic or applied.

- Department has actively involved in the multidisciplinary and emerging research area like Membrane Technology, Computational fluid dynamics, Supercritical fluid extraction, Energy Assessment & Audit.

- Department has also started to discuss the various nearby industry and enterprise for developing entrepreneurship skills among the students.

51. Detail five major Strengths, Weakness, Opportunities and Challenges (SWOC) of the department.

Strengths:

1. Good infrastructure (quality equipped labs/ instrumentation facility for the students and research, modern class rooms, audio-visual aids library etc.)
2. Well devised curriculum and syllabi.
3. Highly qualified and experienced faculty and staff.
4. Co-curricular/ extracurricular facilities like clubs, departmental societies, students chapters of IEI, IChE etc.
5. Cohesiveness and enthusiasm amongst faculty, staff & students towards academics, research and society
6. Good relationship with alumni, retention of faculty & staff etc.
7. Quality research work and rapport of faculty.

Weakness:

1. Inadequate exposure at industrial and international level (due to less opportunities and lack of collaboration with industries/ International universities being at remote location)
2. Research facilities need to be strengthened.
3. Scarcity of industry-institute partnership for research and consultancy activities.
4. Transportation facilities.

Opportunities:

1. Development of new research facilities together with industries and various funding agencies by submitting project proposals.
2. Entrepreneurial opportunities in the area /region.
3. New courses can be started in consideration with the existing and new industries in the surrounding area.
4. Scope of research in rural technologies for local as well as global needs.

Challenges:

1. Lack of appropriate projects of national/international level in the surrounding for collaborative work.
2. Lack of the industry in the region (to meet the research and teaching facilities with our counterparts, good industrial exposure to the students is required).
3. Student exposure related to up-coming technological advancement in India and outside India.
4. Transportation facilities and locational challenges.
5. Admitting high quality students.

52. Future plans of the department:

1. Setting up of new building of the department amounting to about Rs. 15 crore. It would be equipped with the latest state of the art technology and infrastructure of the department. The department has already submitted a proposal in this direction vide number SLIET/CHE/22 Dated 17.04.2015 to Dean (P& D) and is under active consideration of the institute.
2. Setting up Pilot Plant, workshop etc. of the department to enhance the Interaction with the Industry resulting in the form of Projects, consultancy and better placement of the students.
3. Setting up of technology Incubators.
4. Setting up of Centre of Excellence for Cleaner Productions and Energy Conservation
5. Starting M. Tech. (Chemical Engineering) part time.

Evaluative Report of the Department

1. Name of the Department : **Chemistry**
2. Year of establishment: **1991**
3. Is the Department part of a School/Faculty of the university? :- **Yes**
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):- **UG, PG, Ph.D**
5. Interdisciplinary programmes and departments involved :-**NIL**
6. Courses in collaboration with other universities, industries, foreign institutions, etc. :- **NIL**
7. Details of programmes discontinued, if any, with reasons :-**NIL**
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System : **Semester**
9. Participation of the department in the courses offered by other departments :- **Yes**
10. Number of teaching posts sanctioned, filled and actual (Professors/ Associate Professors/Asst. Professors/others) :- **Please refer to administrative department**

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor			
Associate Professors			
Asst. Professors			
Others			

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
B.K. Kanungo	PhD	Professor	Inorganic Chemistry	26	02
Dhiraj Sud	PhD	Professor	Inorganic Chemistry	26	04
Harish Kumar	PhD	Professor	Organic Chemistry	25	03
Ram Pal Chaudhary	PhD	Professor	Organic Chemistry	23	04
Damanjit Singh	PhD	Associate Professor	Organic Chemistry	23	NIL
Hemant Kumar	PhD	Assistant Professor	Organic Chemistry	11	NIL
Himanshu Rani	M.Phil	Assistant Professor	Organic Chemistry	3.5	NIL
Payal Malik	PhD	Assistant Professor	Organic Chemistry	03	NIL

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors :- **NIL**
13. Percentage of classes taken by temporary faculty – programme-wise information
UG : 25% PG : 12%
14. Programme-wise Student Teacher Ratio : **ICD:60/01 UG: 60/01**

Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual: **Please refer to administrative department**

15. Research thrust areas as recognized by major funding agencies :

- Supramolecular Chemistry
- Nanochemistry
- Computational Chemistry
- Heterocycle Chemistry
- Environmental Chemistry
- Inorganic Chemistry
- Organic Chemistry
- Green Chemistry

16. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise. : **N/A**
17. Inter-institutional collaborative projects and associated grants received
- a) National collaboration b) International collaboration with university of Bonn

18. Departmental projects funded by DST :-

Sr	Project Name	Agency	Year	Amount	Name of Investigator
1	Design of Novel Polydentate Chelators for Sensitization of Trivalent Europium and Terbium Luminiscence	DST	2012-15	45 Lacs	P.I .Prof B K. Kanungo CoInvestigators Prof Minali Baral & Prof Ram Pal chaudhary

19. Research facility / centre with

state recognition

national recognition

✓ international recognition

20. Special research laboratories sponsored by / created by industry or corporate bodies : **N/A**

21. Special research laboratories sponsored by / created by industry or corporate bodies : **N/A**

22. Publications:

Number of papers published in peer reviewed journals (national / international)	46
Monographs	NIL
Chapters in Books Edited Books	01
Books with ISBN with details of publishers	10:

	8173197849 Publisher: Narosa Publishing House
Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	46
Citation Index - range / average SNIP	1 to 33
SJR	
Impact Factor - range / average h-index	0 to 6

23. Details of patents and income generated :N/A

24. Areas of consultancy and income generated :N/A

25. Faculty selected nationally / internationally to visit other laboratories / institutions industries in India and abroad :N/A

26. Faculty serving in

- a) National committees :NIL
- b) International committees :NIL
- c) Editorial Boards :01
- d) any other (please specify) : BOS (01)

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).
:-Faculty members are regularly attending the Orientation, refresher courses and others lectures inside/outside university.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects :-100%
- percentage of students doing projects in collaboration with other universities / industry / institute :-13%

29. Awards / recognitions received at the national and international level by

- Faculty
- Doctoral / post doctoral fellows
- Students

:- ENCLOSED AS ANNEXURE-A

30. Seminars/ Conferences/Workshops organized and the source of funding (national / International) with details of outstanding participants, if any.

1. **NICS-16 (National Conference) UNDER TEQIP-II 21-22 Oct, 2016.**
2. **Workshop on Advanced fluorescence spectroscopy by department of Chemistry on 27-28 March, 2013.**

31. Code of ethics for research followed by the departments

:-Department strictly follows university guidelines.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
PG 2015 BATCH	Through JAM	09	06	On Going	On Going
PG 2016 BATCH	Through JAM	06	12	On Going	On Going

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
PG	NIL	33%	67%	NIL

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

NET - 2016: 01

35. Student progression

Student progression	Percentage against enrolled
UG to PG	NIL
PG to M.Phil.	NIL
PG to Ph.D.	2%
Ph.D. to Post-Doctoral	NIL
Employed	
<input type="checkbox"/> Campus selection	27%
<input type="checkbox"/> Other than campus recruitment	NIL
Entrepreneurs	NIL

36. Diversity of staff

Percentage of faculty who are graduates of the same university	NIL
From other universities within the State	03
From other States universities	05
outside the country	NIL

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period : **NONE**

38. Present details of departmental infrastructural facilities with regard to

- a) Library :-**YES**
- b) Internet facilities for staff and students :-**YES**
- c) Total number of class rooms : **Common for the institute**
- d) Class rooms with ICT facility : **NO**
- e) Students' laboratories : **04 Including computational Lab**
- f) Research laboratories : **02**

39. List of doctoral, post-doctoral students and Research Associates
- a) from the host institution/university :
 - b) from other institutions/universities :
:- **List of Doctoral students is enclosed herewith as Annexure-B**
40. Number of post graduate students getting financial assistance from the university:-
None
41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. **N/A**
42. Does the department obtain feedback from
- a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
:-**Yes suggestions of faculty members were incorporated in the syllabus revision.**
 - b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
:- **Genuine suggestions from the students were incorporated in the curriculum revision.**
 - c. alumni and employers on the programmes offered and how does the department utilize the feedback?
:- **Their feedback is well taken care off.**
43. List the distinguished alumni of the department (maximum 10) :**N/A**
44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
- Special lectures: Prof. N.R. Dhaamiwal, Pujabi university Patiala
- Workshops : On advance florescence spectroscopy (27-28 March, 2013)
- Seminar : Prof. B.K. Patel , IIT Guwahati
45. List the teaching methods adopted by the faculty for different programmes.
:- **Lecture by teacher, Class discussion, Groups discussion, Lecture-demonstration, Assignments, Power point presentation**

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
:-By conducting continuous evaluation of the students.
47. Highlight the participation of students and faculty in extension activities.
:-Participated in departmental lecture, conference and workshops.
48. Give details of “beyond syllabus scholarly activities” of the department.
:- Participation in conference, workshop and Faculty student interaction
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. :- N/A
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
:- The department has been involved in the multidisciplinary research.
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.
- The department is running Ph.D and PG courses since 2007**
 - All the faculty members are research orientated and working in the emerging multidisciplinary areas.**
 - Department lacks proper lab infrastructure, PG /smart classrooms.**
 - Department lacks sophisticated instrumentation facility.**
 - High student teacher ratio.**
52. Future plans of the department
- To introduce five year Integrated M.Sc course.**
 - For further strengthening of research, efforts will be taken towards building sophisticated instrumentation laboratory.**
 - Initiate industry -academic collaborative research.**
 - Emphasis will be on publishing research work in high impact factor journals.**

Annexure – A'

	Name of the Faculty	Name/s of Co-Authors	Title of paper	Title of Conference/Seminar	Organizing Institution	Venue	Dates of Conference/seminar
01	Professor, Dr. B.K. Kanungo		Design of Polydentate Chelates for Lanthanide Sensitization	7 th International Symposium on nano & supramolecular Chemistry (ISNSC)	Busan, South Korea	Busan, South Korea	Aug 14-17, 2015
02	Professor, Dr. Harish Chopra		Synthesis and characterization of chiral ionic liquids from natural precursors	45 th World Chemistry Congress (IUPAC-2015)	Busan, South Korea	Busan, South Korea	Aug 09-14 2015
	Professor, Dr. Dhiraj Sud		Synthesized Doped TiO ₂ photocatalyst for mineralization of Quinalphos from aqueous streams.	17 International Conference on Chemistry and Material Science	Zurich Switzerland	Zurich Switzerland	July 29-30 2015
	Prof, Dr. RamPal Chaudhary	Deepika Gautam and Poonam Gautam	“Regioselective Synthesis, X-ray and DFT studies of new Indazolyl-thiazole derivatives”	The 25 th ISHC Congress	University of California	Santa Barbara-CA, USA	Aug. 23-28, 2015
	Prof, Dr. RamPal Chaudhary		Synthetic, DFT and X-ray diffraction studies on new condensed thiazolidin-4-one derivatives	National conference On organic synthesis and catalysis (NCOSC-2016)	Guru Jambheshwar University of Science and Technology,	Hisar	February 17-18, 2016
	Prof, Dr. RamPal Chaudhary		Deepika Gautam and Poonam Gautam	Synthesis, structural characterization and biological studies of new benzo[<i>f</i>]thiazolo-quinazoline derivatives	International conference on Nascent developments in Chemical Sciences (NDCS-2015)	BITS, Pilani	Oct. 16-18, 2015

Annexure – B

Poster presented in conference : Mr. Ajay Sharma, RS (Dr. Damanjit Singh)

1. National Conference on NASCENT INNOVATIONS IN CHEMICAL SCIENCES (NICS-2016) October 21-22, 2016, Department of Chemistry, SLIET, Longowal, Sangrur (PB).

Best Poster Award

2. National Conference on Technologies in Sustainable Food System (TSFS-2016), 7-8, Oct, 2016, Department of Food Engineering and Technology, SLIET, Longowal, Sangrur (PB).

1st Prize In Poster Award

3. 17th CRSI National Symposium in Chemistry, February 6-8, 2015, CSIR-National Chemical Laboratory, Pune, India. (National)
4. 13th Eurasia Conference on Chemical Sciences, December 14-18, 2014, Indian Institute of Science, Bangalore, India. (International)
5. 4th Biennial International conference on New Developments in Drug Discovery from Natural Products and Traditional Medicines (DDNPTM, NIPER-2014), November 20-22, 2014. Department of Natural Products, National Institute of Pharmaceutical Education and Research (NIPER), Sector-67, SAS Nagar, Punjab. (International)
6. Mastering in Molecules and Materials (M³-2014), October 16-17, 2014, NIT Kurukshetra, Department of Chemistry. (National)

Poster presented in conference : Ms. Rohini Verma, RS (Dr. B.K. Kanungo)

1. The national conference on "M3-2014" organized by NIT Kurukshetra was attended and a paper was presented on poster. (Best poster Award)
2. *Fifty First Annual Convention of Chemists* Organized by Indian Chemical Society was attended and a paper was presented on oral 2014.
3. The national conference on "AMRP 2015" organized by SLIET Longowal and a paper was presented on poster
4. The national conference on "RACES 2015" was attended and a paper was presented on poster.

5. 8th National Seminar on “*New Paradigm in Chemical Sciences: Synthetic and Analytical Perspectives-2016*” organized by punjabi university patiala was attended and a paper was presented on poster.
6. *National Conference on Nascent Innovations in Chemical Science(NICS-16)* organized by sliet longowal was attended and a paper was presented in oral 2016.

Poster presented in conference : Mr. Avtar Singh, RS (Dr. Harish Kumar Chopra)

1. Professor R.C. Paul National Symposium on “INNOVATIONS IN CHEMICAL SCIENCES” held at P.U. Chandigarh on March 20-21, 2015.
2. 45th World Chemistry Congress held at Bexco, Busan, South Korea on Aug. 9-14, 2015.
3. International conference on Nascent Developments in Chemical Sciences (NDCS-2015) held at BITS, Pilani (Rajasthan) on October 16-18, 2015.
4. 19th Punjab Science Congress held at SUSCET, Tangori, Mohali on Feb. 7-9, 2016.
5. 8th National Conference on Recent Trends in Chemical and Environmental Sciences held at M.M. Modi College, Patiala on Feb. 19-20, 2016
6. 6th Conference on Current Trends in Drug Discovery and Research held at CSIR-CDRI, Lucknow on Feb. 25-28, 2016.
7. National Conference on Nascent Innovations in Chemical Sciences held at SLIET, Longowal on Oct. 21-22, 2016.

Annexure – C

Sr No.	Name of Students	Name of Supervisor	Host institute/Other university	Part time / Full time
1	Ajay Sharma	Dr. Damanjit Singh	Other university	Full time
2	Rohini Verma	Dr. B.K. Kanungo	Other university	Full time
3	Avtar Singh	Dr. Harish Kumar Chopra	Host institute	Full time
4	Nirmaljeet Kaur	Dr. Harish Kumar Chopra	Other university	Full time
5	Isha Jain	Dr. Payal Malik	Other university	Full time
6	Dibyjit Dash	Dr. B.K. Kanungo	Other university	Full time
7	Poonam Kumari	Dr. Damanjit Singh	Other university	Full time
8	Abhinandan	Dr. Dhiraj Sud	Other university	Part time
9	Simerpreet kaur	Dr. Damanjit Singh	Other university	Part time

Evaluative Report of the Department

1. Name of the Department: **Computer Science and Engineering**
2. Year of establishment: **1991**
3. Is the Department part of a School/Faculty of the university? **Yes**
4. Names of programmes offered:

Name of the Programme	Specialization	Duration
ICD (Integrated Certificate and Diploma)	DCS-CDE	3 yrs
BE	CSE	4 yrs
M. Tech.	CSE	2 yrs
Ph.D	CSE	Minimum 3yrs

5. Interdisciplinary programmes and departments involved:
At present department is not involved in any interdisciplinary programmes.
6. Courses in collaboration with other universities, industries, foreign institutions, etc.
At present CSE department is not offering any course in collaboration with other university, industries, foreign institutions etc.
7. Details of programmes discontinued, if any, with reasons:
 - **BE-Information Technology (3 Yrs programme)**
 - Due to start of four-year degree programme of Computer Science and Engineering
 - Increase in the intake of Computer Science and Engineering
 - **BE- Computer Science and Engineering (3 yrs programmes)**
 - Three years programme is discontinued due to start of 4 yrs degree Programmes in Computer Science and Engineering from the year 2014.
 - **Certificate (2 yrs) and Diploma (2 yrs) Programmes**
 - Certificate and Diploma programmes are discontinued due to the start of ICD (Integrated Certificate and Diploma Programmes) from the year 2014.
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester
9. Participation of the department in the courses offered by other departments:
Yes, department teaches the computer related courses offered by other departments.

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others):

Year:2011-12

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	3	NIL	NIL	NIL
Associate Professors	6	6	NIL	6
Assistant Professors	16	3	7	10
Others	-	-	9	9

Year:2012-13

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	3	NIL	NIL	NIL
Associate Professors	6	6	NIL	6
Assistant Professors	16	3	16	19
Others	-	-	-	-

Year:2013-14

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	3	NIL	NIL	NIL
Associate Professors	6	6	NIL	6
Assistant Professors	16	3	14	17
Others	-	-	-	-

Year:2014-15

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	3	NIL	NIL	NIL
Associate Professors	6	5	NIL	5
Assistant Professors	16	3	21	24
Others	-	-	-	-

Year:2015-16

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	3	NIL	NIL	NIL
Associate Professors	6	5	NIL	5
Assistant Professors	16	3	18	21
Others	-	-	-	-

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Faculty Profile

Sr No	Name	Qualification	Designation	Specialization	Experience	No. of M.Phil. / Ph.D. Students guided for last 4 years
1	Dr. Manoj Kumar Sachan	Ph.D.	Associate Professor	Pattern Recognition	24 years	2
2	Dr. Birmohan Singh	Ph.D.	Associate Professor	Medical Image Processing	24 years	--
3	Dr. Damanpreet Singh	Ph.D.	Associate Professor	Computer Networks, Optimization Techniques, Digital Signal Processing	19 years	--
4	Dr. Major Singh Goraya	Ph.D.	Associate Professor	Grid Computing, Cloud Computing	18 years	--
5	Mrs. Gurjinder Kaur	M.S. Pursuing Ph.D.	Associate Professor	Mobile Adhoc Networks	19 years	--
6	Mr. Manminder Singh	M.Tech, Pursuing Ph.D.	Assistant Professor	Image Processing	14 years	--
7	Mr. Jaspal Singh	M.E., Pursuing Ph.D.	Assistant Professor	Computer Networks	12 years	--
8	Dr. Vinod Kumar Verma	Ph.D.	Assistant Professor	Wireless Networks, Trust and Reputation System, Distributed Computing	11 years	--
9	Ms. Preetpal Kaur Buttar	M.Tech.	Assistant Professor	Pattern Recognition	3 years	--
10	Mr. Rahul Gautam	M.Tech.	Assistant Professor	Image Processing	3 years	--
11	Mr. Rahul Chandra	M.Tech	Assistant Professor	Data Mining, Database	1 year	--
12	Mr. Chandra Shekhar Yadav	M.Tech, Pursuing Ph.D.	Assistant Professor	Data Mining	6 months	--
13	Ms. Jaspreet Kaur	M. Tech.	Assistant Professor	Image Processing	6 years	--
14	Mr. Jatinderpal Singh	M.Tech., Pursuing Ph.D.	Assistant Professor	Adhoc Networks	5 years	--
15	Mr. Harmandeep Singh	M.Tech., Pursuing Ph.D.	Assistant Professor	Image Processing	6 years	--
16	Ms. Jaswinder Kaur	M.Tech.	Assistant Professor	Data Mining	2 years	--
17	Ms. Ramanpreet Kaur	M.Tech.	Assistant Professor	Adhoc Networks	2 years	--
18	Mr. Sukhpreet Singh	M.Tech.	Assistant Professor	Speech Processing	4 years	--
19	Ms. Shikha	M.Tech, Pursuing Ph.D.	Assistant Professor	Cloud Computing	10 years	--
20	Ms. Ravinder Kaur	M.Tech.	Assistant Professor	Networking	4 years	--

21	Mr. Navneet Garg	M.Tech.	Assistant Professor	NLP	4 years	--
22	Ms. Jasmeen	M.Tech.	Assistant Professor	NLP	3 years	--
23	Mr. Amandeep Kumar	M.Tech., Pursuing Ph.D.	Assistant Professor	Information retrieval	6 years	--
24	Ms. Ashu Singla	M.Tech.	Assistant Professor	Grid Computing	4 years	--
25	Mr. Gurwinder Singh	M.Tech.	Assistant Professor	Biomedical Signal Processing, Image Processing & Pattern Recognition	1 year	--

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

Name	Designation	Date of Lecture	Topic	Student Discipline	Level
Er. Ajaypal Singh	Chief Manager, NSIC	10/02/2016	Micro, Small and Medium Enterprises	CSE & IT	UG/PG
Mr. Gaurav Madan	NET Max Technologies, Pvt. Ltd. Chandigarh	21/02/2015	Cloud Computing	CSE & IT	UG/ PG
Dr. Sandeep Kumar	AP, CSE, IIT Roorkee	21/02/2015	Cloud Computing	CSE & IT	UG/ PG

13. Percentage of classes taken by temporary faculty – programme-wise Information

Years	Programmes	% of Load taken by contract faculty
2011-12	Certificate	79%
	Diploma	68%
	Degree	56%
2012-13	Certificate	80%
	Diploma	67%
	Degree	55%
2013-14	Certificate	87%
	Diploma	86%
	Degree	53%
2014-15	Certificate	100%
	Diploma	94%
	ICD	100%
	Degree	70%
	PG	3%
2015-16	Diploma	92%
	ICD	84%
	Degree	66%
	PG	0%

14. Programme-wise Student Teacher Ratio

Years	Programmes	Student-Teacher Ratio
2011-12	Certificate	33:1
	Diploma	27:1
	Degree	30:1
2012-13	Certificate	33:1
	Diploma	27:1
	Degree	31:1
2013-14	Certificate	31:1
	Diploma	28:1
	Degree	29:1
2014-15	Certificate	16:1
	Diploma	21:1
	ICD	30:1
	Degree	25:1
	PG	7:1
2015-16	Diploma	14:1
	ICD	28:1
	Degree	29:1
	PG	12:1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual:

Year:2011-12

	Filled		Actual
	Regular	Contract	
Sr. Technician	1	NIL	1
Technician	3	4	7
Programmer	1	NIL	1
L.A.	2	NIL	2
M.T.S.	1	NIL	1

Year:2012-13

	Filled		Actual
	Regular	Contract	
Sr. Technician	1	NIL	1
Technician	3	4	7
Programmer	1	NIL	1
L.A.	2	NIL	2
M.T.S.	2	NIL	2

Year:2013-14

	Filled		Actual
	Regular	Contract	
Sr. Technician	1	NIL	1
Technician	3	4	7
Programmer	1	NIL	1
L.A.	1	NIL	1
M.T.S.	2	NIL	2

Year:2014-15

	Filled		Actual
	Regular	Contract	
Sr. Technician	1	NIL	1
Technician	3	5	8
Programmer	1	NIL	1
L.A.	1	NIL	1
M.T.S.	2	NIL	2
Clerk	1	NIL	1

Year:2015-16

	Filled		Actual
	Regular	Contract	
Sr. Technician	1	NIL	1
Technician	3	4	7
Programmer	1	NIL	1
L.A.	1	NIL	1
M.T.S.	2	NIL	2
Store Clerk	1	NIL	1

16. Research thrust areas as recognized by major funding agencies:

At present no research thrust areas as recognized by major funding agencies.

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

At present no faculty with ongoing project from national and international funding agencies.

18. Inter-institutional collaborative projects and associated grants received: -

a) National collaboration b) International collaboration

At present no National / International Inter-institutional collaborative projects and associated grants received.

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received

At present department has no funded project.

20. Research facility / centre with

- state recognition
- national recognition
- international recognition

At present, department has good research facilities but not listed.

21. Special research laboratories sponsored by / created by industry or corporate bodies:

At present no such special research laboratories exists.

22. Publications:

	2011-12	2012-13	2013-14	2014-15	2015-16
Number of papers published in peer reviewed journals (National/international)	5	16	16	21	12
Monographs	NIL	NIL	NIL	NIL	NIL
Chapters in Books	NIL	NIL	NIL	NIL	NIL
Edited Books	NIL	NIL	NIL	NIL	NIL
Books with ISBN with details of publishers	1	2	1	3	5
Number listed in international Database	NIL	NIL	NIL	NIL	NIL
citation index-range/average	36				
SNIP	0.233-1.114				
SJR	0.13-0.158				
Impact factor-range/average	0.267-2.857				
h-index	3				

23. Details of patents and income generated

At present department has no patent.

24. Areas of consultancy and income generated

No income has been generated from consultancy.

25. Faculty selected nationally / internationally to visit other laboratories /institutions /industries in India and abroad:

Most of the faculty have been selected nationally / internationally to visit other laboratories /institutions /industries in India and abroad.

26. Faculty serving in

a) National committees

Sr. No.	Name of the faculty with designation	Name of the Committee	Position Held
1.	Dr. Major Singh, Associate Professor	Board of studies in Beant College of Engineering & Technology	Member
2.	Dr. Damanpreet Singh, Associate Professor	UGC, University Inspection	Member
		AICTE NEQIP	Performance Auditor
		PTU Institute Affiliation	Member

b) International committees

At present there is no faculty serving in International committees

c) Editorial Boards

At present there is no faculty serving in Editorial Boards.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs):

Sr. No.	Name of Faculty	Post	Recharging Strategies	Name	Duration	Date	Location
1	Dr. Major Singh Goraya	Associate Professor	STTP	TEQIP-II Sponsored STTP on Adhoc Networks and cloud computing	1 Week	13-17 Jan, 2016	SLIET, Longowal
			STTP	Recent Trends in computational technique in engineering	1 Week	17 - 21 Oct, 2016	SLIET, LONGO WAL
			STTP	Recent Trends in VLSI Design & Communication Systems	1 Week	1-5 June, 2015	SLIET, LONGO WAL
			FDP	Enterprise Cloud Computing	1 Week	14-18 Jan, 2014	IIM Kozhikode
			AICTE Winter School	Future Trends of Broadband Wireless Communications and Networking	2 Week	9-20 Dec, 2014	SLIET, Longowal
			National Conference	Cloud is the future of information technology, on Pervasive Computing	1 day	May 6, 2016.	DAV College, Bathinda

			International Conference on Cloud Computing Computer Science and Advances in Information Technology	Cloud Computing: An Overview	1 day	April 12, 2015.	Chandigarh
			International Conference on Software Engineering (ICOSE 2015)	Priority Based Cooperative Computing in Cloud Using Task Backfilling	2 day	August 17-18, 2015.	Toronto, Canada
			International Conference (ICCICT-15)	Grid Computing as a promising computing platform	2 day	May 12-13, 2015.	Global Institute of Management and Emerging Technologies, Amritsar
			International conference on Software Engineering, Parallel and Distributed Systems, (SEPADS)	Trust and reputation based association among grid entities	1 Week	22 – 27 Feb, 2012.	Cambridge, UK
			International Conference on Advanced Computing, Networking and Security	A consistent System Availability Framework in Computing Grid	3 day	Dec 16-18, 2011.	NIT Surathkal

2	Dr. Manoj Kumar Sachan	Associate Professor	AICTE Winter School	Future Trends of Broadband Wireless Communications and Networking	2 Week	9-20 Dec, 2014	SLIET, Longowal
			FDP	Enterprise Cloud Computing	1 Week	14-18 Jan, 2014	IIM Kozhikode.
			STTP	TEQIP-II Sponsored STTP on Adhoc Networks and cloud computing	1 Week	13-17 Jan, 2016	SLIET, Longowal
3	Dr Damanpreet Singh	Associate Professor	SDP	SDP on Enterprise Cloud Computing	1 Week	14-18 Jan, 2014	IIM, Kozhikode
			STTP	TEQIP-II Sponsored STTP on Optimization techniques in Engineering R & D	1 Week	9 -13 Mar, 2015	SLIET, Longowal
			STTP	TEQIP-II Sponsored STTP on Recent trends in VLSI design and Communication systems	1 Week	1-5 June, 2015	SLIET, Longowal
			Workshop	Industrial Training Workshop on Wireless Networks, Security and sensor networks	1 Week	14-18 Sept, 2015.	Eigen Technologies Pvt. Ltd. New Delhi
			STTP	TEQIP-II Sponsored STTP on Adhoc Networks and cloud computing	1 Week	13-17 Jan, 2016	SLIET, Longowal
4	Dr. Vinod Kumar Verma	Assistant Professor	STTP	Recent Trends in computational technique in engineering	1 Week	17-21 Oct, 2016	SLIET, LONGOWAL
			STTP	Adhoc Network and Cloud Computing	1 week	13-17 Jan 2016	SLIET, LONGOWAL
5	Mr. Jaspal Singh	Assistant Professor	STC	Short term Course	1 Week	22-26 June, 2015	ESCI Gachibauli
6	Mr. Rahul	Assistant Professor	FDP	Network and Security	1 Week	4-May-13	Babu Banarshisad Institute of technology, Gaziabad
			Workshop	Android latest Smart Phone OS	3 days	8-9 march 2013	Babu Banarshisad Institute

							of technology, Gaziabad
7	Ms. Jaspreet Kaur	Assistant Professor	STTP	Short term Course	1 Week	4/1/2015	MOHALI
8	Mr. Navneet Garg	Assistant Professor	Short Term Course	Research Methodology	1 Week	15-19 Apr, 2013	MMIT, MALOUT
			FDP	Development of Digital Library with Dspace Software	1 Week	5-9 Aug, 2013	MMIT, MALOUT
			Workshop	Computational Sanskrit	3 day	11-13 Nov, 2011	S.D. College, Ambala
			Conference	International Conference 'COLING-2012'	1 day	Dec-12	IIT, Mumbai
9	Ms. Shikha	Assistant Professor	Short Term Course	STTP ON CLOUD COMPUTING	1 Week	11-15 Dec, 2012	MMIT, MALOUT
			FDP	Introduction to MATLAB	1 Week	5-9 Apr, 2013	MMIT, MALOUT
10	Mr. Harmandeep Singh	Assistant Professor	Workshop	Future Trends of Broadband Wireless Communication and Networking	2 Week	9-20 Dec, 2013	SLIET LONGOWAL
			FDP	Emerging Trends in Communication & IT	1 Week	25-29 July, 2011	RIEIT, Railmajra
			FDP	Advances in Computing and Communication Technologies	1 Week	9-13 July, 2013	Rayat Group of Institutions
11	Mr. Sukhpreet Singh	Assistant Professor	Training Program	Requirement of MATLAB fundamentals by Mathworks Training Services	3 day	3-5 Dec, 2015	SLIET, LONGOWAL
			Conference	International Conference on Information and Mathematical Sciences (IMS-13)	3 day	24-26 Oct, 2013	BFCET, Bathinda
			Conference	National Conference on "Latest Developments in Materials, Manufacturing and Quality Control" MNCQ-14	2 day	13-14, Feb. 2014	Giani Zail Singh College of Engg. and Technology Bathinda
12	Mr. Jatinder Pal Singh	Assistant Professor	Conference	3rd International Conference on Advancements in Engineering and	2 day	20-21 March, 2015	BGIET, Sangrur

			Technology.			
		FDP	ISTE-PTU Sponsored FDP on Emerging Computer Trends and Technologies in Industries	1 Week	16-20th June, 2014	RIMT-IET, Mandi Gobindgarh

28. Student projects

- Percentage of students who have done in-house projects including inter departmental projects:

All the students undertake in-house project.

- Percentage of students doing projects in collaboration with other universities /industry / institute:

At present no student doing projects in collaboration with other universities/industry/institute.

29. Awards / recognitions received at the national and international level by

- Faculty: **03**
- Doctoral/Post-doctoral fellows: **01**
- Students: NIL

30. Seminars/ Conferences/Workshops organized and the source of funding (national /international) with details of outstanding participants, if any:

Name of the Programme	Date	Co-ordinator(s)	Resource Person(s)	Total Expenditure	Target Audience
Expert Lecture on Micro, Small and Medium Enterprises	10/02/2016	Dr. Damanpreet Singh	Er. Ajaypal Singh, Chief Manager, NSIC	Rs. 7000/-	UG/PG Students
STTP on Adhoc Networks and Cloud Computing	13/01/2016 to 17/01/2016	Dr. Damanpreet Singh, Dr. Major Singh	Prof.(Dr.) Yogesh Chaba, Director, Distance Education, GJU, Hisar Ankur Tyagi, Sr. Application Engineer, Eigen Technologies, New Delhi Somal Saxena,	Rs. 166441/-	30 Participants Internal - 13 External - 17

			Manager(Technical), Eigen Technologies, New Delhi Prof. R.B. Patel, CCET, Chandigarh Deepak Garg, ASP and Head, CSE, Thapar University, Patiala Prof.(Dr.) Gurvinder Singh, Head, CS, GNDU, Amritsar Rajinder Singh, Sr. Technical Consultant, Giga Bytes Network Pvt. Ltd., Ludhiana Lovish Jaiswal, Sr. Manager, Giga Bytes Network Pvt. Ltd., Ludhiana		
Workshop on Cloud Computing	21/02/2015	Dr. Major Singh	Dr. Sandeep Kumar, AP, CSE, IIT Roorkee Mr. Gaurav Madan, NET Max Technologies, Pvt. Ltd., Chandigarh	Rs.23667/-	UG/PG Students (191 Participan ts)

31. Code of ethics for research followed by the departments:

The department is very particular about active research and it encourages its students and faculty members to follow IEEE Code of Ethics. In order to carry forward the legacy of the CSE Department different online tools for checking the plagiarism are used to ensure the quality of the research work. All the students and faculty members of CSE Department are also encouraged to carry out research for the betterment of society and development of nation in particular.

32. Student profile programme-wise:

Name of the Programme	Applications Received *	Selected		Pass percentage	
		Male	Female	Male	Female
GCS-2011-12 (3 yrs)	4582	69	28	93.93	96.77
GIT-2011-12(3 yrs)	4582	27	21	96.77	88.23
DCA-2011-12	3880	30	19	86.22	95
DCE-2011-12	3880	31	17	96.42	94.4
CCA-2011-12	2358	21	27	42.10	91.30
GCS-2012-13 (3 yrs)	3962	62	34	82.25	94.11
GIT-2012-13 (3 yrs)	3962	30	17	66.67	82.35
DCA-2012-13	2909	21	23	85.71	95.5
DCE-2012-13	2909	32	15	84.37	100
CCA-2012-13	1643	28	20	25	65
GCS-2013-14 (3 yrs)	3173	58	38	93.10	97.36
GIT-2013-14 (3 yrs)	3173	24	16	91.66	100
DCA-2013-14	2820	18	28	88.88	100
DCE-2013-14	2820	31	16	93.54	100
CCA-2013-14	1439	29	12	34.48	41.66
GCS-2014-15 (3 yrs)	2347	51	44	--	--
DCA-2014-15	309	11	17	72.73	100
DCS-CDE 2014-15	2100	68	35	--	--
GCS-2014 (4Yrs) + GCS-2015(LEET)	JEE Main/LEET	94	31	--	--
PG-2014-15	13	7	6	100	83.33
GCS-2015 (4 yrs) + GCS-2016 (LEET)	JEE Main/LEET	88	36	--	--
DCA-2015-16	228	12	10	--	--
DCS-CDE 2015-16	2199	80	39	--	--
PG-2015-16	19	4	7	--	--

* No of Application received for different programmes at institute level.

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of Students from the Same University	% of students From other Universities within the State	% of students From Universities outside the State	% of Students From Other Countries
CCA 2011-12	0	61.9	38.1	0
CCA 2012-13	0	70.8	29.2	0
CCA 2013-14	0	75.5	24.5	0
DCA 2011-12	57.1	20.4	22.4	0
DCA 2012-13	59.1	25	15.9	0
DCA 2013-14	60.8	21.8	17.4	0

DCA 2014-15	100	0	0	0
DCA 2015-16	100	0	0	0
DCE 2011-12	54	22	24	0
DCE 2012-13	59.5	19.1	21.2	0
DCE 2013-14	61.7	19.1	19.1	0
DCS-CDE 2014-15	0	50.5	49.5	0
DCS-CDE 2015-16	0	54.92	45.08	0
GCS 2011-12 (3 yrs)	44.4	28.8	26.8	0
GCS 2012-13 (3 yrs)	54.2	25	20.8	0
GCS 2013-14 (3 yrs)	70.8	6.2	22.9	0
GCS 2014-15 (3 yrs)	53.6	22.1	24.3	0
GCS 2014-15 (4 yrs)	44	12	43.2	0
GCS 2015-16 (4 yrs)	17.7	10.4	71.2	0
GIT 2011-12	38	35	27	0
GIT 2012-13	27.6	42.6	29.7	0
GIT 2013-14	55	15	30	0
PG 2014-15	7.6	15.38	76.92	0
PG 2015-16	18.18	18.18	63.64	0

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
GATE	×	×	2	1	17	13
NET	×	×	×	×	×	×
SET	×	×	×	×	×	×
Other Competitive Exams	×	×	×	×	×	×
Civil Service/ Defense/ Army	4	1	×	×	×	×

35. Student progression

Student progression	Percentage against enrolled					
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
UG to PG	×	×	×	×	7.7	18
PG to M. Phil	×	×	×	×	×	×
PG to Ph. D.	×	×	×	×	×	×
Ph. D. to Post-Doctoral	×	×	×	×	×	×
Employed						
	38	34.4	18.62	19.72	21.32	27.4
<ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 						
Entrepreneurs	×	×	×	×	×	×

36. Diversity of staff

Percentage of faculty who are graduates	Percentage
of the same university	20
from other universities within the state	60
from other universities from other states	20
universities outside the country	0

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period:

Session	Degree	Number of Faculty
2011-12	M.Tech, Ph.D.	NIL
2012-13	Ph.D	1
2013-14	Ph.D	1
2014-15	Ph.D	3
2015-16	Ph.D	NIL

38. Present details of departmental infrastructural facilities with regard to

a) College Library:

There is a separate section for Computer Science & Engineering books in the central library of the college with good collection of books. CSE Journals and Magazines are also available in the Central college library.

No. of E-journals	--	16
No. of Titles of CSE	--	2650
No. of Books of CSE	--	13268
Reading hall capacity of library	--	200 students
No. of CSE Ph.D. thesis:	--	7
Digital Library	--	30 PCs

Beside central library there is also a departmental library in the CSE department.

No. of Books:	--	1088
No. of PG Thesis:	--	13
No. of Ph.D. thesis:	--	6

b) Internet Facilities for staff & students:

Department uses the internet facilities provided by the Institute through Administrative Computing Services and Systems (ACSS) for faculty, staff and students.

- Faculty, Staff and students can access internet through Wi-Fi, and LAN.
- The campus is connected through fiber optics internet connection with 1Gbps connectivity through Network Knowledge Management.
- IP ADDRESSES are generated automatically through DHCP.
- CYBERROAM secured internet facility is provided to students, faculty and staff. No user can access the websites which are strictly prohibited by department.
- Wi-Fi facility is available in all hostels, academic, library and all other departments.

c) Total number of class rooms: 9(Class room), 2 (Tutorial)

d) Class rooms with ICT facility: 3

e) Laboratories: There are 12 well equipped Labs. Detail of labs is as follows:

INFORMATION TECHNOLOGY LAB		
S. No.	Particulars	Availability
1.	No. of Computer Terminals	30
2.	Configuration of Computer Terminals	Intel Core i7, 3.40 GHz, TFT 18.5", 500 GB HDD, 4 GB RAM DDR3
3.	Operating System	Windows 8.1 Professional

4.	Workstation	HP-Z420 Intel Xenon CPU (E5-1620 @3.60Ghz, RAM 8GB, HDD 500 GB, 54.6 cm LCD monitor
5.	Software's Specification	MS-Office 2007, Turbo C/C++, Oracle 10g, Visual Basic 2008, Prolog 6.4
6.	Size of Lab	144.366 m ²
SOFTWARE ENGG. & PROGRAMMING LAB-1		
S. No.	Particulars	Availability
1.	No. of Computer Terminals	30
2.	Configuration of Computer Terminals	Intel Core 2 Duo, 3.0 GHz, TFT 15", 2GB RAM DDR3, 320 GB HDD SATA
3.	Operating System	Window-7 Professional, LINUX
4.	Workstation	HP-Z420 Intel Xenon CPU (E5-1620 @3.60Ghz, RAM 8GB, HDD 500 GB, 54.6 cm LCD monitor
5.	Software's Specification	MS-Office 2007, Turbo C/C++, Oracle 10g, Java, WAMP Server
6.	Size of Lab	67.20 m ²
SOFTWARE ENGG. & PROGRAMMING LAB-2		
S. No.	Particulars	Availability
1.	No. of Computer Terminals	30
2.	Configuration of Computer Terminals	Intel Core 2 Duo, 3.0 GHz, TFT 15", 2GB RAM DDR3, 320 GB HDD SATA
3.	Operating System	Window-7 Professional, LINUX
4.	Software's Specification	MS-Office 2007, Turbo C/C++, Oracle 10g, Java, WAMP Server
5.	Size of Lab	132.61 m ²
EMERGING TECHNOLOGIES LAB		

S. No.	Particulars	Availability
1.	No. of Computer Terminals	33 (23+10)
2.	Configuration of Computer Terminals	(23) - Intel Core 2 Duo, 3.0 GHz, 2 GB RAM DDR3, 250 GB, CRT 15" (10) - Intel Core i7, 3.40 GHz, TFT 18.5", 500 GB HDD, 4 GB RAM DDR3
3.	Operating System	Windows Vista Service Pack-1
4.	Workstation	HP-Z400 Intel Xenon CPU (W3-5635 @3.20Ghz, RAM 8GB, HDD 500 GB, TFT 21.5"
5.	Software's Specification	MS-Office 2007, Turbo C/C++, Oracle 10g, Prolog 6.2.5
6.	Size of Lab	158.936 m ²
DESKTOP PUBLISHING LAB		
S. No.	Particulars	Availability
1.	No. of Computer Terminals	30
2.	Configuration of Computer Terminals	Intel Core 2 Duo, 3.0 GHz, TFT 15", 2GB RAM DDR3, 320 GB HDD SATA
3.	Operating System	Windows VISTA
4.	Workstation	HP-Z400 Intel Xenon CPU (W3-5635 @3.20Ghz, RAM 8GB, HDD 500 GB, TFT 21.5"
5.	Software's Specification	MS-Office 2007, Turbo C/C++, Corel Draw, Oracle 10g
6.	Size of Lab	142.29 m ²
LINUX LAB		
S. No.	Particulars	Availability
1.	No. of Computer Terminals	30

2.	Configuration of Computer Terminals	Pentium(R) Dual Core, 2.80 GHz, 512 MB RAM, 160 GB HDD, TFT 15"
3.	Operating System	Windows XP Service Pack-2, Linux
4.	Workstation	HP-Z400 Intel Xenon CPU (W3-5635 @3.20Ghz, RAM 8GB, HDD 500 GB, TFT 21.5"
5.	Software's Specification	MS-Office 2007, Turbo C/C++, Oracle 10g, Adobe Photoshop-9, Macromedia Flash 8.0
6.	Size of Lab	142.29 m ²
WINDOW LAB		
S. No.	Particulars	Availability
1.	No. of Computer Terminals	30
2.	Configuration of Computer Terminals	Intel Core 2 Duo, 3.0 GHz, TFT 15", 2GB RAM DDR3, 250 GB HDD SATA, Z420 Workstation Xenon CPU (E5-1620 @3.60Ghz, RAM 8GB, HDD 500 GB
3.	Operating System	Windows Vista Service Pack-2
4.	Workstation	HP-Z420 Xenon CPU (E5-1620 @3.60Ghz, RAM 8GB, HDD 500 GB, 54.6 cm LCD monitor
5.	Software's Specification	MS-Office 2007, Turbo C/C++, Oracle 10g, Macromedia Flash 8.0
6.	Size of Lab	142.29 m ²
ADVANCED INFORMATION TECHNOLOGY LAB		
S. No.	Particulars	Availability
1.	No. of Computer Terminals	30
2.	Configuration of Computer Terminals	Pentium(R) Dual Core, 1.60 GHz, 1 GB RAM DDR2, 160 GB HDD, CRT 15"

3.	Operating System	Windows XP Service Pack-2
4.	Workstation	HP-Z420 Xenon CPU (E5-1620 @3.60Ghz, RAM 8GB, HDD 500 GB, 54.6 cm LCD monitor)
5.	Software's Specification	MS-Office 2007, Turbo C/C++, Visual Basic 6.0, Macromedia Flash 8.0, WAMP Server 2.0
6.	Size of Lab	112.53 m ²
NETWORK LAB		
S. No.	Particulars	Availability
1.	LAN Trainer Kits	10
2.	No. of Computer Terminals	40+8
3.	Configuration of Computer Terminals	18.5 LCD Monitor, CPU i7 @3.6Ghz, RAM 8GB, HDD-1TB Intel Core 2 Duo, 3.0 GHz, 2 GB RAM DDR3, 320 GB HDD,TFT 15"
4.	Operating System	Windows Vista Service Pack-1, Wndow 8.1 Professional
5.	Workstation	HP-Z420 Xenon CPU (E5-1620 @3.60Ghz, RAM 8GB, HDD 500 GB, 54.6 cm LCD monitor)
6.	Software's Specification	MS-Office 2007, Turbo C/C++, Qualnet 5.0.2
7.	Size of Lab	155.27 m ²
HARDWARE LAB		
S. No.	Particulars	Availability
1.	Hardware Training Kits	4
2.	Configuration of Hardware Training Kits	Intel Core 2 Duo, 3.0 GHz, TFT 14", 4GB RAM DDR3, 500 GB HDD SATA
3.	No. of Computer Terminals	12+6

4.	Configuration of Computer Terminals	Intel Core 2 Duo, 3.0 GHz, TFT 15", 2GB RAM DDR3, 320 GB HDD SATA 18.5 LCD Monitor, CPU i7 @3.6Ghz, RAM 8GB, HDD- 1TB
5.	Operating System	LINUX OS, Windows 98, Windows XP-2, Windows7, Windows VISTA, Windows 8
6.	Workstation	HP-Z400 Intel Xenon CPU (W3-5635 @3.20Ghz, RAM 8GB, HDD 500 GB, TFT 21.5"
7.	Software's Specification	MS-Office 2007, Turbo C/C++, Adobe Reader, Avast Antivirus
8.	Size of Lab	142.29 m ²
MICROPROCESSOR LAB		
S. No.	Particulars	Availability
1.	No. of Microprocessor Kits	18
2.	Specification of kits	Microprocessor 8085
3.	Size of Lab	71.14 m ²
HIGH PERFORMANCE COMPUTING LAB		
S. No.	Particulars	Availability
1.	Workstations	4
2.	Specification	HP-Z840 Intel Xenon CPU (E5-2650 @2.30Ghz (2 Processor), RAM 8GB, HDD 1 TB, TFT 21.5"
3.	Size of Lab	46.025 m ²

f) Research Laboratory: Research facilities are provided in different labs.

39. List of doctoral, post-doctoral students and Research Associates

a) From the host institutions/university

List of PhD Research Scholar of CSE Department

SN	Name	Regn. No	Full Time	Mobile No.	Supervisor	Area of research
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			Part Time			
1.	Mr.Sanjeev Prakash	PCS-1002	Part Time	94172-14808	Dr. V.K. Jain	A Multi-agent System For Planning Support in automatic Hierarchical Coalitions.
2.	Ms. Gurjinder Kaur	PCS-1004	Part Time	94175-88161	Dr. V.K. Jain	Soft Computing techniques for the design of digital filters.
3.	Mr. Manminder Singh	PCS-1102	Part Time	94652-32800	Dr. A.S. Arora	Computer Aided colour image processing and liveness detection for face recognition.
4.	Ms. Satveer Kaur	PCS-1104	Part Time	80547-54961	Dr. J.S. Ubhi	Performance of mobility efficient routing protocols in MANET.
5.	Ms. Mamta Garg	PCS-1105	Part Time	95010-22557	Dr. A.S. Arora	Image Processing.
6	Ms.Harvinder Kaur Grewal	PCS-1106	Part Time	9815913405	Dr. J.S. Dhillon	Optimization techniques in computer engineering.
7.	Mr. Gurpreet Singh	PCS-1401	Full Time	98885-81686	Dr. Manoj Kumar Sachan	A Bilingual Gurmukhi-rom online handwriting identification and recognition system.
8.	Mr. Moin Hasan	PCS-1402	Full Time	95698-03220	Dr. Major Singh	Flexible fault Tolerance Framework in Cloud Computing Environment.
9.	Mr. Jaspal Singh	PCS-1403	Part Time	98766-99245	Dr. Major Singh	Cloud Computing.
10.	Mr. Dalwinder Singh	PCS-1501	Full Time	75891-38151	Dr. Birmohan Singh	Machine Learning & image processing.
11.	Mr.Harmanpreet Singh	PCS-1502	Full Time	99152-88911	Dr.Damanpreet Singh	Wireless Sensor Network
12.	Mr. Avinash Thakur	PCS-1503	Full Time	88948-49566	Dr. Major Singh	Cloud Computing
13.	Mr. Shailendra Kumar Singh	PCS-1504	Full Time	80022-50572	Dr. Manoj Kumar Sachan	Natural Language Processing.
14.	Mr. Sachin Minocha	PCS-1505	Part Time		Dr. Birmohan Singh	
15.	Mr. Neeraj	PCS-1601	Full Time	94179-03840	Dr. Major Singh	Cloud Computing.
16.	Ms. Neha Garg	PCS-1602	Full Time	97797-16165	Dr. Major Singh	Cloud Computing.
17.	Mr. Gurwinder Singh	PCS-1603	Full Time	98721-82678	Dr. Birmohan Singh	Biomedical signals
18.	Mr. Rahul Kr. Singh	PCS-1604	Part Time	97810-16195	Dr. Manoj Kumar Sachan	Natural Language Processing.
19.	Mr. Yogendra	PCS-1605	Part Time	99718-81625	Dr. Birmohan Singh	
20.	Mr. Saurabh Sharma	PCS-1606	Full Time	84377-51715	Dr. Vinod Kumar Verma	Wireless sensor networks.
21.	Rohitash kumar	PCS-1103	Part Time	9460494327	Dr.V.K.Jain	Designing of comprehensive information Security Framework for

						cloud Computing
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b) From the other institutions/university-

At present no doctoral, post-doctoral students and Research Associates from other institutions/ university.

40. Number of post graduate students getting financial assistance from the university.

Session	No. of students
2011-12	NIL
2012-13	NIL
2013-14	NIL
2014-15	12
2015-16	20 (12 admitted in 2014-15 8 admitted in 2015-16)

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. Yes

M.Tech.	The M.Tech programme in Computer Science & Engineering aims at preparing the students to take up applications, research and development in core and some emerging areas in Computer Science and Engineering like Machine Learning, Cloud and Grid Computing, Big Data Analytics, AI and AI related applications in distributed computing environment, Computer Vision etc. The program also includes advanced level courses in Computer Architecture, Networking, Algorithms, Data Bases, Distributed Computing and Computational Intelligence.
B.E. 4 year	Decision was made at the Institute Level
ICD	Decision was made at the Institute Level

42. Does the department obtain feedback from

a) Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

YES, the departments obtain feedback from the faculty on curriculum as well as teaching-learning-evaluation. The faculty members make sure that the programme objectives, course objectives and the outcome are met by the learners. If any modifications are required to fill the gap in this regard, would be reported by the faculty

members concerned. Further, the faculty members recommend for the revision of the particular course based on their expertise and the need of the stakeholders.

b) Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

YES, the feedback mechanisms and the post-corrective measures are among the most valued best practices prevalent in the institution in terms of academic excellence and its sustenance. The feedback by the students on every subject taught is made mandatory and hence gives the institution an insight in to all aspects of teacher and the course taught. And it is reviewed by the Incharge concerned under the guidance of BOS and summary report is prepared and forwarded to respective faculty. Based on this feedback corrective measures are identified by Incharge concerned / Faculty if required.

c) Alumni and employers on the programmes offered and how does the department utilize the feedback?

YES, It is the regular practice of the University to collect the feedback from the Alumni and the employers. Alumni of different capacities including some of the entrepreneurs will be consolidated. The employers have often mentioned of the necessary improvements needed in the curriculum so that the students can obtain requisite skills on par with the practices of industry. Later, this feedback from faculty, students, alumni and employers are discussed at various academic bodies involving faculty, alumni and employers where necessary, relevant changes are brought for discussion at statutory academic bodies.

43. List the distinguished alumni of the department

S No.	Roll Number	Name	Company
1	GCS/112302	Arun Kumar Pasricha	TCS
2	GCS/113303	Hina Bharti	TCS
3	GIT/114312	Vashu Gupta	Infosys
4	GCS/115320	Damanpreet Singh	Indian Navy
5	GCS/113202	Lovejeet Singh	NEC Technologies Indian Pvt Limited
6	GCS/113204	Amandeep Saini	Hp Enterprises India Sales Pvt Ltd
7	GCS/114302	Ajit Singh	Software Ag
8	GCS/123056	Akshay Chitkara	L&T InfoTech
9	GCS/123058	Aftab Azim	Icreon Communication

			Pvt Ltd
10	GCS/112255	Apurva Anand	M/S Eclerx Services Limited Chandigarh

44. Give details of student enrichment programmes (special lectures / workshops /seminar) involving external experts:

Name of Programme	Session	Co-ordinator(s)	Guest Faculty	Participants
Machine Learning (Organized by SLIET Computer Society)	2016-17	Dr. Damanpreet Singh	Arshpreet Singh, Python Community, India	UG/PG Students
Linux Red Hat	2016-17	Mr. Jaspal Singh	Mandeep Bhandari, Payal Sharma, Business Development Executives, Ducat Noida	UG/PG Students
Expert Lecture on Micro, Small and Medium Enterprises	2015-16	Dr. Damanpreet Singh	Er. Ajaypal Singh, Chief Manager, NSIC	UG/PG Students
Workshop on Cloud Computing	2014-15	Dr. Major Singh	Dr. Sandeep Kumar, AP, CSE, IIT Roorkee Mr. Gaurav Madan, NET Max Technologies, Pvt. Ltd., Chandigarh	UG/PG Students

45. List the teaching methods adopted by the faculty for different programmes:

- a) Class Room teaching
- b) Interactive teaching and learning using LCD projectors.
- c) Web based learning: NPTEL and Power point presentations
- d) Assignments and Quiz.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- Detailed planning of course delivery at the beginning of the semester.
- Academic progress monitoring at department level during the semester.
- Student's learning monitoring is done by assignments, test and quizzes and also linking these components with internal assessment of students which becomes the part of grade at the end of semester.

- Faculty Course Files: All faculty members maintain their course file in which they have to keep record of all the tests, assignments, quizzes given to the students in a due course of time.
- Review of course completion report at the end of semester.
- Compilation and Analysis of student's Feedback.
- Ensuring course coverage in Question Papers.

47. Highlight the participation of students and faculty in extension activities.

- a) Attending Conferences/Seminars/FDP's
- b) Inter-departmental Competitions
- c) Departmental Society
- d) Participation in the institute level programs

48. Give details of "beyond syllabus scholarly activities" of the department.

- Yoga and Meditation programs.
- Inspirational sessions.
- Organization of workshops/seminars/symposium etc. on the latest technologies.

49. State whether the programme/ department is accredited/ graded by other agencies?

If yes, give details.

Yes, B.E. in Computer Science and Engineering was accredited by NBA up to 2015.

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Involved in Emerging Research Areas like Cloud Computing, Grid Computing, Image Processing, Soft computing, Network security, Pattern Recognition, Natural Language Processing, Wireless Sensor Networks, Distributed Computing, Trust and Reputation Systems.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department:

- **Strengths:**
 - i. Well qualified, experienced and dedicated faculty and staff.
 - ii. Well-equipped laboratory infrastructure.
 - iii. Diversity of students.
 - iv. Different levels of courses (ICD, UG, PG, Ph.D.) whereby one course can provide the student intake to next higher level course.
 - v. Research fellowships to support the research.

vi. Strong book bank through central and departmental library and access to various online journals.

- **Weakness:**

- i. Locational disadvantage affecting faculty retention.
- ii. Enough faculty and staff positions are not sanctioned in proportion to the increased student intake.
- iii. Poor placement.
- iv. Lacking in consultancy and funded research projects.
- v. Shortage of smart classrooms.

- **Opportunities:**

- i. To provide skilled manpower at different levels as per the local needs and global standards.
- ii. To obtain research projects in the availability of different research funding agencies and to enhance the research contribution through research fellowships allocated to the department.
- iii. Professional development of individual faculty through PDA.
- iv. Time to time revision of course curriculum through academic autonomy.
- v. Starting of non-formal courses.

- **Challenges:**

- i. Relying on the adhoc arrangement of faculty and staff.
- ii. Effect of global recession on placement.
- iii. Mushrooming of large number of institutes which are creating confusion among students.
- iv. Mobility of faculty due to remote location.

52. Future plans of the department.

- a) Alignment of the course curriculum with National Occupational Standards defined by National Skill Development Corporation (NSDC).
- b) More emphasis will be given on the organization of workshops, symposiums, seminars, faculty development programs and conferences for faculty, staff and students in the department.
- c) Interdisciplinary research will be promoted
- d) Collaborations with industry people for the designing and development of curriculum and laboratory experimentation.
- e) To obtain the funded research projects.

Evaluative Report of Department

1. **Name of the Department:**
Electrical & Instrumentation Engineering

2. **Year of establishment:**
1989

3. **Is the Department part of a School/Faculty of the university?**
Yes

4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)**

Formal Courses	
Ph.D. Programme	: Electrical & Instrumentation Engineering
P.G. Programmes	: Instrumentation & Control Engineering
Degree Programmes	: <ul style="list-style-type: none"> • Instrumentation & Control Engineering • Electrical Engineering
Integrated Certificate and Diploma Programmes	: <ul style="list-style-type: none"> • Instrumentation & Control Engineering • Electrical Engineering

5. **Interdisciplinary programmes and departments involved**
 - Computer Science & Engineering Department
 - Electronics & Communication Engineering Department
 - Mechanical Engineering Department
 - Chemistry Department
 - Management & Humanities Departments
 - Mathematics Department
 - Physics Department

6. **Courses in collaboration with other universities, industries, foreign institutions, etc.**
Nil

7. **Details of programmes discontinued, if any, with reasons**
 - Three Years UG Programme in Instrumentation & Control Engineering
 - Two Years Diploma in Instrumentation & Process Control
 - Two Years Programmes in (i) Maintenance of Electrical Equipment and (ii) Servicing & Maintenance of Medical Instruments

8. **Examination System: Annual/Semester/Trimester/Choice Based Credit System**
Semester and Choice based Credit System

9. **Participation of the department in the courses offered by other departments**

- Computer Science & Engineering Department
- Chemical Engineering Department
- Electronics & Communication Engineering Department
- Food Engineering & Technology
- Mechanical Engineering Department

10. Number of teaching posts sanctioned, filled and actual (Professors/ Associate Professors/ Asst. Professors/ others)

	Sanctioned	Filled	Actual (Including CAS & MPS)
Professor	03	03	04
Associate Professors	05	02	10
Assistant Professors	13	13	04
Others	nil	nil	04 (On Contract)

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance
Details are given at Annexure-I

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors
NIL

13. Percentage of classes taken by temporary faculty – programme-wise information

Ph.D. Programme	: 0%
P.G. Programmes	: 0%
Degree Programmes	: 16%
Integrated Certificate and Diploma Programmes	: 18%

14. Programme-wise Student Teacher Ratio: 35.5 : 1 Overall)

	Student : Teacher
Ph.D. Programme	: 3 : 1
P.G. Programmes	: 18 : 1
Degree Programmes	: 32 : 1
Integrated Certificate and Diploma Programmes	: 36 : 1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual
Details are given at Annexure-II

16. Research thrust areas as recognized by major funding agencies

- Power Systems
- Biomedical Engineering

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

NIL

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration NIL

b) International collaboration NIL

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

NIL

20. Research facility / centre with

state recognition NIL

national recognition NIL

international recognition NIL

21. Special research laboratories sponsored by / created by industry or corporate bodies NIL

22. Publications:

Number of papers published in peer reviewed journals (national / international) 121 (Detail is given in ANNEXURE -III)

Monographs : NIL

Chapters in Books

Edited Books

Ashwani Kumar Aggarwal, Book chapter on Digital Preservation of Cultural Heritage for Future Generations' in Handbook of Research on Digital Preservation Tools and Technologies, published by IGI Publishers, Hershey, Pennsylvania, USA in 2016.

Books with ISBN with details of publishers: 06 nos

Details are given at Annexure-IV

Number listed in International Database (For e.g. Web of Science, Scopus,

Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

Citation Index - range / average SNIP

SJR : NIL

Impact Factor - range / average h-index

Citations	1437
h-index	24
i10-index	26
SJR	-
h-index	2
i10-index	
SJR	-

23. Details of patents and income generated: NIL
24. Areas of consultancy and income generated : NIL
25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad: NIL
26. Faculty serving in
 - a) National committees Yes
 - b) International committees Yes
 - c) Editorial Boards Yes
 - d) any other (please specify) Technical paper Reviewing services
27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs)

Details of faculty recharging strategies are given at Annexure -V
28. Student projects
 - percentage of students who have done in-house projects including inter-departmental projects - 100%
 - percentage of students doing projects in collaboration with other universities / industry / institute NIL
29. Awards / recognitions received at the national and international level by
 - Faculty : NIL
 - Doctoral / post-doctoral fellows : NIL
 - Students : NIL

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

Details are given at Annexure VI

31. Code of ethics for research followed by the departments

The Department of EIE, gives particularly high priority to research. In this, the department pursues a research ethos that promotes exceptional expertise as well as ethical responsibility in the quest for knowledge and the development, conservation and transfer of such knowledge. Consequently, all members of staff and students of the department are required always to strive for the highest standards of excellence and morality in any research activities. The Code of Ethics for Research serves as an important guideline to inspire researchers maintains high ethical standards in all research activities at the institute.

The Department of EIE at SLIET is imbibing the ethics and etiquettes by motivating the students as well as faculty to holistically follow the code of ethics for any research work carried out within the department. All the students and faculty members in Department of EIE are committed to carry out research for the betterment of society in general and development of nation in particular.

32. Student profile programme-wise:

Details are given at Annexure- VII

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
Ph.D. Programme	42.85	33.33	23.82	nil
P.G. Programmes	7.69	nil	92.31	nil
Degree Programmes	50.00	20.00	30.00	nil
Integrated Certificate and Diploma Programmes	nil	50%	50%	nil

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

15 no. (GATE)

35. Student progression

Student progression		Percentage enrolled	against
UG to PG		-	
PG to M.Phil.		-	
PG to Ph.D.		-	
Ph.D. to Post-Doctoral		-	
Employed			
<input type="checkbox"/>	Campus selection	2011	09 students
		2012	17 students
		2013	08 students
		2014	11 students
		2015	12 students
		2016	08 students
<input type="checkbox"/>	Other than campus recruitment	-	
Entrepreneurs		-	

36. Diversity of staff

Faculty Graduates from	Percentage of faculty
Same university	5%
Other universities within the State	60%
Universities from other States	30%
Universities outside the country	5%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

Sr. No.	Faculty Name	Year	Degree
1.	Dr. Manpreet Kaur	2015-2016	Ph.D.
2.	Dr. Surita Maini	2015-2016	Ph.D.
3	Dr. Ashwani Kumar Aggarwal	2014-2015	Ph.D.
4	Dr. Raj Kumar Garg	2016-2017	Ph.D.
5	Dr. Manpreet Singh Manna	2015-2016	Ph.D.

38. Present details of departmental infrastructural facilities with regard to

a) Library

There is a separate section for electrical and instrumentation engineering books in the Central Library of college with a good collection of books. It has large number of volume of technical books along with a good collection of books on literature, general awareness, management and moral sciences etc. The central library is

already subscribing to a large number of National and International journals. In addition to it, there is also a departmental library for faculty and staff. The departmental library contains more than 700 books.

b) Internet facilities for staff and students

Internet facility allows students to access internet 24/7. High speed Wifi network surrounds campus and let student access it any time. Students can access E-books through internet. Students and faculties are free to access internet after the regular working hours.

This helps the students prepare papers on the latest technologies to be presented in various symposiums and seminars. 24 hours Internet facility is provided. With Internet facilities in the well-equipped internet lab, providing high speed of connectivity the student can surf the net together unlimited information.

c) Total number of class rooms: 06

d) Class rooms with ICT facility

One of the classrooms are equipped with ICT facility in the college. The department uses this room for teaching program involving power point presentations. EIE department also has Digital Lecture Room.

e) Students' laboratories

The department is having eleven well-equipped and fully furnished labs to fulfil every practical aspect of degree curriculum. Excellent facilities are available in department to carry out the experimental & research work. They are exhaustively utilized by faculty and students to enhance the practical dimensions of their knowledge. The labs expose them to hi-tech equipments that is true with the latest development in related areas. There are 13 laboratories in EIE department as listed below:

- Analytical Laboratory
- Computational laboratory
- Electrical Machine Laboratory
- Electrical Workshop
- Digital Signal Processing Laboratory
- Control Engineering Laboratory
- Transducers Laboratory
- Basic Electrical Engineering Laboratory
- Biomedical Engineering Laboratory
- Instrumentation Center
- Hydraulic and Pneumatic Laboratory
- Power Electronics Laboratory
- Microprocessor and Microcontroller Laboratory

f) Research laboratories: 03

39. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/university

Details given at Annexure VIII

b) from other institutions/universities

Details given at Annexure IX

40. Number of post graduate students getting financial assistance from the university.

Sr. No	Funding Agency	Number of students
1.	AICTE	12
2.	TEQIP	02

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

Yes. Various meetings of faculty members were organized to deliberate on the possibility for new programs. After iterative meetings, a proposal was prepared to introduce 3 years ICD program and 4-years UG program in the department of Electrical and Instrumentation engineering. The proposal was discussed at length in the meeting with members of the Board of Studies. The proposal was further discussed and deliberated in Board meeting. The proposal was finally approved and incorporated in the academic programmes.

42. Does the department obtain feedback from?

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, the department obtains feedback from faculty on curriculum as well as teaching- learning evaluation. Department utilizes feedback for curriculum modification and improvement. Also, the department obtains feedback on teaching -learning-evaluation, and utilizes it for improving the teaching -learning-evaluation process. It enhances the teaching learning process by taking proper feedback of the corresponding theory and lab courses.

b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes. The Department obtains feedback from students on staff, curriculum, as well as teaching-learning evaluation. Department utilizes feedback for

further analysis of faculty performance and the feedback report is also handed over to the faculty members. Also, the department utilizes the feedback on curriculum when the syllabi are revised. The department positively responds to the feedback and rectifies the areas where modifications are required. After verifying the students' feedback, appropriate teaching techniques are adopted. Student representatives from each section make contributions by giving feedback on the student experiences and perspectives. Based on this feedback, the department takes necessary steps to satisfy them.

- c. alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes. The department recognizes the distinguished alumni by associating them while framing and updating the syllabi. The department also recognizes the distinguished alumni by inviting them to give special lectures and seminars to the students.

43. List the distinguished alumni of the department (maximum 10)

Details are at Annexure-X

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Details of student enrichment programmes is given in Annexure-XI

45. List the teaching methods adopted by the faculty for different programmes.

- Chalk and talk method
- Interactive Teaching,
- Power Point presentation using LCD projector
- Group Discussion
- Quizzes, demonstration, seminar presentation *etc.*

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- Through meetings and random checks by Dean, HOD and committees, constituted by Dean (Academics) for that purpose.
- By interacting with students and faculty frequently to check the progress.
- Continuous Internal Assessment Tests
- Periodical Seminars and Assignments

47. Highlight the participation of students and faculty in extension activities.
- Attending conferences/seminars/FDPs
48. Give details of “beyond syllabus scholarly activities” of the department.
Detail of Beyond scholarly activities accrued over in the department is provided in Annexure-XI
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.
Yes, programme/ department is accredited/ graded by NBA.
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.
- Through research and development activities
 - Introducing value addition courses.
 - Conducting In-house and industrial training activities
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.
- Strength:**
- Highly qualified faculty.
 - Good number of publication in reputed journals (SCI indexed).
 - Good interactions with outer world.
 - Well established laboratories & research facilities and technical help.
- Weakness:**
- Shortage of faculty.
 - Lack of sponsored projects.
 - Lack of patent filing and book writing.
 - Lack of space for infrastructure for classrooms, laboratories & faculty rooms.
 - Lack of running informed courses.
 - To provide funding for B. Tech final year projects.
 - To provide the training for diverse students with different background.
- Opportunity:**
- Post-doctoral fellowship from Indian or Foreign universities.
 - Visiting foreign university/MOU with foreign universities for dissemination of knowledge/ or knowledge sharing.
 - Industry and departmental interaction for students, faculty, technicians.
 - Accessibility to state of equipment in laboratories.

- To provide scholarships to students under government sponsored schemes.
- To establish Virtual laboratories.
- To provide employable skilled manpower as per the local needs and global standards.

Challenges:

- To establish strong bondage between department & industry.
- To provide smart class rooms in the Department.
- To provide placement to students.
- Make up classes for weaker section of students.

52. Future plans of the department

- i. To start M. Tech programme in electrical engineering.
- ii. To implement Visvesvaraya scheme for Ph.D. programme.
- iii. To submit research project to various sponsoring/funding agencies.
- iv. To procure equipment for ICD, UG and PG laboratories as per new scheme.
- v. To establish Centre for skilled development
- viii. Efforts shall be made to establish Centre of Excellence in electrical and instrumentation engineering.
- ix. To provide wider access to people for pursuing professional programmes to inculcate entrepreneurial skills through regular mode in the department.
- x. To setup an Industry Institute Interaction Cell (IIIC) to facilitate the Campus placement.
- xi. To organise workshops, symposiums, seminars, faculty development programs and conferences in the department to promote computer science based interdisciplinary research.
- xii. To establish incubation centre for developing entrepreneurship and promoting start-up with innovative ideas.

Annexure-I

Faculty profile

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. V.K. Jain	Ph.D.	Professor	Electrical Engg., Control System, Reliability Engg	37	7
Dr. J.S. Dhillon	Ph.D.	Professor	Power System Optimization	30	07
Dr. S. Marwaha	Ph.D.	Professor	Power Systems	27	2
Dr. A.S. Arora	Ph.D.	Professor	Biomedical Engineering	28	04
Ms. Prathiba Tyagi	M.Tech (Pursuing Ph.D.)	Associate Professor	Biomedical Engineering	24	02
Dr. Manpreet Kaur	Ph.D.	Associate Professor	Biomedical Engineering	23	03
Dr. Surita Maini	Ph.D..	Associate Professor r		22	03
Ms. Rajinder Kaur	M.Tech	Associate Professor r	Electrical and biomedical Engineering	22	01
Sh. Diljinder Singh	M. E. (Pursuing Ph.D.)	Associate Professor	Electrical Engineering	22	02
Sh. Anshuka Bansal	M.Tech	Associate Professor	Electrical Engineering	20	01
Sh. Asim Ali Khan	M. E. (Pursuing Ph.D.)	Associate Professor	Instrumentation, Biomedical Imaging	19	06
Sh. Charanjiv Gupta	M. E. (Pursuing Ph.D.)	Associate Professor	Electrical Engineering	21	02
Dr. Manpreet Singh	Ph.D.	Associate Professor	Electrical Engineering	19	02
Sh. Gurmeet	M. E. (Pursuing	Associate	Electrical	21	02

Singh Grewal	Ph.D.)	Professor	Engineering		
Dr. Sanjeev Singh	Ph.D.	Associate Professor	Energy Management, Power Electronics and Drives, Power Quality Control of Electrical Systems	17	14
Mr. Manmohan Singh	M.E. (Pursuing Ph.D.)	Associate Professor	Multi-heuristics for Electric Power System Optimization	18	10
Dr. A. K. Aggarwal	Ph.D. (Japan)	Assistant Professor	Computer Vision	20	04
Dr. Raj Kumar Garg	Ph.D.	Assistant Professor	Signal Processing, Power Quality, Industrial Process control	16	10
Sh. Sunil Kumar Bansal	M. E.	Assistant Professor	Instrumentation & Control	4	-
Ms Barsha Mali	M. E. (Pursuing Ph.D.)	Assistant Professor	Instrumentation & Control	2	-
Ms. Nitika Garg	M. E.	Assistant Professor	Electrical and Instrumentation engineering	2	-
Mr. Parveen Kumar	M. E.	Assistant Professor	Power System Optimization	2	-
Mr. Inderjeet Singh	M. E.	Assistant Professor	Instrumentation and control	1/2	-
Mr. Jasmeet Singh	M. E.	Assistant Professor	Instrumentation and control	5	-

Annexure-II**Technical Supporting Staff**

S. No.	Name	Designation	Highest Qualification	Date of joining, in the present post	Date of joining the institute
01.	Sh. S S Rathore	Technician	Diploma	11.10.2001	10.11.1994
02.	Sh. Vipen Kumar	Technician	Diploma	20.1.1994	20.1.1994
03.	Sh. Sukhminder Singh	Technician	Diploma	6.11.1991	6.11.1991
05.	Sh. Amarjit Singh	Technician	Diploma	18.6.1997	18.6.1997
06.	Sh. Navdeep Kumar	Technician	Diploma	24.10.2001	24.10.2001
07.	Jasvir Singh	Technician	Diploma	12.10.2001	12.10.2001

S. No.	Name	Designation	Highest Qualification	Date of joining, in the present post	Date of joining the institute
01.	Mr. Ran Vijay Kr. Singh	Clerk	B.Com.	28.10.1999	07.09.1993
02.	Mr. Maharaj Din Verma	MTS	B.A.	28.10.1999	28.10.1999
03.	Mr. Kila Ram	MTS	10+2	28.10.1999	28.10.1999
04.	Ms. Harinder Kaur	MTS	10+2	28.09.2006	28.09.2006

Annexure-III**List of Publications**

1. Nitin Narang, Era Sharma and J.S. Dhillon, Combined heat and power economic dispatch using integrated civilized swarm optimization and Powell's pattern search method, *Applied Soft Computing*, 52, 3, pp. 190-202, 2017, ISSN: 1568-4946, 1872-9681, IF: 2.857
2. Nirbhaw Jap Singh, J.S. Dhillon and D.P. Kothari, Multi-objective thermal power load dispatch using chaotic differential evolutionary algorithm and Powell's method, *Soft Computing*, 2017, DOI 10.1007/s00500-016-2473-7, ISSN: 1432-7643 (Print) 1433-7479 (Online), IF: 1.630
3. Tripatjot Singh Panag and J.S. Dhillon, Two Stage Grid Classification Based Algorithm for the Identification of Fields Under a Wireless Sensor Network Monitored Area, *Wireless Personal Communications*, 2016, DOI: 10.1007/s11277-016-3813-8, ISSN: 0929-6212 (Print) 1572-834X (Online), IF: 0.701
4. Damanpreet Singh and Jaspreet Singh Dhillon, Fuzzy based design of digital IIR filter using ETLBO, *Turkish Journal of Electrical Engineering & Computer Sciences*, vol. 24, pp.4042-4062, 2016, DOI:10.3906/elk-1410-107, E-ISSN: 1303-6203,1300-0632, IF: 0.518
5. Kamalpreet Kaur Dhaliwal, Jaspreet Singh Dhillon, Integrated cat swarm optimization and differential evolution algorithm for optimal IIR filter design in multi-objective framework, *Circuits, Systems, and Signal Processing*, Vol. 36, No. 01, pp:270-296, 2017, DOI: 10.1007/s00034-016-0304-9, ISSN: 0278-081X (Print) 1531-5878 (Online), IF:1.178
6. Manmohan Singh and Jaspreet Singh Dhillon, A simple opposition based greedy heuristic search for dynamic economic thermal power dispatch, *Electric Power Components and Systems*, Vol. 44, No 6, pp. 589-605, 2016, DOI: 10.1080/15325008.2015.1122113, ISSN: 1532-5008, 1532-5016, 0.664
7. Manmohan Singh and J.S. Dhillon, Multiobjective thermal power dispatch using opposition-based greedy heuristic search, *International Journal of Electrical Power and Energy Systems*, Vol. 82, pp.339-353, 2016, ISSN: 0142-0615, 1879-3517, IF: 3.432
8. Nirbhaw Jap Singh, J.S. Dhillon and D.P. Kothari, Synergic predator-prey optimization for economic thermal power dispatch problem, *Applied Soft Computing*, Vol. 43, pp.298-311, 2016, ISSN: 1568-4946, 1872-9681, IF: 2.14
9. Vikram Kumar Kamboj, S.K. Bath and J.S. Dhillon, Multiobjective multi area unit commitment using hybrid differential evolution algorithm considering import/export and tie-line constraints, *Neural Computing and Applications*, 2016, DOI 10.1007/s00521-016-2240-9, ISSN: 1433-3058, IF: 1.492
10. D.S. Sidhu, J.S. Dhillon and Dalveer Kaur, Hybrid heuristic search method for design of digital IIR filter with conflicting objectives, *Soft Computing*, 2016, DOI 10.1007/s00500-015-2023-8, ISSN: 1432-7643 (Print), 1433-7479 (Online), IF: 1.630
11. Vikram Kumar Kamboj, S.K. Bath and J.S. Dhillon, Implementation of hybrid harmony/random search algorithm considering ensemble and pitch violation for unit commitment problem, *International Journal of Electric Power and Energy Systems*, Vol. 77, No. 5, pp. 228-249, 2016, ISSN: 0142-0615, 1879-3517, IF: 3.432
12. D.S. Sidhu, J.S. Dhillon and Dalveer Kaur, Design of higher order digital iir low pass filter using hybrid differential evolution, *International Journal of Signal Processing Systems*, Vol. 4, no. 1, pp. 6-12, 2016, ISSN: 2315-4535, -
13. Vikram Kumar Kamboj, S.K. Bath and J.S. Dhillon, A novel hybrid DE-random search approach for unit commitment problem, *Neural Computing and Applications*, Vol. 26, No. 8, pp. 1-23, 2015, DOI: 10.1007/s00521-015-2124-4, ISSN: 1433-3058, IF: 1.492
14. Vikram Kumar Kamboj, S.K. Bath and J.S. Dhillon, Hybrid HS-random search algorithm considering ensemble and pitch violation for unit commitment problem, *Neural*

- Computing and Applications, Vol. 26, No. 8, pp. 1-26, 2015, DOI: 10.1007/s00521-015-2114-6, ISSN: 1433-3058, IF: 1.492
15. D.S. Sidhu, J.S. Dhillon and Dalvir Kaur, Design of digital iir filter with conflicting objectives using hybrid gravitational search algorithm, *Mathematical Problems in Engineering*, Vol. 2015, pp.1-16, 2015, doi:10.1155/2015/282809 (Article ID 282809), ISSN: 1024-123X, e-ISSN: 1563-5147, IF:1.082
 16. Vikram Kumar Kamboj, S.K. Bath and J.S. Dhillon, Solution of non-convex economic load dispatch problem using Grey Wolf Optimizer, *Neural Computing and Applications*, Vol. 26, No. 5, pp.1-16, 2015, DOI 10.1007/s00521-015-1934-8, ISSN: 1433-3058, IF: 1.429
 17. Ranjit Kaur, Manjeet Singh Patterh and J.S. Dhillon, A new greedy search method for the design of digital IIR filter, *Journal of King Saud University –Computer and Information Sciences*, Vol. 27, No. 4, pp. 278–287, 2015, ISSN: 1319-1578, -
 18. Kamalpreet Kaur Dhaliwal and Jaspreet Singh Dhillon, On the design of optimal digital IIR BP filter using opposition aided cat swarm optimization algorithm, *International Journal of Engineering Research and General Science*, Vol. 3, No. 3, pp.736-743, 2015, ISSN: 2091-2730, 3.843
 19. Damanpreet Singh and J.S. Dhillon, Design of optimal IIR digital filter using Teaching-Learning based optimization technique, *WSEAS Transactions on Advances in Engineering Education*, Vol.12, Article 2, pp. 9-18, 2015, ISSN: 1790-1979, E-ISSN: 2224-3410, -
 20. K.K. Dhaliwal and J.S. Dhillon, Implementation of opposition based biogeography-based optimization for optimal digital iir filter design, *Vitivinicola*, Vol. 30, No. 3, pp. 326-52, 2015, ISSN: 0254-0223, IF: 0.444
 21. Damanpreet Singh and J.S. Dhillon, Design of higher order LP and HP digital IIR filter using the concept of teaching-learning based optimization, *WSEAS Transactions on Signal Processing*, Vol. 11, pp. 29-37, 2015, E-ISSN: 1790-5052 / 2224-3488, IF: 0.13
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 23. Damanpreet Singh and J.S. Dhillon, Design of IIR digital filter using the concept of teaching-learning based optimization, *Wulfenia Journal*, Vol. 21, No. 9, pp. 309-333, 2014, ISSN: 1561-882X, IF: 0.236
 24. Damanpreet Singh and J.S. Dhillon, IIR band pass and band stop filter design employing teaching- learning based optimization technique, *International Journal of Computer Applications*, Vol. 104, No. 14, pp. 38-42, 2014, ISSN: 0975-8887, IF: 0.814
 25. Kamalpreet Kaur and J.S. Dhillon, Design of digital IIR filters using integrated cat swarm optimization and differential evolution, *International Journal of Computer Applications*, Vol. 99, No. 4, pp. 28-43, 2014, ISSN: 0975-8887, IF: 0.791
 26. Nitin Narang, J.S. Dhillon and D.P. Kothari, Weight pattern evaluation for multiobjective hydrothermal generation scheduling using hybrid search technique, *International Journal of Electrical Power & Energy Systems*, Vol. 62, pp. 665–678, ISSN: 0142-0615, 1879-3517, IF: 3.432
 27. Nitin Narang, J.S. Dhillon and D.P. Kothari, Scheduling of short-term hydrothermal generation using predator prey optimization technique, *Applied Soft Computing*, Vol. 21, pp. 298-308, 2014, ISSN: 1568-4946, 1872-9681, IF: 2.14
 28. Ranjit Kaur, Manjeet Singh Patterh and J.S. Dhillon, Real coded genetic algorithm for design of IIR digital filter with conflicting objectives, *Applied Mathematics & Information Sciences*, Vol. 8, no. 5, pp. 2635-44, 2014, ISSN: 1935-0090, 2325-0399, IF: 1.232
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31. Balraj Singh, J.S. Dhillon and Y.S. Brar, Design of digital IIR filters: a comparison, *International Journal of Electrical Electronics and Telecommunication Engineering*, Vol. 44, No.1, pp. 1108-21, 2013, ISSN: 2051-3240, IF: 2.221
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33. Ranjit Kaur, Manjeet Singh Patterh and J.S. Dhillon, Digital IIR filter design using real coded genetic algorithm, *International Journal Information Technology and Computer Science*, Vol. 7, pp. 27-35, 2013, ISSN: 2074-9007, 2074-9015, IF: 0.07
34. Ranjit Kaur, Manjeet Singh Patterh and J. S. Dhillon, Design of optimal L1 stable IIR digital filter using real coded genetic algorithm, *IAENG International Journal of Computer Science*, Vol. 39, No. 4, pp. 01-21, 2012, ISSN: 1819-656X, 1819-9224, IF: 0.98
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39. Jaspreet Singh Dhillon and Manmohan Singh, Generation search method in polar coordinates for optimization of economic emission load dispatch, *International Journal of Advanced Computer and Mathematical Sciences*, Vol. 2, No. 1, pp. 74-88, 2011, ISSN: 2230-9624, IF: 1.54
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41. R. Kumar, B. Singh, D. T. Shahani, A. Chandra and K. Al-Haddad, Recognition of Power-Quality Disturbances Using S-Transform-Based ANN Classifier and Rule-Based Decision Tree, *IEEE Trans. on Industry Applications*, 51 (2), 1249-1258, 2014, DOI: 10.1109/TIA.2014.2356639, Print ISSN: 0093-9994 Online ISSN: 1939-9367, IF: 1.901
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45. Sanjeev Singh and Bhim Singh, Optimized Passive Filter Design using Modified Particle Swarm Optimization Algorithm for a 12-Pulse Converter fed LCI-Synchronous Motor

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Annexure-IV**Books with ISBN with details of publishers**

Authors	Title	Edition	Publisher	Year	ISBN no.
D.P. Kothari and J. S. Dhillon	Power System Optimization	2 nd edition	<i>Prentice Hall of India Pvt. Ltd., New Delhi</i>	2011	ISBN: 978-81-203-4085-5
D.P. Kothari and J.S. Dhillon	Digital Circuits and Design	-	<i>Pearson Education, New Delhi</i>	2016	ISBN: 978-93-325-4353-9
Sanjeev Singh and Umesh Rathore	Energy Management	2 nd edition	S.K. KATARIA & SONS	2016	978-93-5014-101-4
H.M. Rai, Sanjay Marwaha	Basic Electrical Engineering'		Satya Prakashan	2012	81-7684-258-3
H.M. Rai, B.R. Sharma, Sanjay Marwaha	Basic Electrical Engineering'	-	Satya Prakashan	2010	81-7684-522-1
Amanpreet Singh, Sanjay Marwaha, H.M. Rai	Basic Electrical and Electronics Engineering'		Satya Prakashan	2010	81-7684-567-2

ANNEXURE-V

Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs)

Name of Faculty	Nature of the course/Summer School	Place	Duration
Sh. Diljinder Singh	One week TEQIP-II sponsored Short Term Training Program (STTP) on "Renewable Energy Applications: Practices and Challenges"	SLIET, Longowal	December. 21 - 25, 2015
	7th INDIA MASTERS Technical Training Conference for MICROCHIP Embedded Control Engineers, "INDIA MASTERSs CONFERENCE 2010",	RAMADA hotel conference hall Mumbai	November. 29-30, 2010
	TEQIP-II sponsored Short Term Training Program (STTP) on "Computational Tools for Engineers"	Guru Nanak Dev Engineering College, Ludhiana	29 July - 03 Aug, 2013
	Two-day workshop on "Machine Vision & Image Processing using LabVIEW"	PSG College of Technology, Coimbatore	May. 18 - 19, 2012
Dr. A. K. Aggarwal	TEQIP-II sponsored course on Energy management and energy efficiency	IIT Guwahati	May 23-27, 2016
	Knowledge Dissemination Programme on "Gradient based Numerical Optimization Algorithms	IIT, Kharagpur	December 7-11, 2015
	TEQIP-II STTP on VLSI Design and Communication Systems	SLIET, Longowal	June 1-5, 2015
Dr. J.S. Dhillon	Management Capacity Enhancement Programme, under TEQIP	IIM Udaipur	December 15-20, 2014
Professor S. Marwaha	Management Capacity Enhancement Programme, under TEQIP	IIM Udaipur	February 13-18, 2017
Dr. Surita Maini	Management Capacity Enhancement Programme for Administrators of TEQIP-II	IIM, Udaipur	June 8-13, 2015
	E-Governance: Transforming Government Sector	NPC, Port Blair	November 2 -6, 2015
	Team Building & Leadership	NPC, Munnar	June, 13-17,

			2016
Mr. Charanjiv Gupta	E-Governance: Transforming Government Sector	NPC, Port Blair	November 2 -6, 2015
	Team Building & Leadership	NPC, Munnar	June, 13-17, 2016
	Impact of bulk penetration of renewable energy resources on grid operation and control	CPRI, Bangalore	November 10-11, 2016
	Power system reliability	NPTI, Bangalore	June 21-26, 2015
	Industry Institute Interaction for Continuing Education Programme	NITTTR, Chandigarh	March 5-9, 2012

ANNEXUR-VI

Seminars/ Conferences/Workshops organized

Sr No	Academic year	Name of Program	Date	Sponsored By	Coordinator
1.	2010-2011	National Conference on Recent advances in Computational Techniques in Electrical Engineering RACTEE-2011	25/02/2011 to 26/02/2011	-	EIE department
2.	2011-2012	National Conference on Green Technologies: Smart and Efficient Management GTSEM-2012	24/02/2012 to 25/02/2012	-	EIE department
3.	2014-2015	TEQIP-II sponsored STTP	09/03/2015 to 13/03/2015	TEQIP-II	EIE department
4.	2015-2016	National Conference on Advanced Computational Methods in Electrical Engineering ACMEE-2016	25/03/2016 to 26/03/2016	TEQIP-II	Mr. Manmohan Singh, Mr. Diljinder Singh
5.	2015-2016	TEQIP-II sponsored two-day workshop on BIOMEDICAL ENGINEERING: Harmonizing the Research and Curricula	30/9/2016 to 01/10/2016	TEQIP-II	Dr. A. S. Arora
6.	2015-2016	TEQIP-II sponsored STTP on Recent Advances in Computational Techniques in Engineering	17/10/2016 to 21/10/2016	TEQIP-II	Dr. Surita Maini Dr. Ashwani Kumar Agagrwal

Annexure-VII**Student profile programme-wise**

Name of the Programme		Applications Received	Selected		Pass Percentage	
			Male	Female	Male	Female
Ph.D. Programme	2011	609	10	2		
	2012	386	1	1		
	2013	440	2	0		
	2014	443	0	0		
	2015	563	7	1		
	2016	530	2	0		
P.G. Programmes	2011	1238	144	72		
	2012	1241	131	45		
	2013	48	89	13		
	2014	-	94	27		
	2015	19	105	55		
	2016	289	93	74		
Degree Programmes	2011	4581	449	112		
	2012	3962	395	138		
	2013	3174	375	123		
	2014	2342	539	134		
	2015	2082	469	91		
	2016	1329	342	108		
Integrated Certificate and Diploma Programmes	2011	-	-	-		
	2012	-	-	-		
	2013	-	-	-		
	2014	2101	415	99		
	2015	2199	455	110		
	2016	1822	471	122		

ANNEXURE-VIII**List of doctoral, post-doctoral students and Research Associates from the host institution/university**

Sr. No	Student Status	Name of the Research Scholar	Name of the Supervisor (s)	Topic/Area of Research
1.	SFIP	Gurmeet Singh Grewal	Prof. A.S. Arora	Design and performance analysis of Combined Radial and Axial -Flux Permanent Magnet Synchronous Motor
2.	SFIP	Pratibha Tyagi	Prof. A.S. Arora	Surface electro myography based posture analysis for the backrest
3.	SFIP	Manmohan Singh	Prof. J.S. Dhillon	Multi-heuristics for Electric Power System Optimization
4	SFIP	Diljinder Singh	Prof. J.S. Dhillon	Hybrid Optimization Algorithm for Load Dispatch of Coordinated Wind – Thermal Electric Power System
5	SFIP	Asim Ali Khan	Prof. A.S. Arora	Detection of Breast Cancer with Mammography and Infrared Imaging
6	SFIP	Charanjiv Gupta	Dr. Sanjeev Singh	Design and performance Evaluation of Micro grid based on conventional and renewable energy sources

SFIP: Self-Financed Internal Part-time

ANNEXUR-IX

List of doctoral, post-doctoral students and Research Associates from other institutions/universities

Sr. No	Student Status	Name of the Research Scholar	Name of the Supervisor (s)	Topic/Area of Research
1.	SFEP	Gurinderpal Singh	Prof. V.K. Jain	Development of Solar Biogas Model for Generation of Energy
2.	SFEP	Sukhjot Singh	Prof. V.K. Jain	Development of novel algorithm for optimization of Quality parameters in Steganography and Watermarking
3.	SFEP	Mr. Satyajit Sen Purkayastha	Prof. V.K. Jain	Developing a Interpretable Brain Computer Interface with Improved Information Transfer Rate
4	SFEP	Mr. NirbhawJap Singh	Prof. J. S. Dhillon	Power System Optimization
5	SFEP	Mr. Jatinder Singh	Prof. J. S. Dhillon	Profit based Unit Commitment using Memetic Algorithm
6	SFEP	Ms. Manbir Kaur	Prof. J. S. Dhillon	Novel hybrid algorithm for hydrothermal generation scheduling
7	SFEP	Mr. Tripatjot Singh Panag	Prof. J. S. Dhillon	Wireless Sensor Networks using hybrid Optimization Techniques
8	FTWP	Mr. Mohit Kumar	Prof. J. S. Dhillon	Soft Computing techniques for generation scheduling of electrical power systems
9	SFEP	Ms Gurprit Kaur	Prof. J. S. Dhillon	Power System Optimization
11	SFIP	Gurmeet Singh	Prof. A. S. Arora	Design and performance analysis of Combined Radial and Axial-Flux Permanent Magnet Synchronous Motor
12	SFEF	Nidhi Maurya	Prof. A. S. Arora	Analysis of Galvanic Skin Response in Emotion Detection and

				Decision Making
13	FTWP	Mr. Jaspreet Singh	Prof. A. S. Arora	Biomedical Engineering
14	SFEP	Mr. Gagan Wadhwa	Prof. S Marwaha	Application of Genetic Algorithm/ Neural Network for Analysis of Transformer Oil
15	SFEP	Mr. Sukhwinder Singh	Prof. S Marwaha	Robust Control of Grid Connected Doubly Fed Induction Generator (DFIG) Based Power Systems
16	SFEP	Chetan Vasudeva	Prof. S Marwaha	Quasi Static Field Analysis of Electrical Machines Using an h-Hierarchical Adaptive Finite Element Method
17	SFEP	Gagandeep Sharma	Prof. S Marwaha	Design and Electromagnetic Field Analysis of Low Speed Permanent Magnet Generators for Renewable Energy Applications
18	SFEP	Hare Krishna Mishra	Dr. Manpreet Kaur	Yet to be decided
19	SFEP	Ashanand	Dr. Manpreet Kaur	Yet to be decided
20	SFEP	Rheesabh Dwivedi	Dr. Sanjeev Singh	Yet to be decided
21	SFEP	Umesh Chand Rathore	Dr. Sanjeev Singh	Design and Development of Voltage and Frequency Controller for Micro/Pico-Hydro Power Generation System
22	SFEP	Jaspreet Singh	Dr. Sanjeev Singh	Impact Analysis of Power Quality Problems of Transformers
23	SFEP	Manoj Kumar	Dr. Sanjeev Singh	Analysis, Design and Development of High Frequency Converter Based Power Factor Controller for Welding Application
24	SFEP	Amit Kushwaha	Dr. Ashwani Kumar Aggarwal	Yet to be decided

FTWF: Full-Time with Fellowship

SFEP: Self-Financed External Part-time

Annexure-X**List the distinguished alumni of the department**

Sr. No.	Name of Alumni	Designation	Current Employer
1.	Dr (Mrs.) Ranjit Kaur	Professor	University College of Engineering (UCoE), Punjabi University, Patiala
2.	Mrs. Navneet Kaur	Assistant Professor	Baba Banda Bahadur Engineering College, Fatehgarh Sahib
3.	Mr. NirbhawJap Singh	Assistant Professor	Thapar University Patiala
4.	Mr. Kala Ram Kansal	Sub Divisional Magistrate (SDM)	SDM office, Mansa
5	Mr. Gautam Kaushal	Assistant Professor	University College of Engineering (UCoE), Punjabi University, Patiala
6	Mr. J.S. Aujla	Deputy General Manager (Technical)	Energy Efficiency Services Limited, New Delhi.
7	Dr. Raj Kumar Garg	Assistant Professor	SLIET Longowal
8	Dr. Amit Kaul	Assistant Professor	National Institute of Technology(NIT) Hamirpur
9	Dr. Deepak Joshi	Assistant Professor	Indian Institute of Technology (IIT) Delhi
10	Mr. Himesh Handa	Assistant Professor	National Institute of Technology(NIT) Hamirpur

ANNEXUR-XI

Detail of Beyond scholarly activities accrued over in the department is given below:

1. Name of Programme: National Conference on Recent advances in Computational Techniques in Electrical Engineering RACTEE-2011
Date: 25-26 February, 2011
2. Name of Programme: National Conference on Green Technologies: Smart and Efficient Management GTSEM-2012
Date: 24-25 February, 2012
3. Name of Programme: TEQIP-II sponsored STTP
Date: 09-13 March, 2015
4. Name of Programme: National Conference on Advanced Computational Methods in Electrical Engineering ACMEE-2016
Date: 25-26 March, 2016
Coordinators Mr. Manmohan Singh and Mr. Diljinder Singh
5. Name of Programme: TEQIP-II sponsored two-day workshop on BIOMEDICAL ENGINEERING: Harmonizing the Research and Curricula
Date: 30 September- 01 October, 2016
Coordinators Dr. A.S. Arora
6. Name of Programme: TEQIP-II sponsored STTP on Recent Advances in Computational Techniques in Engineering
Date: 17-21 October, 2016
Coordinators Dr. Surita Maini and Dr. Ashwani Kumar Agarwal

Prof. J. Dhillon	Citations	849
	h-index	12
	i10-index	16
	SJR	-
Dr. Sanjeev Singh	Citations	579
	h-index	10
	i10-index	10
	SJR	-
Dr. Surita Maini	Citations	9
	h-index	2
	i10-index	
	SJR	-

Evaluative Report of the Department

1. **Name of the Department :** Electronics and Communication Engineering
2. **Year of establishment :** 1991
3. **Is the Department part of a School/Faculty of the university? -** Yes
4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)**

S. No.	Programme Level	Name of Programme	Duration (years)	Entry Qualification	Sanctioned/ Approved Strength
1.	Doctorate Level	Ph.D	3-8	M.Tech	--
2.	Post Graduate	M.Tech	2	B.Tech	20
3.	Under Graduate	B.E.	4/3	12 th /Diploma	60
4.	Diploma	Diploma	2	12 th	20
5.	Integrated Certificate and Diploma	ICD (DEC-CSME & DEC-CTV)	3	10 th	62

5. **Interdisciplinary programmes and departments involved:** -NIL-
6. **Courses in collaboration with other universities, industries, foreign institutions, etc.:**
 - At present, the department does not offer any course in collaboration with other universities, industries, foreign institutions, etc.
7. **Details of programmes discontinued, if any, with reasons:**
 - Programmes discontinued: 2 years Certificate Programme, 2 years Diploma Programme and 3 years Degree Programme.

Reason: Due to restructuring of academic programmes, 2 years Certificate,

- 2 years Diploma and 3 years Degree programmes have been discontinued.
8. **Examination System: Annual/Semester/Trimester/Choice Based Credit System:** Semester Wise
9. **Participation of the department in the courses offered by other departments:** Yes

Courses offered by ECE department to the other departments:

UG Programme	
EC-421	Elements of Electronic Engineering
ECO-621	Principle of Communication Engineering
ECO-622	Optical Electronics
ECO-623	Electronic Measurements & Instrumentation
ECO-711	Fundamentals of Microprocessor
ECO-712	VLSI Technology
ECO-713	Nano Technology
ECO-721	Biomedical Electronics
ECO-722	Microcontroller & Embedded System
ECO-723	Wireless Communication
ICD Programme	
EC-211	Fundamentals of Electronic Engineering
EC-221	Fundamentals of Electronic Engineering

Courses offered by other department(s) to ECE Department :

UG Programme	
CYT-411	Applied Chemistry
HUT-412	Engineering Economics and Entrepreneurship
CST-411	Elements of Computer Programming

MET-412	Workshop Technology & Practice-I
MEP-413	Engineering Drawing*
AMT-421	Engineering Mathematics
PHT-421	Applied Physics
HUT-422	English Communication & Soft Skills
EET-421	Elements of Electrical Engineering
MET-422	Elements of Mechanical Engineering
HUM-712	Human Values and Professional Ethics
CHM-721	Environmental Studies
HUT-722	Principles of Management
ICD Programme	
AM-111	Mathematics- I
PH-111	Physics-I
CY-111	Chemistry-I
HU-111	Communication Skills-I
EE-111	Fundamental of Electrical Engineering
WS-122	Workshop Practice
AM-121	Mathematics- II
PH-121	Physics-II
CY-121	Chemistry-II
ME-121	Engineering Drawing
HU-211	Communication Skills-II
CS-216	Computer Fundamentals
MC-211	Moral values and Professional ethics
AM-221	Applied Mathematics

MC-311	Environmental Studies
HU-311	Entrepreneurship

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

Year:2011-12

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	2	1	0	1
Associate Professors	4	5	0	5
Assistant Professors/PRL	12	3	9	12

Year:2012-13

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	2	1	0	2
Associate Professors	4	5	0	5
Assistant Professors	12	2	5	7

Year:2013-14

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	2	1	0	3
Associate Professors	4	3/4	0	3/4
Assistant Professors	12	2/5	8/6	10/11

Year:2014-15

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	2	1	0	4
Associate Professors	4	3	0	3
Assistant Professors	12	5	3	8

Year:2015-16

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	2	1	0	4
Associate Professors	4	3	0	3
Assistant Professors	12	5/4	4/8	9/12

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance :

Sr. No	Name of the faculty	Designation	Qualification	Area of Specialization	No. of Years of Experience (Approx.)	No. of Ph.D/M. Phil Students guided for the last 4 years
1	Dr. A.P. Singh Pharwaha	Professor	Ph.D.	Intelligent System	24	07
2	Dr. J.S. Ubhi	Professor	Ph.D.	Wireless Communication & VLSI Design	22½	01
3	Dr. Anupma Marwaha	Professor	Ph.D.	Design & Analysis of Electromagnetic Devices and Antennas	24	07
4	Dr. Surinder Singh	Professor	Ph.D.	Broadband Communication Network	18	05
5	Dr. L.S. Solanki	Associate Professor	Ph.D.	Antenna, Microwave Detection Buried Object	24	Nil
6	Dr. Ajay Pal Singh	Associate Professor	Ph.D.	Image Processing	19	Nil
7	Dr. Dilip Kumar	Associate Professor	Ph.D.	Embedded System, Wireless Sensor Network	12	01
8	Er. Pankaj Kumar Das	Assistant Professor	M.Tech	VLSI Design, Nano Material	10	Nil
9	Er. Alka Singla	Assistant Professor	M.Tech	Optical Fiber Communication,	4	Nil

				OCDMA		
10	Er. Sarbjeet Singh	Assistant Professor	M.Tech	Analog VLSI and Digital VLSI	8	Nil
11	Er. Vipul Singhal	Assistant Professor	M.Tech	Image Processing	4	Nil
12	Kuldip Singh	Assistant Professor	M.Tech	RF & Microwave Engineering	3	Nil
13	Vivek Harshey	Assistant Professor	M.Tech	VLSI	2	Nil
14	Er. Deepak Kumar	Assistant Professor (On Contract)	M.Tech	Digital Signal Processing	2.5	Nil
15	Er. Rajesh Kumar	Assistant Professor (On Contract)	M.Tech	Design of Low Power Devices	4	Nil
16	Er. Arshdeep Singh	Assistant Professor (On Contract)	M.Tech	MANETs	2	Nil
17	Er. Harpreet Kaur	Assistant Professor (On Contract)	M.Tech	Digital Image Processing	1	Nil
18	Er. Mamta Janagal	Assistant Professor (On Contract)	M.Tech	Optical Network	8.5	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors :-
NIL-

13. Percentage of classes taken by temporary faculty - programme-wise information:

Year 2011-12

Programme	Percentage(%)
Certificate	65.13
Diploma	53.8
Degree	41.9
PG	6.89

Year 2012-13

Programme	Percentage(%)
Certificate	56.25
Diploma	84.84
Degree	17.39
PG	16.6

Year 2013-14

Programme	Percentage(%)
Certificate	48.8
Diploma	53.13
Degree	9.24
PG	7.14

Year 2014-15

Programme	Percentage(%)
Certificate	50
ICD	22
Diploma	39
Degree	19
PG	0

Year 2015-16

Programme	Percentage(%)
ICD	63

Diploma	47
Degree	24
PG	14

14. Programme-wise Student Teacher Ratio :
Year 2011-12

Program	Number of students	Number of teachers	Percentage (Approximate)
Certificate	398	15.95	24.82
Diploma	100	6.48	30.86
Degree	390	15.82	24.65
PG	64	4.37	14.65

Year 2012-13

Program	Number of students	Number of teachers	Percentage (Approximate)
Certificate	392	16.12	24.31
Diploma	198	6.5	30.46
Degree	390	15.75	24.76
PG	64	4.24	15.1

Year 2013-14

Program	Number of students	Number of teachers	Percentage (Approximate)
Certificate	316	16.23	19.47
Diploma	196	6.57	29.83
Degree	386	15.47	24.95
PG	60	3.98	15.07

Year 2014-15

Programme	Number of students	Number of teachers	Percentage (Approximate)
Certificate	122	9.78	12.47
ICD	100	8.95	11.17
Diploma	156	7.1	21.97
Degree	428	17.64	24.26
PG	58	5.32	10.90

Year 2015-16

Programme	Number of students	Number of teachers	Percentage (Approximate)
ICD	210	12.34	17.02
Diploma	98	9.06	10.82
Degree	452	20.51	22.04
PG	59	3.96	14.90

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual**Year 2011-12**

	Sanctioned	Filled	Actual
Academic support staff (technical) Sr. Technician/ Technician	7	7	7
Clerk/SSS	1	1	1
L.A.	1	1	1
M.T.S	2	2	2
Administrative staff	2	2	2

Year 2012-13

	Sanctioned	Filled	Actual

Academic support staff (technical) Sr. Technician/ Technician	7	7	7
Clerk/SSS	1	1	1
L.A.	1	1	1
M.T.S	2	2	2
Administrative staff	2	2	2

Year 2013-14

	Sanctioned	Filled	Actual
Academic support staff (technical) Sr. Technician/ Technician	7	7	7
Clerk/SSS	1	1	1
L.A.	1	1	1
M.T.S	2	2	2
Administrative staff	2	2	2

Year 2014-15

	Sanctioned	Filled	Actual
Academic support staff (technical) Sr. Technician/ Technician	7	7	7
Clerk/SSS	1	1	1
L.A.	1	1	1
M.T.S	2	2	2
Administrative staff	2	2	2

Year 2015-16

	Sanctioned	Filled	Actual

Academic support staff (technical) Sr. Technician/ Technician	7	7	7
Clerk/SSS	1	1	1
L.A.	1	1	1
M.T.S	2	2	2
Administrative staff	2	2	2

- 16. Research thrust areas as recognized by major funding agencies :**
 ➤ Broadband Communication and Optical Network.
- 17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise: -NIL-**
- 18. Inter-institutional collaborative projects and associated grants received**
 a) National collaboration:- NIL b) International collaboration:- NIL
- 19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received :**

Sr. No.	Title of Project	Name of Principle Investigator	Duration of Project	Funded by	Grant received
1.	Enhancement of flexibility & Expandability of Optical Communication Networks	Dr. Surinder Singh	03 years (2013-2016)	AICTE	Rs. 15,00,000/-
2.	Reconfiguration of optical fiber links in optical network topologies for enhancement of	Dr. Surinder Singh	01 year (2013-2014)	TEQIP-II	Rs. 75000/-

broadband optical communication network				
---	--	--	--	--

20. Research facility / centre with

State recognition

National recognition

International recognition

- At present, department has good research facilities such as Anechoic chamber in Microwave lab, various research software like Optisystem, FemSim, MATLAB, HFSS, Cadence Tools etc. but these facilities are not listed by such agencies. However, research project has been funded by AICTE and TEQIP.

21. Special research laboratories sponsored by / created by industry or corporate bodies :

- At present no special research laboratories are sponsored by / created by industry or corporate bodies. However, department has signed MoU with Semiconductor Laboratory, Department of Space, SAS Nagar, Mohali to use their research laboratories. The department has also initiated process to sign MoU with CEERI-CSIR, Pilani to use their research facilities.

22. Publications: List of detailed publication is attached at Annexure- I

Faculty Name	Number of papers published peer reviewed	Chapters in books	Edited books	Books with ISBN with detail of publishers	Number listed in international Database (Scopus, web of science etc.)	Citation Index-range/average	Impact Factor-range/average	h-index-range/average
Dr. Amar Partap Singh	46	02	--		46	419	--	18
Dr.	53	--	01	- Elements of	20	78	--	04

NAAC-Evaluative Report Electrical and Instrumentation

Anupma Marwaha				Electrical and Electronics Engineering, MBD Group (Modern Publishers) 978-93-5184-004-6 - Modern Approach to System Analysis and Design, MBD Group (Modern Publishers) 978-93-5184-005-3				
Dr. J.S. Ubhi	14	01		--	14	54	0.387	4
Dr. Surinder Singh	34	1	--	- Planning and optimization of LTI networks ISBN:978-3-330-3504-1 by Lambert Academic Publication	34	2354	--	9
Dr. Dilip Kumar	25	02		- Aerophonic technology: Blessings, curse and automation with ISBN:- 978-3-659-85756-0 in 2016 - Surveillance Robot Design and development with ISBN: 978-3-659-83188-1 in 2016	25	1089	0-1.5	13
Dr. Ajaypal Singh	11	--		--	--	--	--	--
Er. Lakhvinder Singh	1	--		--	--	--	--	--

NAAC-Evaluative Report Electrical and Instrumentation

Solanki								
Er. Pankaj Kumar Das	11					18		2
Er. Sarbjeet Singh	Nil	--		--	--	--	--	--
Er. Alka Singla	--	--		--	--	--	--	--
Er. Vipul Singhal	Nil	--		--	--	--	--	--
Er. Kuldip Lohchab		--		--	--	--	--	--
Er. Vivek Harshey		--		--	--	--	--	--
Er. Rajesh Pathak		---		--	--	---	--	--
Er. Deepak Sigroha	Nil	--		--	--	--	--	--
Er. Arshdeep Singh	2	--		--	--	--	--	--
Er. Mamta Janagal	6	--		--	--	--	--	--
Er. Harpreet Kaur	2	--		--	--	--	--	--

23. Details of patents and income generated: -Nil-

24. Areas of consultancy and income generated:

The department is exploring consultancy in the area(s) of Broadband Communication, Low power VLSI Design, Intelligent Systems.

25. Faculty selected nationally / internationally to visit other laboratories / institutions/industries in India and abroad

- Most of the faculty has been selected nationally / internationally to visit other laboratories / institutions/ industries in India and abroad.

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards
- d) any other (please specify)

S. No	Faculty Name	Faculty Serving in	National/ International	Detail
1.	Dr. A.P. Singh	Reviewer	International	-IEEE Transactions on Circuits and Systems-I and IEEE Sensors Journal -IEEE TENCON'91 International Conference on Energy, Computer, Communication and Control systems
		Fellow/ Member	National International	- Institution of Engineers - Institution of Electronics and Telecommunications Engineers - Instrument Society of India -Indian Society for Technical Education, Metrology Society of India -Punjab Academy of Sciences - International Association of Engineers (IAENG), Hong Kong
2.	Dr. J.S. Ubhi	Reviewer	International	Journals published by IEEE, Elsevier, Wiley, Taylor& Francis.
		Member	International/ National	-Institution of Engineers (IE).

				-Institution of Electronics and Telecommunications Engineers (IETE). -International Association of Engineers (IAENG). Hongkong -Member of Expert team by NBA
3.	Dr. Anupma Marwaha	Reviewer	International	Journals published by Scopus, Elsevier Science, Springer
		Member	National	-Institution of Engineers (IE). -Life Member of Indian Society for Technical Education (ISTE).
4.	Dr. Surinder Singh	Editorial Board	International	Indonesian Journal of Electrical Engineering and computer science
5.	Dr.Dilip Kumar	Reviewer Committee	International	Journals published by Elsevier, Springer, IET, IEEE

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

Name of Faculty	Nature of the course/Summer School	Place	Duration
Dr. A.P Singh	National workshop on Partners for development of e-Content for Skill Development organized by NMEICT, MHRD	Habitat Center, New Delhi	June 13, 2014
	Management Capacity Enhancement Programme	IIM Udaipur	June 8-13, 2015.
	Workshop on Disciplinary Rules and Procedures conducted by	Azzure the Spree Hotel, Calangute, Goa.	October 26-29, 2015

	NAHRD, New Delhi		
Dr. J.S. Ubhi	Industrial Training	Semi-Conductor Laboratory, Mohali	December 21, 2015- January 4, 2016 June 6 - July 5, 2016
	STTP on Ad-hoc Networks and cloud computing	SLIET, Longowal	January 13- 17, 2016
	STTP on Wireless Communications: Fundamentals and Advancements	IIT, Delhi	July 6-11, 2015
	STTP on Academic Leadership for TEQIP institutions	IIM, Kozhikode	June 22-27, 2015.
	STTP cum training program on Design Trends with EDA Tools in VLSI, Electronics and Communication Technology	NIT, Hamirpur	July 06 - 10, 2013
Dr. Surinder Singh	Industrial Training	ZTE Telecommunication India Pvt. Ltd. Gurgaon	June 04-July 03, 2016
	Industrial Training	GIGABYTE Networks, Ludhiana, India	December 16, 2016- January 01, 2017
	Industrial Training	GIGASOFT, India	December 16-31, 2015
Dr. Anupma Marwaha	Industrial Training	M/S Electrowaves Pvt Lt., Parwanoo (H.P)	December 19, 2015- January 2, 2016
	Industrial Training	Advance Tech. India Pvt Ltd., Zirakpur (Punjab)	June 8-27, 2016 and July 5-20 July, 2016
Dr. Dilip Kumar	STTP on Optimization Techniques in Engineering R& D	SLIET, Longowal	March 09 -13, 2015
	STTP on Ad-hoc Networks and cloud computing	SLIET, Longowal	January 13-17, 2016

	STTP on renewable energy applications: Practices and challenges	SLIET, Longowal	December 21-25, 2015
Er. Vipul Singhal	FDP on Advanced Communication Techniques	NIT, Delhi	June, 2013
	Recent Trends on VLSI Design & Communication System	SLIET, Longowal	June 01-05, 2015

28. Student projects

- **percentage of students who have done in-house projects including inter-departmental projects**
- **percentage of students doing projects in collaboration with other universities /industry / institute**
 - All the students of ICD, UG and PG programme undertake in house projects.

29. Awards / recognitions received at the national and international level by

- **Faculty**
- **Doctoral/ post doctoral fellows**
- **Students**

1. Name of Faculty: Dr. A.P. Singh

- Year 2011-12
 - Best Paper Award in National conference on Communications & Networking in SLIET, Longowal.
 - Best Paper Award in National Conference on GTSEM-12, SLIET Longowal.
- Year 2014-15
 - KF Antia Memorial Prize for the paper titled, "On the Design and Analysis of Modified Koch Curve Fractal Antenna, " published in the Journal of the Institution of Engineers (India) 2014-2015
 - Elected third time in the year 2015 as an Executive Member to the State Committee of Institution of Engineers (India) with a tenure of two years for Punjab & Chandigarh State Centre, Punjab, India.

2. Name of Faculty: Dr. Anupma Marwaha

➤ Year 2015-2016

- Awarded Best Paper Award for the research paper, "Performance analysis of graphene based nano patch antenna for various substrate materials in THz regime", presented at International Conference on Electrical and Electronics Engineering, Pattaya, Bangkok, Thailand, ISBN:9788193137307, July 2015

3. Name of Faculty: Dr. Surinder Singh

➤ 2012-13

- Best work in telecommunication by Punjab Academy of Sciences in 2013.

4. Name of Faculty: Dr. Dilip Kumar

➤ 2014-2015

- Got best M.tech thesis award in 2014 among 300 thesis by Pushpa Gujral Science City, Kapurthala in INNOTECH-2014.
- First most cited paper published "EECDA: Energy Efficient Clustering and Data Aggregation Protocol for heterogeneous wireless sensor networks" in IJCCC Journal, Romania accessed by ISI web of science on 11 September 2014.
- 2nd most cited paper titled "EEHC: Energy efficient heterogeneous clustered scheme for wireless sensor networks", Published in Computer Communication Journal, Elsevier, 2014 accessed by ISI web of science, 2014.

➤ 2015-16

- Got IET premium award 2015 by IET society, UK for paper titled, "Performance Analysis of Energy Efficient Clustering Protocol for Maximizing lifetime of Wireless Sensor Networks".
- His biography was selected for the inclusion to the 33rd edition of Marquis Who's Who in the World 2016.
- Nominated for Indian Electronics at Semiconductor Association Technovation awards 2016.
- Got best paper award in International Multi Track conference on Sciences, Engg. and Technical Innovations sponsored by ISRO organized by CT group of institutions Jalandhar.

• **Awards to Students:**

- Vikash Ranjan of GEC/14 (4-year Degree Programme) was awarded by department of Atomic Energy for his essay “Societal benefits of non-power applications of nuclear science and technology” on 28th Oct, 2016.
- Vikash Ranjan of GEC/14 (4-year Degree Programme) was awarded first prize in the National Level Scientific Writing contest on topic: Technology in Digital Communication, organized by the academy at NASI, Allahabad on 27th Feb, 2017.

30. Seminars/ Conferences/Workshops organized and the source of funding (national/international) with details of outstanding participants, if any.

Sr No	Academic year	Name of Programme	Date	Sponsored By	Coordinator
1.	2013-2014	2 Weeks winter School on Future Trends of Broadband Wireless Comm.& Networking	December 9-20, 2013	AICTE	Dr. Surinder Singh Dr J.S Ubhi
2.	2013-2014	FDTP on Future of Communication System	August 30 - September 3, 2013	TEQIP	Dr. Surinder Singh
3.	2014-2015	Recent Trends on VLSI Design & Communication System	June 01-05, 2015	TEQIP	Dr. Dilip Kumar
4.	2015-2016	National Conference on Communication & Networking	February 05-06, 2016	TEQIP	Dr Ajaypal Singh
5.	2016-2017	STTP on Frontiers in Electronics & Communication	September 19-23 , 2016	TEQIP	Dr J.S Ubhi

		Engg.			
6.	2016-2017	2 days Workshop on MEMS System & Design	October 24-25, 2016	TEQIP	Dr. Dilip Kumar

31. Code of ethics for research followed by the departments:

The Department of ECE, gives particularly high priority to research. In this regard, the department pursues a research ethos that promotes exceptional expertise as well as ethical responsibility in the quest for knowledge and the development, conservation and transfer of such knowledge. In order to carry forward the legacy of the ECE Department, different online tools for checking the plagiarism are used to ensure the quality of the research work. Consequently, all members of staff and students of the department are required always to strive for the highest standards of excellence and morality in any research activities. The code of ethics for research serves as an important guideline to inspire researchers maintains high ethical standards in all research activities at the institute. The department is imbibing the ethics and etiquettes by motivating the students as well as faculty to holistically follow the code of ethics for any research work carried out within the department. All the students and faculty members in the department are committed to carry out research for the betterment of society in general and development of nation in particular.

32. Student profile programme-wise:

Year 2011-12

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage*	
		Male	Female	Male	Female
Certificate (2-years)	2358	63	36	68.25	72.77
Diploma (2-years)	3880	31	19	96.77	100
Degree (3-years)	4582	52	13	80	100
PG (M.Tech)	1238	19	05	100	100
Ph.D	609	03	02	--	--

Year 2012-13

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female

(refer to question no. 4)					
Certificate (2-years)	1643	65	32	27.69	87.5
Diploma (2-years)	2909	29	20	93	90
Degree (3-years)	3962	42	23	80.95	95.65
PG (M.Tech)	1241	16	04	100	100
Ph.D	386	03	01	--	--

Year 2013-14

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Certificate (2-years)	1439	48	13	35.41	38.46
Diploma (2-years)	2820	26	23	73.07	86.95
Degree (3-years)	3173	38	25	71.05	100
PG (M.Tech)	47+ through CCMT	20	0	92.30	100
Ph.D	440	03	02	--	--

Year 2014-15

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Integrated Certificate and Diploma (3-years)	2100	29	21	--	--
Diploma (2-years)	309	12	17	100	100
Degree (4-year) *Admission through JEE Mains	241	16	06	--	--
Degree (3-years)	2347	39	25	--	--
PG (M.Tech)	13+ Admission through CCMT	14	05	100	100
Ph.D	443	04	00	--	--

Year 2015-16

Name of the Programme (refer to question no. 4)	Applications Received*	Selected		Pass percentage	
		Male	Female	Male	Female

Integrated Certificate and Diploma (3-years)	2199	34	21	--	--
Diploma (2-years)	228	16	04	--	--
Degree (4-year) *Admission through JEE Mains	204	11	02	--	--
Degree (3-years)	2082	42	22	--	--
PG (M.Tech)	19+ Admission through CCMT	14	6	--	--
Ph.D	563	02	04	--	--

*Numbers of application received are for complete programme at institute level, whereas selected and pass percentage of students is calculated at department level.

33. Diversity of Students

Year 2011-12

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Certificate(2-year)	0	63	40	0
Diploma (2-year)	52	20	28	0
Degree(3 year)	33.84	21.53	44.61	0
PG (M.Tech)	17	17	65	0
Ph.D.	11	56	33	0

Year 2012-13

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Certificate(2-year)	0	70	30	0

Diploma (2-year)	59	18	38	0
Degree(3 year)	38	25	37	0
PG (M.Tech)	20	15	65	0
Ph.D.	0	100	0	0

Year 2013-14

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Certificate(2-year)	0	24	76	0
Diploma (2-year)	59	18	38	0
Degree(3 year)	38.09	30.15	31.74	0
PG (M.Tech)	5	0	95	0
Ph.D.	33	0	67	0

Year 2014-15

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Integrated Certificate and Diploma (3-year)	0	32	68	0
Diploma (2-year)	100	0	0	0
Degree (4-year)	0	5	95	0
Degree(3 year)	42	14	44	0
PG (M.Tech)	11	5	84	0

Ph.D.	25	50	25	0
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Year 2015-16

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Integrated Certificate and Diploma (3-year)	0	16	84	0
Diploma (2-year)	100	0	0	0
Degree (4-year)	0	8	92	0
Degree(Lateral entry)	71	2	27	0
PG (M.Tech)	20	15	65	0
Ph.D.	33	50	17	0

- 34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.**

	2011-12	2012-13	2013-14	2014-15	2015-16
GATE	04	06	06	07	04
NET	×	×	×	×	×
SET	×	×	×	×	×
Other Competitive Exams	×	×	×	×	×
Civil Service/ Defense/ Army	×	×	×	×	×

- 35. Student progression:**

Year 2011-12 (year of admission)

Student progression	Percentage against enrolled
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NAAC-Evaluative Report Electrical and Instrumentation

UG to PG	24
PG to M.Phil.	--
PG to Ph.D.	5
Ph.D. to Post-Doctoral	--
Employed	
<input type="checkbox"/> Campus selection	7
<input type="checkbox"/> Other than campus recruitment	3
Entrepreneurs	--

Year 2012-13

Student progression	Percentage against enrolled
UG to PG	10
PG to M.Phil.	--
PG to Ph.D.	0
Ph.D. to Post-Doctoral	--
Employed	
<input type="checkbox"/> Campus selection	7
<input type="checkbox"/> Other than campus recruitment	3
Entrepreneurs	--

Year 2013-14

Student progression	Percentage against enrolled
UG to PG	10
PG to M.Phil.	--
PG to Ph.D.	

Ph.D. to Post-Doctoral	--
Employed	
<input type="checkbox"/> Campus selection	7
<input type="checkbox"/> Other than campus recruitment	3
Entrepreneurs	--

Year 2014-15

Student progression	Percentage against enrolled
UG to PG	11
PG to M.Phil.	--
PG to Ph.D.	25
Ph.D. to Post-Doctoral	--
Employed	
<input type="checkbox"/> Campus selection	13
<input type="checkbox"/> Other than campus recruitment	10
Entrepreneurs	--

Year 2015-16

Student progression	Percentage against enrolled
UG to PG	13
PG to M.Phil.	--
PG to Ph.D.	--
Ph.D. to Post-Doctoral	5
Employed	
<input type="checkbox"/> Campus selection	22
<input type="checkbox"/> Other than campus recruitment	03

Entrepreneurs	--
---------------	----

36. Diversity of Staff

Percentage of faculty who are graduates	Percentage
Of the same university	11
From other universities within the state	50
From other universities from other state	39
Universities outside the country	0

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

Sr. No.	Faculty Name	Year	Degree
1.	Er. Pankaj Kumar Das	2013-14	M.Tech
2.	Dr. Ajaypal Singh	2014-15	Ph.D
3.	Dr. Lakhwinder Singh Solanki	2016-17	Ph.D

38. Present details of departmental infrastructural facilities with regard to**a) Library**

- There is a separate section of books related to electronics and communication engineering in the Central Library of the institute with a good collection of books. It has large number of volume of technical books along with a good collection of books on literature, general awareness, management and moral sciences etc. The central library is already subscribing to a large number of National and International journals. In addition to it, there is also a departmental library for faculty and staff. The departmental library contains around 1200 books.

b) Internet facilities for staff and students

- Department uses the internet facilities provided by the Institute through Administrative Computing Services and Systems (ACSS) for faculty, staff and students.
 - Faculty, Staff and students can access internet through Wi-Fi, and LAN.

- The campus is connected through fiber optics internet connection with 1Gbps connectivity through Network Knowledge Management and let student access it any time. Students can access E-books through internet. Students and faculties are free to access internet after the regular working hours. This helps the students prepare papers on the latest technologies to be presented in various symposiums and seminars. 24 hours Internet facility is provided.
 - IP ADDRESSES are generated automatically through DHCP.
 - CYBERROAM secured internet facility is provided to students, faculty and staff. No user can access the websites which are strictly prohibited by department.
 - Wi-Fi facility is available in all hostels, academic, library and all other departments.
- c) **Total number of class rooms:** 07
- d) **Class rooms with ICT facility:** Four classrooms are equipped with ICT facility in the institute. The department uses this room for teaching purposes involving power point presentations. ECE department also has Digital Lecture Room with conferencing facility.
- e) **Students' laboratories:** The department is having nine well-equipped and fully furnished labs to fulfil every practical aspect of curriculum related to ICD, UG and PG programmes. It also has three research laboratories specifically for PG students and research scholars. Excellent facilities are available in department to carry out the experimental & research work. They are exhaustively utilized by faculty and students to enhance the practical dimensions of their knowledge. The labs expose them to hi-tech equipments that is true with the latest development in related areas. The highlights of individual Laboratory are as under :-

BASIC ELECTRONICS LAB

It is one of the important Laboratory of ICD and Degree students for their course curriculum. The aim establishes this lab is to given basic practical training about electronics components and circuits. Specifically this lab has trainers to give introduction about commonly used transducers, components and meters. Even to fly in the sky one needs to take-off from the land. That land/platform is provided by the Basic Electronics Laboratory. In other words, each long life and sophisticated building needs strong pedestal at the base. Analog electronics lab is meant for the essential basic knowledge and building of fundamentals among the students about various electronic devices and related circuitry. Students here learn to play their hands over small circuit like voltage amplifier, current amplifiers, combinations of resistors, capacitors and inductors in addition to differentiators and integrators. These basic help them to tackle the equipment at higher levels.

Major Equipments in BE Lab	
1.	Electronic Work Station
2.	DC Power Supply
3.	Oscillator Demonstrator Kit
4.	Rectifier Trainer
5.	30 MHz Dual Trace CRO
6.	10 MHz Function Generator
7.	Single Stage Amplifier Kit
8.	Two Stage RC Coupled Kit
9	Feedback Amplified Kit (Current)
10	Feedback Amplified Kit (Voltage)
11	Acquisition of Various Sensors
12	Basic Analog Electronics Trainer

ADVANCE COMMUNICATION LAB

Besides Analog circuitry, the next fascinating and essential subject of Electronics and Communications students is Communication Lab. A lab built on similar structure as above mentioned in rooting of ideas and zeal among students taking communication as basic course. This laboratory has all necessary trainers' kits and analyzing apparatus for the required need. It caters the students with analog communication kits viz. amplitude modulation, frequency modulation, phase modulation and a few of digital communication kits viz., pulse code modulation, pulse with modulation and time division multiplexing.

Major Equipment in Advance Communication Lab	
1.	Frequency Modulator (Modulation/Demodulation)

2.	Light Runner Standard
3.	Digital LCR Q-meter
4.	Electronic Work Station
5.	30 MHz Dual Trace CRO
6.	10 MHz Function Generator
7.	EDX Signal Pro with Network Design Module
8.	USB Trainer
9.	Hand Held Oscilloscope
10	Antenna Trainer
11	Basic Digital Comm. Trainer
12	Universal Digital Trainer System
13	Sampling and Reconstruction Kit
14	Pulse Position Modulation/Demodulation Kit
15	AM Transmitter/Receiver Trainer
16	AM Receiver Trainer
17	Digital Multimeter
18	Optical Fiber link
19	Delta Sigma Modulator/demodulator
20	Frequency Division Multiplexing Modulator/ demodulator Kit
21	Adaptive Modulator/ demodulator Kit
22	Time Division Multiplexing
23	COMMSIM
24	MULTISIM

AUDIO VIDEO LAB (TV LAB)

A fully furnished lab with all audio and video technological equipment required for ICD and Degree students. This lab has all type of needed equipments to study and learn about different parameters of video signal.

Major Equipment in TV Lab	
1.	Color TV trainer
2.	B&W TV trainer
3.	CRO 20 MHz
4.	CRO 100 MHz
5.	VCD Trainer
6.	Telephone Trainer
7.	DVD Player Trainer
8.	Frequency Modulator (Modulation/Demodulation)
9.	Audio Output Power Meter
10.	SMD Technology Trainer
11.	Color Pattern Generator
12.	PCB Drilling Machine
13.	Electronic Work Station
14.	DC Power Supply
15.	10 MHz Function Generator
16.	USB Trainer
17.	Hand Held Oscilloscope
18.	Digital/ Analog Tester
19.	Microphone Trainer
20.	Loudspeaker Trainer
21.	Noise Audio Trainer
22.	Component tester

23	Digital Clock trainer
24	LED TV 32`
25	Plasma TV
26	Smart TV 32`
27	Temperature Control Soldering and Desoldering Station
28	Test Equipment Work Station
29	Audio/Video Txr/Rxr trainer
30	LCD TV and DTH Trainer

MICROPROCESSOR LAB

For fulfilling needs of studies in microprocessor related areas, this lab has all basic and advanced kits for Microprocessors like 8085, 8086, 68000 and interfacing kits. The undergraduate students for their final projects extensively use this lab.

Major Equipment in Microprocessor Lab	
1.	8085 microprocessor kit
2.	8085 microprocessor kit
3.	8086microprocessor kit
4.	Advanced 8086 microprocessor kit
5.	8051 Microcontroller kit
6.	4.5 Digital Multimeter
7.	10 MHz Function Generator
8.	Power Meter and Power Sensor
9	Test Equipment Work Station
10	Universal Microprocessor Development package

INTEGRATED CIRCUIT LAB

For fulfilling needs of studies in digital electronics, this lab has all basic and advanced kits. The undergraduate students for their final projects extensively use this lab.

Major Equipment in IC Lab	
1.	IC bread board
2.	Function/Pulse generator
3.	Function generator
4.	Digital Power Supply Multiplier
5.	Electronic Work Station
6.	30 MHz Dual Trace CRO
7.	10 MHz Function Generator
8.	Hand Held Oscilloscope
9.	Digital/Analog Tester
10	Digital IC Trainer
11	Digital and integrated Circuit Trainer
12	555 Timer kit
13	741 Op-amp kit
14	Linear IC Trainer

PCB DESIGN & FACBRICATION LAB

The lab has an adequate infrastructure to impart PCB manufacturing skills to the students. The lab is fully capable of undertaking large 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 contains the following major equipments:

Major Equipment in PCB Lab	
1.	30 MHz Dual Trace CRO
2.	10 MHz Function Generator

3.	PCB Making Machine
4.	PCB Making Machine
5	Electric Drilling Machine
6.	Vertical Reprographic Camera
7.	Test Equipment Work Station

COMPUTER/DSP LAB

A well furnished lab has been entitled as department's computer centre and serves software needs of students of electronics communication. The lab has 37 Pentium-IV computers with configuration and with TFT screens. This lab is extensively utilized by the students for project work. This lab contains the following major equipments:

Major Equipment in Computer Lab/DSP Lab	
1.	MATLAB Software
2.	HFSS antenna Simulator
3.	IE 3D Software (6 Users)
4.	Optisim v11
5.	Multisim Software
6.	ORCAD, PSPICE Circuit Simulator and Design

SERVICING & MAINTENANCE LAB /INDUSTRIAL ELECTRONICS LAB

The Laboratory equipped with all necessary tools and aids not only provide the students with necessary diagnostics and troubleshooting skills but also extends service support to all laboratory in the department.

Major Equipment in S & M Lab	
1.	Temperature controlled soldering & de-soldering station
2.	DC Ammeter
3.	DC Voltmeter
4.	Analog multimeter

5.	PCB Drilling Machine
6.	Electronic Work Station
7.	30 MHz Dual Trace CRO
8.	10 MHz Function Generator
9.	Hand Held Oscilloscope
10.	Digital/ Analog Tester
11	Component Trainer

f) Research laboratories: 03

BROADBAND COMMUNICATION LAB (MICROWAVE LAB)

This laboratory is useful for Graduate, Post Graduate and Ph.D students. This lab included Light Runner Optical Experimental Kit, OptiSim, FemSiM etc for optical communication and network design.

MACHINE VISION & MOTION CONTROL LAB

A modern lab with State-of-the-Art Equipment supported by Latest Software (s) in the field of Virtual Instrumentation Based Machine Vision & Motion Control has been established to deliver imaging-based automatic inspection and analysis for such applications as automatic inspection, process control, and robot guidance in industry. This lab provides Research Facilities for Graduate, Post Graduate and Ph.D. students in the field of Intelligent Systems & Networking, Multi-axis motion products.

VLSI DESIGN LAB

This laboratory is useful for Graduate, Post Graduate and research scholars. This lab is supported by softwares as Cadence tools, H-Spice. Presently, this lab is running under Computer Lab.

The department has set up and also handles the operation of a 800 line EPABX which provides the communication facility through the sprawling campus.

39. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/university

Sr. No	Student Staus	Regn/Enroll. No.	Name of the Research Scholar	Name of the Supervisor (s)	Topic/Area of Research
1.	SFIP*	PEC/1203	Jatinder Singh	Dr. J.S. Ubhi, Professor (ECE)	Wireless Communication

2.	SFIP	PEC/1404	Sarbjeet Singh	Dr. Dilip Kumar, Associate Professor (ECE)	Wireless sensor networks
3.	SFIP	PEC/1602	Alka Singla	Dr. Anupma Marwaha, Professor (ECE) Dr. Sanjay Marwaha, Professor (ECE)	Nanomaterial based Antenna Design
4.	FTWF**	PEC/1402	Sukhbir Singh	Dr.Surinder Singh, Professor (ECE)	Optical Networks
5.	FTWF	PEC/1403	Gurmeet Singh	Dr. A.P.Singh, Professor, ECE	Microstrip/ Fractal Antenna
6.	Fellow ship from TEQIP	PEC/1501	Savita	Dr. A.P. Singh, Professor (ECE)	Microstrip/ Fractal Antenna
7.	FTWF	PEC/1502	Ashish Kumar	Dr. A.P.Singh, Professor (ECE)	Microstrip/ Fractal Antenna
8.	FTWF	PEC/1503	Mukesh Kumar	Dr. J.S. Ubhi, Professor (ECE)	VLSI Memory Design
9.	FTWF	PEC/1504	Veerpal Kaur	Dr.Surinder Singh, Professor (ECE)	Optical Networks
10.	FTWF	PEC/1505	Tarunpreet Kaur	Dr. Dilip Kumar, Associate Professor (ECE)	Wireless Sensor Networks
11.	FTWF	PEC/1506	Baljinder Kaur	Dr. Anupama Marwaha, Professor (ECE)	Patch Antenna Arrays
12.	FTWF	PEC/1601	Ashwini Kumar,	Dr. Amar Partap Singh, Professor (ECE)	Fractal Antenna Design
13.	FTWF	PEC/1603	Rajdavinder Kaur Sidhu	Dr. J.S. Ubhi, Professor (ECE)	VLSI Design

b) From other Institutions/Universities

Sr. No	Student	Regn/Enroll. No.	Name of the Research	Name of the Supervisor (s)	Topic/Area of Research
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	Staus		Scholar		
1.	SFEP	PEC/1002	Pradeep Kumar Gaur	Dr. Anupma Marwaha, Professor (ECE)	Enhancing the scope of Internetworking using IPv6 in Wireless Adhoc networks
2.	SFEP	PEC/1104	Jyotika Chopra	Dr. Anupama Marwaha, Professor (ECE) Dr. Amodh Kumar, CSIO, Chandigarh	Enhancement of Techniques for Offline Signature and Fingerprint Matching
3.	SFEP	PEC/1107	Taranjeet Kaur	Dr. Surinder Singh, Professor (ECE)/ Dr. Manjit Singh Bhamrah	Optimization of EAM based Wavelength Converter for Optical Network
4.	SFEP	PEC/1108	Mandeep Singh Sra	Dr. Jagpal Singh Ubhi, Professor (ECE)	Performance Study of CDMA System Under Fading Environment
5.	SFEP	PEC/1109	Harsimrat Kaur	Dr. Anupma Marwaha, Professor (ECE)/ Dr. Charanjeet Singh, Hoshiarpur	Synthesis and Microwave Absorption Analysis of M-Type Hexagonal Ferrites in X-Band
6.	SFEP	PE/C1201	Monika Aggarwal	Dr. A.P. Singh, Professor (ECE)	Development of Fractal Antennas for Cognitive Radio Applications
7.	SFEP	PEC/1202	Dilbag Singh	Dr. Surinder Singh, Professor (ECE)	Design of Contention Detection and Resolution Circuit in All-optical Router for Ultrahigh Speed Communication Networks
8.	SFEP	PEC/1204	Candy Goyal	Dr. J.S. Ubhi, Professor (ECE)/ Dr. Balwinder Rai, NIT, Jalandhar	Design and Analysis of Nano Scale Arithmetic Circuits for Low Power VLSI Design
9.	SFEP	PEC/1303	Sandeep Kohar,	Dr. Surinder Singh, Professor (ECE)/ Dr. Asok De	Microwave Antenna Design
10.	SFEP	PEC/1305	Vinay Saini,	Dr. J.S. Ubhi, Professor (ECE) /Dr.	VLSI Design

				Dushyant Gupta, GJU, Hissar,	
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* SFIP : Self Financed Internal Part-time

**FTWF : Full-Time with Fellowship

***SFEP : Self Financed External Part-time

40. Number of post graduate students getting financial assistance from the university

Sr. No	Admitted Year (Batch)	Funding Agency	
		AICTE	TEQIP
1.	2011	08	--
2.	2012	13	02
3.	2013	16	--
4.	2014	19	--
5	2015	19	1

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

Various meetings of faculty members were organized to deliberate on the possibility to start new programmes in the department. After iterative meetings a proposal was prepared to introduce 3 years ICD programme and 4 years UG programme in the department of Electronics and Communication Engineering. The proposal was discussed at length in the meeting with members of the Board of Studies. The proposal was further discussed and deliberated in Board meeting. The proposal was finally approved and incorporated in the academic programmes.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, the departments obtain feedback from the faculty on curriculum as well as teaching-learning-evaluation. The faculty members make

sure that the programme objectives, course objectives and the outcome are met by the learners. If any modifications are required to fill the gap in this regard, would be reported by the faculty members concerned. Further, the faculty members recommend for the inclusion of the latest technology on a particular course based on their expertise and the need of the stakeholders.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, the feedback mechanisms and the post-corrective measures are among the most valued best practices prevalent in the institution in terms of academic excellence and its sustenance. The feedback by the students on every subject taught is made mandatory and hence gives the institution an insight in to all aspects of teacher and the course taught. Summary report is prepared by the concerned teacher and corrective measures are taken if required.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes, the department recognizes the distinguished alumni and the employer by associating them while framing and updating the syllabi. The employers have often mentioned of the necessary improvements needed in the curriculum so that the students can obtain requisite skills on par with the practices of industry. Alumni are included in the BOS and invited during revision of teaching scheme and syllabus.

43. List the distinguished alumni of the department (maximum 10)

Sr. No.	Name of Alumni	Designation	Current Employer
1.	Kumar Deepankar	Data Science Consultant /Big Data Consultant	Tata Consultancy Services Ltd, New York, US.
2.	Munish Chauhan	Post-Doc Associate	Neuro-Electricity Lab, Arizona State University, USA
3.	Amandeep Singla	Asst. Director General (I.T.S)	TERM Cell HR,DoT, Ministry of Communications Room No.312,107 The Mall Ambala Cantt-133001, Haryana
4.	Amit Pahwa		BT Global Services Ltd

			(British Telecom), Bangalore
5.	Jatinder Singh	ADSTE/SIR (Assistant Division Signal and Telecom Engineer)	Posted at Sirhind, Indian Railway
6.	Subhash Kumar Ram	Scientist	CSIR-CEERI, Ministry of Science & Technology, Govt. of India, Rajasthan.
7.	Mohit Soni	Senior Technical Assistant 'B'	TBRL, Defence R&D Organization (DRDO), Govt of India, Chandigarh
8.	Dr. Neeru Malhotra	H.O.D (Associate Professor)	DAV College Jalandhar.
9.	Dr. Ankush Kansal	Assistant Professor	Thapar University, Patiala.
10.	Ajay Dang	General Manager (Operations)	Kirloskar Technologies Pvt Ltd. New Delhi.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Sr No	Academic year	Name of Programme	Date	Sponsored By	Coordinator
1.	2013-2014	2 Weeks winter School on Future Trends of broadband Wireless Comm.& Networking	9-20 December,201 3	AICTE	Dr. Surinder Singh Dr J.S Ubhi
2.	2013-2014	FDTP on Future of communication system	30 August-3 September,201 3	TEQIP	Dr. Surinder Singh
3.	2014-2015	Workshop on VLSI Design	16-17 March, 2015	TEQIP	--
4.	2014-2015	Recent Trends on VLSI Design	01-05 June,2015	TEQIP	Dr. Dilip Kumar

		& Communication System			
5.	2015-2016	Three Days training on Synopsys EDA tools	18-21 January, 2016	--	--
6.	2015-2016	National Conference on Communication & Networking	5-6 February,2016	TEQIP	Dr Ajaypal Singh
7.	2016-2017	STTP on Frontiers in Electronics & Communication Engg.	19-23 September,201 6	TEQIP	Dr J.S Ubhi
8.	2016-2017	2 days Workshop on MEMS System & Design	24-25 October,2016	TEQIP	Dr. Dilip Kumar

➤ The institute has also subscribed lecture series of NPTEL.

45. List the teaching methods adopted by the faculty for different programmes.

- Class Room teaching
- Interactive Teaching and learning using LCD projectors
- Group Discussion
- Quizzes, assignments, demonstration, seminar presentation etc.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- Detailed planning of course delivery at the beginning of the semester.
- Academic progress monitoring at department level during the semester.

- Student's learning monitoring is done by assignments, test and quizzes and also linking these components with internal assessment of students which becomes the part of grade at the end of semester.
- Faculty Course Files: All faculty members maintain their course file in which they have to keep record of all the tests, assignments, quizzes given to the students in a due course of time.
- Review of course completion report at the end of semester.
- Compilation and Analysis of student's Feedback.
- Ensuring course coverage in Question Papers.

47. Highlight the participation of students and faculty in extension activities.

- Attending Conferences/Seminars/FDP's
- Inter-departmental competitions
- Departmental Societies
- Participation in the institute level programs

48. Give details of "beyond syllabus scholarly activities" of the department.

- Inspirational sessions.
- Yoga and Meditation programs.
- Organization of workshops/seminars/symposium/Conference etc. on the latest technologies such as:

Sr No	Academic year	Name of Programme	Date	Sponsored By	Coordinator
1.	2013-2014	2 Weeks winter School on Future Trends of broadband Wireless Comm.& Networking	9-20 December,2013	AICTE	Dr. Surinder Singh Dr J.S Ubhi
2.	2013-2014	FDTP on Future of communication	30 August-3 September,2013	TEQIP	Dr. Surinder Singh

		system			
3.	2014-2015	Recent Trends on VLSI Design & Communication System	01-05 June,2015	TEQIP	Dr. Dilip Kumar
4.	2015-2016	National Conference on Communication & Networking	5-6 February,2016	TEQIP	Dr Ajaypal Singh
5.	2016-2017	STTP on Frontiers in Electronics & Communication Engg.	19-23 September,2016	TEQIP	Dr J.S Ubhi
6.	2016-2017	2 days Workshop on MEMS System & Design	24-25 October,2016	TEQIP	Dr. Dilip Kumar

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

- Yes, the BE programme of Electronics & Communication Engineering is accredited by IEI (Institution of Engineering, India)

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

- The department is involved in emerging research areas like Image Processing, VLSI Design, Optical Networks, Microwave and Antenna Technology, Neural and Fuzzy Networks, Wireless Sensor Networks etc.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strength:-

1. Experienced, Dedicated and Highly qualified faculty in specialised areas.
2. Good number of publication in reputed journals (SCI indexed).
3. Research fellowships to support the research.
4. Good interactions with outer world.
5. Well established laboratories & research facilities and technical help.
6. 17 Ph.D supervised by faculty of department & 23 currently enrolled/registered for Ph.D.
7. Diversity of students, faculty and staff.
8. MoU with Industry, research institute for dissemination of knowledge and use of their research facilities.

Weakness:-

1. Lack of sponsored projects.
2. Lack of patent filing and book writing.
3. Lack of space for infrastructure for classrooms, smart classrooms, laboratories & faculty rooms.
4. Lack of running informal courses.
5. Lack of funding for B.Tech final year projects.
6. Lack of training for diverse students with different background.

Opportunity:-

1. Post doctoral fellowship from Indian or Foreign universities.
2. Visiting foreign university/MOU with foreign universities for dissemination of knowledge/ or knowledge sharing.
3. Industry and departmental interaction for students, faculty, technicians.
4. Accessibility to state of equipment in laboratories.
5. To provide scholarships to students under government sponsored schemes.
6. To establish Virtual laboratories in the department.
7. To provide employable skilled manpower through formal and non-formal courses as per the local needs and global standards.
8. Academic autonomy for timely revision of course curriculum at various levels to keep the pace with dynamic needs of industry.

Challenges:-

1. To establish strong bondage between department & industry.
2. To provide smart class rooms in the Department.
3. To provide placement to students.

4. Make up classes for weaker section of students.

52. Future plans of the department.

- i. To start M.Tech programme in VLSI design.
- ii. To submit research project to various sponsoring/funding agencies.
- iii. To procure equipment for ICD, UG and PG laboratories as per new scheme.
- iv. To procure specialized/high end equipment in Machine Vision and Motion Control Lab, Wireless Communication and optical communication including Vector Network Analyzer and associated equipment upto 40 GHz for Microwave Lab equipment, .
- v. To establish Centre for skilled development
- vi. Efforts shall be made to establish Centre of Excellence in the area of VLSI and MEMS Design, Wireless Communication
- vii. To provide wider access to people for pursuing professional programmes to inculcate entrepreneurial skills through regular mode in the Department of ECE.
- viii. To setup an Industry Institute Interaction Cell (IIIC) to facilitate the Campus placement.
- ix. More emphasis will be given organise workshops, symposiums, seminars, faculty development programs and conferences in the department to promote interdisciplinary research for faculty, staff and students in the department.
- x. To establish incubation centre for developing entrepreneurship and promoting start-up with innovative ideas.
- xi. Alignment of the course curriculum with National Occupational Standards defined by National Skill Development Corporation (NSDC).
- xii. Collaborations with industry people for the designing and development of curriculum and laboratory experimentation.

Annexure-I**Some of the Publications by the faculty members of ECE Deptt.****I. Dr. A.P Singh**

S.No	Authors	Title	Year	Journal, Volume and No.
1.	Jagtar Singh, A.P.Singh and T.S.Kamal	Artificial Neural Network for Estimation of Directivity of Circular Microstrip Patch Antennas	2011	Research Cell: An International Journal of Engineering Sciences, pp. 159-167, vol.1, ISSN: 2229-6913.
2.	Jagtar Singh, A.P.Singh and T.S.Kamal	On the Design of Triangular Microstrip Antenna for Wireless communication	2011	Special Issue on IP Multimedia Communications of International Journal of Computer Applications, vo.1 1, pp.103-106, Oct. 2011, ISBN: 978-93-80864-99-3 (Impact Factor: 0.814)
3.	S. Kumar, P. Bhalla and Amarpartap Singh	Fuzzy Rule Base Generation from Numerical Data using Big Bang-Big Crunch Optimization	2011	IEI Journal-ET, pp.18-25, vol. 91, Jan., 2011, ISSN: 0251-1096.
4.	Baljit Singh Khera and Amar Partap Singh Pharwaha	Classification of Clustered Microcalcifications using Resilient Back-propagation Training Algorithm	2011	Special Issue on IP Multimedia Communications of International Journal of Computer Applications, vol.1, pp.118-124, Oct. 2011, ISBN: 978-93-80864-99-3 (Impact Factor: 0.814)
5.	Balkrishan and Singh A.P.	Moderate Bit Insertion for Hiding Crypto-Data in Digital Image for Steganography	2011	Special Issue on IP Multimedia Communications of International Journal of Computer Applications,

				vol.1, pp.136-138, Oct. 2011, ISBN: 978-93-80864-99-3 (Impact Factor: 0.821)
6.	B. S. Khera and A. P. S. Pharwaha	Integration of Fuzzy and Wavelet Approaches towards Mammogram Contrast Enhancement	2012	IEI-Springer Journal-Electrical, Electronics & Telecommunication and Computer Engineering, vol.93, no.2, pp.101-110, 2012, Print ISSN: 2250-2106, Online ISSN: 2250-2114.
7.	S. Rani and A. P. Singh	Fractal Antenna with Defected Ground Structure for Telemedicine Applications	2012	International Journal on Communications Antenna and Propagation (IRECAP), vol.1, no: 1, indexed in Elsevier Bibliographic Database-SCOPUS)
8.	S.Kakkar, S.Rani & A.P.Singh	On the Resonant Behavior Analysis of Small-Size Slot Antenna with Different Substrates	2012	International Journal of Computer Applications, pp no. 10-12, Impact Factor: 0.715
9.	Parvinder Kaur, Shakti Kumar, Amarpartap Singh	Optimization of Membership Functions Based on Ant Colony Algorithm	2012	International Journal of Computer Science and Information Security (IJCSIS), Vol. 10, No. 4, pp. 38-45, ISSN:1947-5500, Impact Factor: 0.423 (IC Value: 5.50-Computed by Index Copernicus)
10.	Jagtar Singh, A. P. Singh & T. S. Kamal	Estimation of Resonant Frequency of a Circular Microstrip Antenna Using Artificial Neural Network	2012	Springer Series B Journal of the Institution of Engineers (India): Electrical, Electronics & Telecommunication and Computer

				Engineering, Volume 93, Number 1, Pages 7-13
11.	Shakti Kumar, Parvinder Kaur, and Amarpartap Singh	Fuzzy Model Identification: A Firefly Optimization Approach	2012	International Journal of Computer Applications (IJCA), Vol. 58, No. 6, pp. 1-8, IISN: 0975-8887, Impact Factor:0814, ISSN: 1542-3980, SCI Indexed, Impact Factor:1.01.
12.	Ajay Pal Singh Chauhan and Amar Partap Singh	Intelligent Estimator for Assessing Apple Fruit Quality	2012	International Journal of Computer Applications (0975 – 8887) Volume 60– No.5, pp. 35-41
13.	S. Rani and A. P. Singh	On the Design and Optimization of New Fractal Antenna Using PSO	2012	International Journal of Electronics, vol. 100, no. 10, pp. 1383-1397, (Indexed by SCI, Thomson Reuters, Impact Factor: 0.459.
14.	Ashwani Kumar and A.P.Singh	Neural Network based Fault Diagnosis in Analog Electronic Circuit using Polynomial Curve Fitting	2013	International Journal of Computer Applications (0975-8887) Volume 61– No.16, pp. 28-34, Impact Factor: 0.791.
15.	Ashwani Kumar, A.P.Singh	Fuzzy classifier for fault diagnosis in analog electronic circuits	2013	ISA Transactions (Elsevier), pp.816-24, Impact Factor ^{TR} = 2.984.
16.	Ashwani Kumar, A.P.Singh	On the design of intelligent virtual instrument for the fault diagnosis in mixed signal analog circuit	2013	International Journal of Computer Applications, Vol.73-No.16 , pp no. 1-7, Impact Factor: 0.791
17.	Baljit Singh Khehra and Amar Partap	Digital Mammogram Enhancement using Kapur Measure of	2013	Biomedical Engineering: Applications, Basis and Communications, vol.

	<i>Singh Pharwaha</i>	<i>Entropy and Mathematical Morphology</i>		25, no.3, pp. 1350029:1-14, Print: ISSN: 1016-2372, Online ISSN:1793-7132 (Impact Factor ^{TR} =0.236)
18.	Ajay Pal Singh Chauhan and Amar Partap Singh	Development of an Intelligent Virtual Grader for Estimation of Fruit Quality	2013	International Journal of Computer Applications (0975-8887) Volume 62– No.17, pp. 35-41
19.	Jagtar Singh Sivia, Amarpartap Singh and Tara Singh Kamal	Neurocomputational Approach for Feed- Position Estimation in Circular Micro-strip Antenna	2013	International Journal of Computer Applications vol.75 No.6 pp. 33-38, Impact Factor: 0.821.
20.	Jagtar Singh, Amarpartap Singh and Tara Singh Kamal	Neurocomputational Approach for Design and Analysis of Triangular Micro-strip Antenna	2013	Journal Wulfenia, Volume. 20, Issue. 6, Impact Factor ^{TR} =0.267.
21.	Jagtar Singh Sivia,, Amar Partap Singh Pharwaha and Tara Singh Kamal	Analysis and Design of Circular Fractal Antenna Using Artificial Neural Networks	2013	Progress In Electromagnetics Research Journal, PIER B, Vol. 56, pp 251-267, Impact Factor ^{SJR} : 0.60.
22.	Jagtar Singh Sivia,, A. P. Singh and T. S.Kamal	Design of Sierpinski Carpet Fractal Antenna using Artificial Neural Network	2013	International Journal of Computer Applications, vol. 68, no.8, 2013 (Published by Foundation of Computer Science (FCS), New York, USA, ISBN: 978-93-80874-28- 3 (Impact Factor: 0.821)
23.	Jindal, B. and Singh A. P	Camouflaging in Digital Image for Secure	2013	IEI-Springer Journal: Electrical, Electronics & Telecommunication and

		Communication		Computer Engineering, vol. 94, no. 2, pp. 85-92
24.	Balkrishan and Singh, A. P.	Enhanced Bandwidth Utilization in Image Steganography with Enhanced Data Security	2013	International Journal of Computer Application, vol. 84, no.11, pp. 31-38(Impact Factor=.821)
25.	S. Rani and A. P. Singh	Design and Optimization of New Hybrid Fractal Tree Antenna	2013	International Journal of Applied Electromagnetics and Mechanics, vol. 43, no. 4, pp. 403-415, (Indexed by SCI expanded, Thomson Reuters, Impact Factor: 0.815
26.	S. Rani and A. P. Singh	Modified Koch Fractal Antenna with Asymmetrical Ground Plane for Multi and UWB Applications	2013	International Journal of Applied Electromagnetics and Mechanics, vol. 42, no. 2, pp. 259-267, (Indexed by SCI expanded, Thomson Reuters, Impact Factor: 10.815
27.	S. Rani and A. P. Singh	On the Design and Analysis of Modified Koch-Curve Fractal Antenna	2013	IEI-Springer Journal-Electrical, Electronics & Telecommunication and Computer Engineering, vol.94, no.4, pp.231-236.
28.	A. P. Singh and S. Rani	A Novel Antenna Design for Telemedicine Applications	2013	International Journal of Communication Science and Engineering, vol.7, no. 12, pp. 617-621.
29.	Baljit Singh Khera and Amar Partap Singh Pharwaha	Least-Squares Support Vector Machine for Characterization of Clusters of Microcalcifications	2013	WASET International Journal of Computer, Information, Science and Technology, vol.7, no.12, pp932-941, 2013, Print ISSN: 2010-376X,

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30.	S. Rani and A. P. Singh	A Novel Design of Hybrid Fractal Antenna Using BFO	2014	Journal of Intelligent and Fuzzy Systems, vol.27, no.3, pp.1233-1241, (Indexed by SCI expanded, Thomson Reuters, Impact Factor: 1.812
31.	Jindal, B. and Singh A. P	Hiding Data in Digital Image with Multilayer Security	2014	Wulfenia Journal, vol. 21, no. 5, pp. 47-63, (Impact Factor ^{TR} = 0.26)
32.	Jindal, B. and Singh A. P	Image Steganography with Multilayer Security using Moderate Bit Substitution	2014	Journal of Applied Sciences, vol. 14, no. 8, pp. 738-747 (Impact Factor ^{SJR} =0.162)
33.	Ajay Pal Singh, Amar Partap Singh	Virtual Grader for Assessing Apple Quality using Shape features	2014	Wulfenia Journal, Vol 21, No.7, pp 232-241. (Impact factor: 0.267).
34.	Ajay Pal Singh, Amar Partap Singh	Virtual Grader for Apple Quality Assessment using Fruit size and Illumination Features	2014	Global Journal of Computer Science and Technology, Vol 14, Issue 4, pp 5-12. (Impact factor: 1.5)
35.	Shakti Kumar, Parvinder Kaur and Amar Partap Singh	Fuzzy Model Identification: A Comparative Study of Four Recent Approaches	2015	International Journal of Multivalued Logic and Soft Computing (MVLSC), vol.25, no.4-5, pp.379-398, 2015, ISSN: 1542-3980, Impact Factor: 1.02 (SCI Indexed)
36.	Baljit Singh Khera, Amar Partap Singh Pharwaha and Manisha	Fuzzy 2-Partion Entropy Threshold Selection based on Big Bang-Big Crunch Optimization	2015	Egyptian Informatics Journal, vol.16, no.1, pp. 133-150, ISSN: 1110-8665 (Impact Factor ^{SJR} :

	Kaushal	Algorithm		0.252
37.	Baljit Singh Khera, and Amar Partap Singh Pharwaha	Classification of Clustered Micro-calcifications using MLFFBP-ANN and SVM	2015	Egyptian Informatics Journal, vol.16, no.3, ISSN: 1110-8665 (Impact Factor ^{SJR} : 0.252
38.	A.P.Singh and S. Rani	On the Design of Wearable Fractal Antenna	2015	International Journal of Computer, Electrical, Automation, Control and Information Engineering, vol.9, no.7, pp.1181-1186, 2015.
39.	S. Kakkar, A.P. Singh and T. S. Kamal	Application of DGS in Microstrip Patch Antenna	2015	International Journal of Computer Applications, pp.10-12, 2015 (Impact Factor: 0.715)
40.	Jindal B. and Singh A.P.	Concealing Data in a Digital Image with Multilayer Security	2015	Multimedia Tools and Applications, Wulfenia Journal, 74(9):1-19 (Impact Factor ^{TR} = 1.346)
41.	Ashwani Kumar Narula and Amar Partap Singh	Fault Diagnosis of Mixed-Signal Analog Circuit using Artificial Neural Networks	2015	International Journal of Intelligent Systems and Applications (IJISA), vol.7, pp.11-17, 2015, Impact Factor: 0.1.
42.	Ashwani Kumar, Amar Partap Singh	Transistor Level Fault Diagnosis in Digital Circuits using Artificial Neural Network	2016	Measurement, vol.82, pp.384-390, 2016, Impact Factor:0.1.
43.	S. Kakkar, T. S. Kamal and A.P. Singh	Small Size Patch Antenna with DGS for Emergency Management	2016	MATEC Web of Conference Journal, vol. 57, 01001, pp. 1-3, 2016 (Indexed with Thomson Reuters, SCOPUS)

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45.	Baljit Singh Khehra and Amar Partap Singh Pharwaha,	Comparison of Genetic Algorithm, Particle Swarm Optimization and Biogeography-Based Optimization for Feature Selection to Classify Clusters of Microcalcifications	2016	IE(I)-Springer Journal-Electrical, Electronics & Telecommunication and Computer Engineering, vol. 93, no. 2, pp. 101-110, 2016, ISSN Print: 2250-2106, ISSN Online: 2250-2114.
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2. Adish Bindal & **Surinder Singh**, "Investigation of Crosstalk in Channels by Using Fiber Raman Amplifiers," *Fiber and Integrated Optics incorporating International Journal on Optoelectronics*, Volume 29, Issue 3, May 2012, pp. 187-208, **Taylor and Francis**, UK, (*Impact factor:0.506*).
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IV. **Dr. J.S. Ubhi**

1. Manoj Pandey, Jagpal Singh Ubhi and K S Raju, "Computational Acceleration of Real-Time Kernel-Based Tracking System", *Journal of Circuits, Systems and Computers*, Volume 25, No. 04, 1650030 (21), April 2016.
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5. Satveer Kaur and Jagpal Singh Ubhi, "A Study of MANET Mobility Models", *International Journal of Engineering and Technical Research*, Vol 3, Issue 12, pp. 28-33, 2015.
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10. Suman Gill and J S Ubhi, "CPW Fed Hexagonal Patch Shape with Hexagonal slot Ultra Wideband Antenna", *International Journal of Computers & Technology*, Vol 3, Issue 2, pp 256-258, 2012.
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12. Manpreet Kaur , Birmohan Singh, JS Ubhi and Seema Rani, "Integrated Approach to ECG Signal Processing", *International Journal on Information Sciences and Computing*, Vol. 5, No.1, pp 13-17, January 2011.

V. Dr. Dilip Kumar

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4. Dilip kumar and Rajeev Kumar, "Multiobjective Artificial BeeColony Algorithm to energy aware routing protocol in wireless sensor network," Wireless Networks, pp. 1-14, 2015. (SCI Index, Impact Factor – 0.961)
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8. Dilip Kumar and Isha Goel, "Design and Implementation of Android based Wearable Smart locator Band for people with Autism, Dementia, and Alzheimer," Advances in Electronics, Jan 2015. (Cited by 2)
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10. Dilip kumar and RK Pandey, "Distributed Transformer Monitoring System Based on Zigbee Technology," International Journal of Engineering Trends and Technology (IJETT), Vol. 4, no.5, pp. 35-47, 2014. (Cited by 3, SSRG Journals , Impact Factor - 1.795)
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12. Dilip Kumar and Rakesh Kumar Pandey. "Distributed Transformer Monitoring System Based On Zigbee Technology." arXiv preprint arXiv:1403.3547 (2014). (Cited by 3)
13. Dilip kumar and Tarunpreet Kaur, "Design and development of Solar Powered and Cell Phone Operated Mobile robot for Border Surveillance," International Journal of Electronics and Communication Technology, Vol. 5, no. 3, pp. 128-133, 2014
14. Dilip kumar and Gagandeep Kaur, "Aeroponic technology: Blessing or curse," International Journal of Engineering Research and Technology (IJERT), Vol. 5, no. 7, pp. 691-693, 2014

15. Dilip kumar and Rohit Daid, "LEACH protocol enhancement using genetic and neural network self organizing maps," International Journal of Advances in Science and Technology (IJAST), vol. 2, Issue No.4, pp. 45-48, 2014.
16. Dilip kumar and Tarunpreet Kaur, "Design of cell phone operated multipurpose security robot for military applications using solar panel," International Journal of Scientific Engineering and Technology Research, vol. 3, no. 16, pp. 3472-3475, 2014.
17. Dilip kumar and Gagandeep Kaur, "Development of an embedded circuit and a prototype bucket aero phonic system for bitter gourd production," International Journal Computer Science and Technology, vol. 5, no. 3, pp. 54-57, 2014.
18. Dilip Kumar and Baljit Kaur "Development of automated nutrients composition control fertigation system." International Journal of Computer Science, Engineering and Applications 3, no. 3, 2013. (Cited by 2)
19. Dilip Kumar and Kirat Pal Singh. "Performance Evaluation of Low Power MIPS Crypto Processor based on Cryptography Algorithms." arXiv preprint arXiv:1306.1916, 2013. (Cited by 2)
20. Dilip Kumar and Ripul Rishi. "Prototype Design of Indigenous GSM based Intelligent Irrigation System." International Journal of Computer Applications, Vol 73, no. 18, 2013. (Cited by 1)
21. Dilip Kumar and Misha Goyal. "Automatic E-baby Cradle Swing Based on Baby Cry." International Journal of Computer Applications, Vol. 71, no. 21, 2013. (Cited by 1)
22. Dilip Kumar and Tejminder Kaur. "Design and development of calibration unit for precision planter." International Journal of Computer Science, Engineering and Applications, Vol. 3, no. 3, 2013. (Cited by 1)
23. Dilip Kumar, Sonali Mehta and Balwinder Singh,. "Performance Analysis of Floating Point MAC Unit." International Journal of Computer Applications, Vol. 78, no. 1, 2013.
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30. Dilip Kumar, Prakash, Neelam R. And Tejender Sheoran. "Microcontroller based closed loop automatic irrigation system." International Journal of Innovative Technology and Exploring Engineering (IJITEE) 1, no. 1, pp. 4-6, 2012.

VI. Dr. Lakhvinder Singh Solanki

Dr. Lakhvinder Singh Solanki , “Development and modelling of the dielectric properties of tissue-mimicking phantom materials for ultra-wideband microwave breast cancer detection” published in Optik - International Journal for Light and Electron Optics issue, pp. 2217-2225, November 2015

VII. Dr. AjayPal Singh

1. Ajay Pal Singh & Amar Partap Singh, “Virtual Grader for Assessing Apple Quality using Shape features” published in Wulfenia Journal, Volume 21, Number 7, (2014)
2. Ajay Pal Singh Chauhan & Amar Partap Singh, “Intelligent Estimator for Assessing Apple Fruit Quality”, published in International Journal of Computer Applications, Volume 60, Number 5 (2012).
3. Pardeep Sharma & Ajay Pal Singh, “Implementation of floating multiplier on reconfigurable hardware and study its effect on 4 input LUT’s”, published in International Journal of Advanced Research in Computer Science and software Engineering.
4. Pardeep Sharma & Ajay Pal Singh, “Configuring floating point multiplier on Spartan 2E hardware module” published in International Journal of Advanced Research in Computer Science and software Engineering.
5. Ajay Pal Singh Chauhan & Amar Partap Singh, “Development of an Intelligent Virtual Grader for Estimation of Fruit Quality”, published in International Journal of Computer Applications, Volume 62, Number 17 (2013).
6. Ajay Pal Singh & Amar Partap Singh, “Virtual Grader for Apple Quality Assessment using Fruit size and Illumination Features”, published in Global Journal of Computer Science and Technology, Volume 14, Issue 4, (2013).

7. Ajay Pal Singh & Neeraj Jhulka, "Screw Classification using Machine Vision", published in International Journal of Electronics and Telecommunication Technology, Volume2, Issue1(2011).
8. Ajay Pal Singh & Amar Partap Singh., "Ambient Illumination Effect in Apple Quality Gradation Using Color Features International Journal of Agriculture food Science & Technology ,Volume6, Number 1 (2015)
9. Ajay Kumar Vishwakarma, Ajay Pal Singh & Jagpreet Singh, "Improvement in Stitched Image using Image Fusion" International Journal of Engineering Technology and Computer Research, Volume2, Issue 5,(2015)
10. Neha & Ajay Pal Singh, "Design of Linear Phase Low Pass FIR Filter using Particle Swarm Optimization Algorithm" published in International Journal of Computer Applications, Volume 98, Number 3 (2014).
11. Neha & Ajay Pal Singh, "Design of Optimized Transition Width Linear Phase FIR Filter using PSO Algorithm with Constriction Factor Approach" published in Communications on applied electronics, Volume5, Number7, (2016).

VIII. Er. Pankaj Kumar Das

1. Manoj Kumar Majumder, Pankaj Kumar Das, B.K. Kaushik, " Delay and Crosstalk Reliability Issues in Mixed MWCNT Bundle Interconnects" Elsevier Microelectronics reliability., vol. 54, pp. 2570-2577, 2014.
2. Pankaj Kumar Das, Manoj Kumar Majumder, and Brajesh Kumar Kaushik, "Dynamic Crosstalk Analysis of Mixed Multi-walled Carbon Nanotube Bundle Interconnects," IET - The Journal of Engineering, 2014 (DOI:10.1049/joe.2013.0272).
3. Manoj Kumar Majumder, Pankaj Kumar Das, Vobulapuram Ramesh Kumar, and Brajesh Kumar Kaushik, "Crosstalk induced delay analysis of randomly distributed mixed CNT bundle interconnect," Journal of Circuits, Systems and Computers, vol. 24, no. 10, Aug. 2015.
4. Manoj Kumar Majumder, Pankaj Kumar Das, and Brajesh Kumar Kaushik, "Delay and Crosstalk Reliability Issues in Mixed MWCNT Bundle Interconnects," Microelectronics Reliability, Elsevier, vol. 54, no. 11, pp. 2570-2577, 2014 (DOI: 10.1016/j.microrel.2014.04.008).

Evaluative Report of the Department

1. Name of the Department :

Food Engineering and Technology

2. Year of establishment:

1992

3. Is the Department part of a School/Faculty of the university?

University

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

ICD (Integrated Certificate Diploma)

B.Tech. (Food Technology)

M.Tech (Food Engineering and Technology)

Ph.D (Food Engineering and Technology)

5. Interdisciplinary programmes and departments involved

NIL

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

NIL

IGNOU Courses

- i. Diploma in Production of Value Added Products from Cereals, Pulses & Oilseeds**
- ii. Diploma Programme in Value Added Products from Fruits and Vegetables (DVAPFV)**
- iii. PG Diploma in Food Safety and Quality Management (PGDFSQM)**

7. Details of programmes discontinued, if any, with reasons

B.Tech (Food Technology) 3, Year (Upgraded to 4-year course)

Diploma (Food Processing), 2-year, Upgraded to 3-year ICD

Certificate (Food Technology), 2-year, Upgraded to 3-year ICD

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

Semester

9. Participation of the department in the courses offered by other departments”

NIL

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

Positions	Sanctioned	Filled	Actual (including CAS & MPS)
Professor			09
Associate Professors			02
Asst. Professors			
Others			

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
M.B.Bera	Ph.D	Professor	Food Processing and Biotechnology	25	Ph.D.: 04
D.C. Saxena	Ph.D	Professor	Food Technology	22	Ph.D.: 02 M.Tech: 06

			(Cereal Technology)		
H.K. Sharma	Ph.D	Professor		22	Ph.D.: 06 M.Tech: 06
P.S. Panesar	Ph.D	Professor and Head	Food Processing and Biotechnology	20	Ph.D.: 06 M.Tech: 06
Kamlesh Parsad	Ph.D	Professor	Food Technology	23	Ph.D.: 02 M.Tech: 06
Vikas Nanda	Ph.D	Professor	Food Technology	20	Ph.D.: 02 M. Tech.:06
C.S.Riar	Ph.D.	Professor	Food Technology (Cereal Technology)	20	Ph.D.: 01 M. Tech.:06
Sukhcharn Singh	Ph.D.	Professor	Food Technology	20	Ph.D.: 01 M. Tech.:06
P.Kumar	Ph.D.	Professor	Health Foods, Product Development	20	Ph.D.: 01 M. Tech.:06
Charanjiv Singh	Ph.D.	Associate Professor	edible films and coatings, protein modification	19	M.Tech: 06
Navdeep Jindal	Ph.D.	Associate Professor	Food Engineering	16	M. Tech.:06

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

- i. Expert: **Dr. Suwendu Bhattacharya, Chief Scientist**, CFTRI Mysore
- ii. Expert: **Prof. S. S. Thorat, Professor and Head**, Department of Food Science & Technology, Post Graduate Institute, MPKV Rahuri (Maharashtra)
- iii. Expert: **Dr Sanjeev Sharma, Diet & Nutrition Consultant**, A P Organics Limited, Dhuri
- iv. Expert lecture Dr H. N. Mishra, Professor, Department of Agriculture and Food Engineering, IIT Kharagpur
- v. Guest lecture by Dr. R. P. Ambrose Kingsley, Asstt Professor, Kansas State University USA

13. Percentage of classes taken by temporary faculty – programme-wise information

B.Tech. (10%)

ICD (10%)

14. Programme-wise Student Teacher Ratio

1:60 in Theory

1:30 in Practical

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

Positions	Sanctioned	Filled	Actual (including CAS & MPS)
Sr. Technicians		02	02
Technicians		03+1 (adhoc)	03+1 (adhoc)

16. Research thrust areas as recognized by major funding agencies

- Bio-utilization of agro-industrial wastes
- Production of prebiotics
- Microencapsulation of probiotics and its use in non-dairy food products.
- Development of bacteriocin and its use in food preservation
- Isolation, purification structure elucidation of exo-polysaccharides
- Production of food enzymes
- Processing and Utilization of Buckwheat (*Fagopyrum Esculentum*)
- Development of Value Added Products from Selected Minor Millets
- Development of Novel Value Added Products from Selected Small Millets and Their Quality Evaluation
- Development and Characterization of Biodegradable Films from Non-conventional Starch Sources
- Development of Nutraceutical Foods using Extrusion Technology
- Germination invitro digestibilities studies on food grain and
- Development of edible, active packaging etc

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Sr.	Title of the Project	Cost (Rs. lakhs)	Duration	Funding Agency	PI/Co-PI
1	Development of bench scale technology for the production of lactose free milk	6.00	2 years (2000-2002)	MHRD, New Delhi	Prof. P.S. Panesar as a PI
2	Bio-separation of microbial amylase: Process optimization and validation	6.00	2 years (2001-2003)	MHRD, New Delhi	Prof. M.B. Bera as a PI
3	Design and fabrication of Amla pricking machine for cottage scale industry	6.07	2 years (2004-06)	ICAR, New Delhi	D.C. Saxena as PI
4	Design and fabrication of gas fired continuous tandoori roti baking oven	10.48	2 years (2005-07)	CSIR, New Delhi	D.C. Saxena as PI
5	Lactulose production by permeabilized yeast cells using Immobilized cell technology	18.12	3 years (2009-12)	CSIR, New Delhi	Prof. P.S. Panesar as a PI
6	Value addition to rice bran by extrusion technology	17.90	2 years (2011-2013)	AICTE, New Delhi	Prof. D.C. Saxena as Co-Pi
7	Development of process for production, downstream processing and application of oligosaccharide producer Enzymes	70.67	2 years (2013-2015)	DBT, New Delhi	Prof. P.S. Panesar
8	Development of immobilized cell technology for the	26.72	2 years (2013-	CSIR, New Delhi	Prof. P.S. Panesar as a PI

	production of L(+) lactic acid using waste potato starch		2015)		
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18. Inter-institutional collaborative projects and associated grants received

a) National collaboration

- b) “Development of processes for production, downstream processing and applications of oligosaccharide producer enzymes” a network project (jointly with Department of Biotechnology, Punjabi University, Patiala) funded by Department of Biotechnology (DBT), Govt. of India., New Delhi with fund amount of Rs. 70 lakh (Principal Investigator at SLIET Longowal. Dr. P. S. Panesar).

b) International collaboration NA

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

As in S. No 17 above

20. Research facility / centre with

- state recognition
- national recognition
- international recognition

NIL

21. **Special research laboratories sponsored by / created by industry or corporate bodies: NIL**

22. **Publications:**

Number of papers published in peer reviewed journals (national / international): 255 (last five years)

Dr. M.B. Bera

1. Vandana Bali, **Parmjit S. Panesar**, Manab B. Bera, and John F. Kennedy (2016) Bacteriocins: Recent trends and potential applications. *Critical Reviews in Food Science and Nutrition*, 56: 817-834
2. S. Kaur, P.S. Panesar*, M.B. Bera and V. Kaur (2015) Simple Sequence Repeat Markers in Genetic Divergence and Marker Assisted Selection of Rice Cultivars: A Review. *Critical Reviews in Food Science and Nutrition*, 55: 41-49 Doi: 10.1080/10408398.2011.646363
3. Gisha, Parmjit S. Panesar*, Manab B. Bera and Shubhneet Kaur (2014) Bioutilization of whey for ethanol production using yeast isolate. *International Journal of Food and Fermentation Technology*, 4: 107-112.
4. Varinder Kaur, M.B. Bera, P.S. Panesar, H.K. Chopra and J.F. Kennedy (2014) Welan Gum: Microbial Production, Characterization, and Applications. *International Journal of Biological Macromolecules* 65: 454-461.
5. V Bali, PS Panesar and MB Bera (2014). Potential of immobilization technology in bacteriocin production and antimicrobial packaging: A Review. *Food Reviews International*, 30(3): 244-263
6. V Bali, PS Panesar and MB Bera (2014). Trends in utilization of agro-industrial byproducts for production of bacteriocins and their biopreservative applications. *Critical Reviews in Biotechnology* (Published online) doi: 10.3109/07388551.2014.947916
7. V Bali, PS Panesar and MB Bera (2014) Utilization of agro-industrial byproducts for bacteriocin production using newly isolated *Enterococcus faecium* BS13. *International Journal of Biological, Veterinary, Agricultural and Food Engineering* 8(6): 507-511.
8. Shubhneet Kaur, Parmjit S. Panesar, Manab B. Bera and Shweta Kumari (2014) Physicochemical, textural, pasting, and in vitro digestion properties of some basmati and non-basmati rice cultivars. *International Journal of Food Properties*, 17: 1055-1066
9. V. Bali, P. S. Panesar*, M.B. Bera and R. Panesar (2014) Fructo-oligosaccharides: Production, purification and potential applications. *Critical Reviews in Food Science and Nutrition* (In Press) DOI: 10.1080/10408398.2012.694084.
10. Reeba Panesar, Parmjit S. Panesar and Manab B. Bera. 2014. Evaluation of different media for fermentative production of biopigments using yeast cultures. *Asian Journal of Microbiology, Biotechnology and Environmental Sciences* 16:163-168.
11. S. Kumari, P.S. Panesar*, M.B. Bera and H.K. Chopra (2013) Comparative studies on physico-chemical characterization of yeast cells entrapped with alginate and hybrid beads. *Iran Polym J* DOI 10.1007/s13726-013-0206-7
12. S. Kumari, P.S. Panesar* and M.B. Bera (2013) Statistical modeling of β -galactosidase production from novel yeast isolate using cheese whey. *Journal of Scientific & Industrial Research* (Accepted)

13. V. Kaur, M.B. Bera*, P.S. Panesar, H.K. Chopra (2013) Production and characterization of exopolysaccharide produced by *Alcaligenes faecalis* B14. *International Journal of Biotechnology and Bioengineering Research*. 4: 365-374
14. S. Kumari, P.S. Panesar*, M.B. Bera and Reeba Panesar (2013) Permeabilization of a newly isolated *Kluyveromyces* sp. for the preparation of whole cell biocatalysis with β -galactosidase activity. *International Journal of Food and Nutritional Sciences* 2(1): 22-26
15. V. Bali P.S. Panesar* and Manab B. Bera (2013) Effect of bacteriocin extracted from *Enterococcus faecium* BS 13 on shelf life of paneer and khoya. *International Journal of Food and Nutritional Sciences* 2(1): 5-11
16. V. Bali, P.S. Panesar* and M.B. Bera (2013) Physiological, biochemical and molecular characterization of potential bacteriocin producer strain isolated from fermented barseem. *Acta Alimentaria* 43(4): 515-525.
17. S.M.R. Joshi, M.B. Bera and P.S. Panesar* (2012) Extrusion cooking of maize/spirulina mixture: factors affecting expanded product characteristics and sensory quality. *Journal of Food Processing and Preservation* 38(2): 655-664
18. V. Bali, P.S. Panesar* and M. B. Bera (2012). Biopreservation: An emerging tool in food processing industry. *Beverage and Food World* 39(10): 50-59
19. S. Kaur, P.S. Panesar* and M. B. Bera (2012). Genetically modified foods: Global status, potential benefits and safety concerns. *Journal Punjab Academy of Sciences* 9-10(1&2): 28-33

Dr. P. S. Panesar

1. Rachna Sehrawat, **Parmjit S. Panesar**, Tanya L. Swer, Anit Kumar (2017) Response surface methodology (RSM) mediated interaction of media concentration and process parameters for the pigment production by *Monascus purpureus* MTCC 369 under solid state fermentation. *Pigment & Resin Technology*, **46**: 14 – 20.
2. Vandana Bali, **Parmjit S. Panesar**, Manab B. Bera, and John F. Kennedy (2016) Bacteriocins: Recent trends and potential applications. *Critical Reviews in Food Science and Nutrition*, 56: 817-834
3. **Parmjit S. Panesar**, Rupinder Kaur, Gisha, Rajender S. Sangwan (2016) Bio-Processing of agro-industrial wastes for the production of food grade enzymes: Progress and Prospects. *Applied Food Biotechnology*, 3 (4):208-227
4. **P.S. Panesar** and S. Kaur (2016) Screening of media components and process parameters for production of L(+) lactic acid from potato waste liquid using

amylolytic *Rhizopus oryzae*. pp. 1 –11 (DOI: <http://dx.doi.org/10.1556/066.2016.0013>) (Published online)

5. Parmjit S. Panesar and Shubhneet Kaur (2015) Bioutilisation of Agro-industrial Waste for Lactic Acid Production. *International Journal of Food Science and Technology*, 50: 2143-2151.
6. Basharat Yousuf, Parmjit S. Panesar, Harish K. Chopra and Khalid Gul (2015) Characterization of secondary metabolites from various solvent extracts of saffron floral waste. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.* DOI 10.1007/s40011-015-0547-4
7. S. Kaur, P.S. Panesar*, M.B. Bera and V. Kaur (2015) Simple Sequence Repeat Markers in Genetic Divergence and Marker Assisted Selection of Rice Cultivars: A Review. *Critical Reviews in Food Science and Nutrition*, 55: 41-49 Doi: 10.1080/10408398.2011.646363
8. Reeba Panesar, Shubhneet Kaur, Parmjit S. Panesar (2015) Production of microbial pigments utilizing agro-industrial waste: a review. *Current Opinion in Food Science*, 1: 70-76.
9. Gisha, Parmjit S. Panesar*, Manab B. Bera and Shubhneet Kaur (2014) Bioutilization of whey for ethanol production using yeast isolate. *International Journal of Food and Fermentation Technology*, 4: 107-112.
10. Varinder Kaur, M.B. Bera, P.S. Panesar, H.K. Chopra and J.F. Kennedy (2014) Welan Gum: Microbial Production, Characterization, and Applications. *International Journal of Biological Macromolecules* 65: 454-461.
11. V Bali, PS Panesar and MB Bera (2014). Potential of immobilization technology in bacteriocin production and antimicrobial packaging: A Review. *Food Reviews International*, 30(3): 244-263
12. PS Panesar, V Bali and S Rani (2014) Physico-chemical, textural and sensory analysis of aloe vera fortified probiotic yoghurt. *Current Nutrition and Food Science* 10(3): 228-233.
13. V Bali, PS Panesar and MB Bera (2014). Trends in utilization of agro-industrial byproducts for production of bacteriocins and their biopreservative applications. *Critical Reviews in Biotechnology* (Published online) doi: 10.3109/07388551.2014.947916
14. V Bali, PS Panesar and MB Bera (2014) Utilization of agro-industrial byproducts for bacteriocin production using newly isolated *Enterococcus faecium* BS13. *International Journal of Biological, Veterinary, Agricultural and Food Engineering* 8(6): 507-511.
15. Shubhneet Kaur, Parmjit S. Panesar, Manab B. Bera and Shweta Kumari (2014) Physicochemical, textural, pasting, and in vitro digestion properties of some basmati and non-basmati rice cultivars. *International Journal of Food Properties*, 17: 1055-1066
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- g. **Kumar, P.** 2013. Potentials for Phytochemicals – India and Middle East. *Ingredients South Asia*. Saffron Media Pvt. Ltd. Mumbai. August, 2013 p. 68, 70.

h. Chapters in Books: 70

i. Edited Books :10

j. Books with ISBN with details of publishers

- Science and Technology of Fruit Wine Production (2017), M.R. Kosseva, V.K. Joshi, P.S. Panesar (ISBN 9780128008508), Academic Press, USA, UK

- Biotechnology in Agriculture and Food Processing: Opportunities and Challenges, P.S. Panesar and S. S. Marwaha, Taylor and Francis Group (CRC Press), USA [2013]
 - Enzymes in Food Processing: Fundamentals & Potential Applications, P. S. Panesar, S. S. Marwaha, H.K. Chopra, (ISBN 978-93-80026-33-6), Published by IK International Pvt. Ltd., New Delhi. [2010]
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- k. Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)**

Faculty →	D.C.Saxena	P.S.Panesar	C.S.Riar	P.Kumar
Citation indices				
Range	928	1019 (Scopus) 1914 (Google Scholar)	614	474/5.36
average				
Impact Factor				
Range		0.380-7.178	0.402-4.330 2.126	0.5 to 3.29/0.9
average				
SNIP		0.092-2.276	0.953-1.747	
SJR		0.106-1.819	0.406-1.490	
h-index	16	16(Scopus) 21(Google Scholar)	11(Scopus) 14(Google Scholar)	10

I. Details of patents and income generated

- i) **Tanuja Srivastava and Saxena D.C. (2013).** A NUTRITIOUS SNACK FROM RICE INDUSTRY WASTE AND METHOD THEREOF (Filed on **25/12/2013**, Publication Date: **05/02/2016**, Application No.**3764/DEL/2013**)
- ii) **Saxena D.C. and Kulsum Jan (2013).** MOULDING PELLETS FROM BIO-WASTE AND PROCESS THEREOF (Filed on **22/04/2015**, Application No. **1116/DEL/2015**)

23. Areas of consultancy and income generated

NIL

24. Faculty selected nationally / internationally to visit other laboratories / institutions

/ industries in India and abroad

25. Faculty serving in

a) National committees

- **P.S.Panesar Former Member** of the scientific panel on “*Genetically modified organisms and foods*” constituted by the *Food Safety and Standards Authority of India*.

- **P.S.Panesar Member of Board of Studies at Lovely Professional University, Jalandhar** in the discipline of Food Technology, India
- **P.S.Panesar Member of Board of Studies at Mata Gujri College, Fatehgarh Sahib, India** in the discipline of Food Technology
- **P.S.Panesar Member of Board of Studies at Punjab Technical University, Jalandhar** in the disciplines of Biotechnology, and Food Technology.
- **P.S.Panesar Current/Former Member of Editorial Advisory Board of**
International Journal of Biological Macromolecules (ISSN: 0141-8130)
International Journal of Food and Fermentation Technology (ISSN NO.: 2277-9396)
American Journal of Food Technology (ISSN no. 1557-4571)
International Journal of Dairy Sciences (ISSN no. 1811-9743)
Asian Journal of Microbiology Biotechnology & Environ. Sci. (ISSN no. 0972-3005)
Research Journal of Microbiology (ISSN no. 1816-4935)
World Journal of Dairy & Food Sciences (ISSN no. 1817-308X)
Journal of Industrial Pollution Control (ISSN no. 0257-8050)

b) International committees

- **P.S.Panesar Member** in the *international collective of experts of Foundation for Science and Technology* (FCT), Portugal.
- c)

c) Editorial Boards

- **P.S.Panesar** International Journal of Biological Macromolecules (ISSN: 0141-8130), **An Elsevier Journal**
- **P.S.Panesar** Applied Food Biotechnology (ISSN: 2423-4214)
- **P.S.Panesar** International Journal of Food and Fermentation Technology (2249-1570)
- **P.S.Panesar** Asian Journal of Microbiology Biotechnology & Environmental Sciences (ISSN no. 0972-3005)
- **P.S.Panesar** Journal of Ecology, Environment & Conservation (ISSN no. 0971-765X)
- P.Kumar: Member, Editorial Board, Food Processing Technology, NDRI, Karnal
- P.Kumar: Member, Editorial Board, International Journal of Food, Nutrition and Dietetics

d) any other (please specify)

- P.Kumar Member, Curriculum Development of Theory and Practical courses of B. Tech. Food Technology, NIFTEM, Kundli- 2010

- P.Kumar Member, Expert Committee, Curriculum Development for M. Tech. (Pharma Foods & Nutraceutical Biotechnology), PIT, PTU, Jalandhar- 2012-2013
- P.Kumar Expert, Development of e-course of Food Technology – I for B. Tech. (Dairy Technology) Programme, NDRI, Karnal.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects
95-100%
- percentage of students doing projects in collaboration with other universities
/ industry / institute
0-5%

29. Awards / recognitions received at the national and international level by

- **Faculty**

- a. 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.

- **Doctoral / post doctoral fellows**

- a. D. C. Saxena guided one **Post-Doctorate Fellow** Dr. Mune Mune Martin Alain, Lecturer, University of Maroua, **Cameroon** under **Research Training Fellowship for Developing Country Scientists (RTFDCS)** fellowship, Govt. of India

- **Students**

- a. INSPIRE FELLOWSHIP to Ms Vandana Bali, Research Fellow (DST, New Delhi)
- b. RAJIV GANDHI FELLOWSHIP to Mr Balwan and Mandeep Singh, Shiv Kumar (PFE-1218) Research Fellow
- c. Mr. Tajamul Rouf Shah (PFE-1211) granted INSPIRE Fellowship
- d. Senior Research Associateship to Dr. Reeba Panesar under Scientist Pool Scheme (CSIR, New Delhi)

30. **Seminars/ Conferences/Workshops organized and the source of funding (national**

/ international) with details of outstanding participants, if any.

- 1 **National Conference** on “Innovative Techniques in the Development of Functional Foods and Nutraceuticals” NCFN-14 held on **February 14-15, 2014** at **SLIET, Longowal**.
- 2 TEQIP sponsored National Conference on “Innovative Techniques in Food Product and Processing Technologies” on Oct 09-10, 2015 at SLIET, Longowal.
- 3 **Organized National Conference** on “*Technologies in Sustainable Food Systems*” on October 7-8, 2016 at SLIET Longowal.

31. **Code of ethics for research followed by the departments:** Ethics are being followed in research publications and academics

32. **Student profile programme-wise:**

2011-12

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage*	
		Male	Female	Male	Female
Certificate (2-years)	2358	18	16	44.44	38.88
Diploma (2-years)	3880	21	13	80.95	100
Degree (3-years)	4582	36	28	27.77	85.7
PG (M.Tech)	1238	23	11	95.65	100
Ph.D	609	02	04	50	--

2012-13

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Certificate (2-years)	1643	23	16	34.7	56.25
Diploma (2-years)	2909	26	20	88.4	95
Degree (3-years)	3962	25	20	76	90
PG (M.Tech)	1241	19	12	100	100
Ph.D	386	12	11	16.66	--

2013-14

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Certificate (2-years)	1439	13	08	30.76	37.5
Diploma (2-years)	2820	28	9	85.7	100
Degree (3-years)	3173	25	18	52	88.88
PG (M.Tech)	47+ through CCMT	4	03	100	100
Ph.D	440	03	05	--	--

2014-15

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Integrated Certificate and Diploma (3-years)	2100	32	18	--	--
Diploma (2-years)	309	6	11	100	100
Degree (4-year) *Admission through JEE Mains	241	15	06	--	--
Degree (3-years)	2347	32	17	--	--
PG (M.Tech)	13+ Admission through CCMT	00	00	--	--
Ph.D	443	01	00	--	--

2015-16

Name of the Programme (refer to question no. 4)	Applications Received*	Selected		Pass percentage	
		Male	Female	Male	Female
Integrated Certificate and Diploma (3-years)	2199	23	19	--	--
Diploma (2-years)	228	07	03	--	--
Degree (4-year) *Admission through JEE Mains	204	09	01	--	--
Degree (3-years)	2082	30	10	--	--
PG (M.Tech)	19+ Admission through CCMT	03	04	--	--
Ph.D	563	03	04	--	--

*Numbers of application received are for complete program at institute level, whereas selected and pass percentage of students is calculated at department level.

**33. Diversity of students:
2011-12**

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Certificate(2-year)	0	76.60	23.40	0
Diploma (2-year)	42.10	34.20	23.60	0
Degree(3 year)	32.81	39	28.12	0
PG (M.Tech)	8.82	2.94	88.23	0
Ph.D.	0	16.66	83.30	0

2012-13

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Certificate(2-year)	0	38.46	61.53	0
Diploma (2-year)	44.44	33.33	22.22	0
Degree(3 year)	64.44	0	35.55	0
PG (M.Tech)	0	25.80	74.20	0
Ph.D.	4.30	4.30	91.30	0

2013-14

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Certificate(2-year)	0	28.57	71.42	0
Diploma (2-year)	40.50	29.70	29.70	0
Degree(3 year)	60.46	0	39.53	0
PG (M.Tech)	14.28	0	85.71	0
Ph.D.	12.50	12.50	75	0

2014-15

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Integrated Certificate and Diploma (3-year)	0	26	74	0
Diploma (2-year)	100	0	0	0
Degree (4-year)	0	0	100	0
Degree(3 year)	67	0	32.67	0
PG (M.Tech)	00	0	0	0
Ph.D.	0	0	100	0

2015-16

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from other universities outside the state	% of students from other countries
Integrated Certificate and Diploma (3-year)	0	21	79.50	0
Diploma (2-year)	100	0	0	0
Degree (4-year)	0	0	100	0
Degree(3 year)	80	2.50	17.50	0
PG (M.Tech)	85.71	0	14.28	0
Ph.D.	71.42	0	28.57	0

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

GATE: 12 (last four years)

35. Student progression

Student progression	Percentage against enrolled
UG to PG	40-45%
PG to M.Phil.	NA
PG to Ph.D.	10-15%
Ph.D. to Post-Doctoral	Nil
Employed	Campus Selection: 20-30%

<input type="checkbox"/> Campus selection <input type="checkbox"/> Other than campus recruitment	Others: 60-70%
Entrepreneurs	10%

36. Diversity of staff

Percentage of faculty who are graduates of the same university: Nil
From other universities within the State and other States of India: 100%

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period :

01(Ph.D.)

37. Present details of departmental infrastructural facilities with regard to

- a) Library : **01**
- b) Internet facilities for staff and students : Yes
- c) Total number of class rooms: **07**
- d) Class rooms with ICT facility: 2
- e) Students' laboratories : **09**
- f) Research laboratories: **04**

39. List of doctoral, post-doctoral students and Research Associates

- a) from the host institution/university : **5**
- b) from other institutions/universities : 30

40. Number of post graduate students getting financial assistance from the university.

12 (MHRD)

06 (Others)

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

- i) Board of Studies (BOS) meeting including outside experts were held
- ii) Student and industry feedback were taken in to consideration

42. Does the department obtain feedback from

- a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, Board of Studies (BOS) meeting including faculty and outside experts

- b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, Student feedback from prescribed proforma are being taken

- c. alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes, Alumni meet and experts lectures from alumni placed in industries are being held.

43. List the distinguished alumni of the department (maximum 10)

Name of Student	Company
Taranjit Singh	Cremica Agro Foods Theing Road, Phillaur - 144 410, Punjab
Avneet Kaur Johal	Nestle (India) , Moga Punjab
Swikriti Trivedi	Twilight Mercantiles Ltd. Village: Dhana, Baghbania, Nallagarh, Himachal Pradesh
Pardeep Sharma	Reliance Dairy Foods Limited, MOHALI

Kumbhar Sunil Bhimsen	Nestle (India), Goa
Harkanwal Singh	Reliance Dairy Foods Limited, MOHALI
Rajan	Coca Cola Bottling Plant, Ludhiana
Kundan Kishor	Haldiram Snacks Pvt Ltd Noida UP
Shashilata Bhaskar	Cre mica Agro Foods Theing Road, Phillaur - 144 410, Punjab
Shashi Kumar	Haldiram Snacks Pvt Ltd Noida UP
Ashmita Kumari	Pepsi Bottling Plant Jamshedpur, Jharkhand
Reecha Jha	Bikanervala Foods Private Limited A-28, Lawrence Road Industrial Area, New Delhi
Ritu Choudhary	Quality Executive, Pitanjali Haridwar

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Guest/Expert lectures are being delivered time to time by the experts from academic institutions and the Industry

45. List the teaching methods adopted by the faculty for different programmes

1. Class room teaching
2. Head on projector
3. Multi media

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- i) Placement of the students
- ii) Feedback from students and industries are being taken

47. Highlight the participation of students and faculty in extension activities.

IGNOU centre

48. Give details of “beyond syllabus scholarly activities” of the department.

- a. MOU with CIPHET, Ludhiana
- b. MOU with Indian Institute of Crop Processing Technology (IICPT), Thanjavur, Tamil Nadu

Signing MOU with other reputed Institutions / Universities in India and Abroad is in progress.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

NBA (5-Years)

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied

Generates trained manpower in the field of Food Engineering & Technology. The students get employment in industry, opt for higher education or become entrepreneur.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strength

- i) Highly qualified faculty
- ii) Sophisticated lab facilities
- iii) Sufficient number of labs
- iv) Trained technical staff
- v) Department library

Weaknesses

- i) Placement of students
- ii) Less industry-Institute interaction
- iii) Absence of Scale-up facilities

Opportunities and Challenges

- i) Placement of students
- ii) Industrial oriented research projects
- iii) Industrial consultancy
- iv) Generation of Scale-up facilities

52. Future plans of the department

- i) Industrial oriented research projects
- ii) Industrial consultancy
- iii) Sophisticated lab facilities of international standard

Evaluative Report of the Department

1. Name of the Department: Management and Humanities
2. Year of establishment: 1991
3. Is the Department part of a School/Faculty of the university? Yes
4. Names of programmes offered: MBA and Ph.D.
5. Interdisciplinary programmes and departments involved: NIL
6. Courses in collaboration with other universities, industries, foreign institutions, etc.:
NIL
7. Details of programmes discontinued, if any, with reasons: NA
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:
Semester
9. Participation of the department in the courses offered by other departments: Yes
10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others):
Information in this regard is available with administration section.

	Sanctioned	Filled	Actual Including CAS
Professor			06
Associate Professors			01
Asst. Professors			01
Others			-----

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance:

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D.
Dr. P. K. Jain	Ph.D.	Professor	Labour law, HR, IR and General Management	32 (25 Years in Teaching, 07 Years in	05
Dr. Japreet Kaur	Ph.D.	Professor	English Language and Literature,	26 Years in SLIET	02
Dr. Mahesh Kumar	Ph.D.	Professor	Communication Skills, Indian	25 Years in SLIET	04
Dr. Parveen Khanna	Ph.D.	Professor	Communication Skills, Indian	25 Years in SLIET	Nil
Dr. P. K. Dhiman	Ph.D.	Professor	HRM, Entrepreneurship	19 Years in SLIET	01
Dr. Sanjeev Bansal	Ph.D.	Professor	Marketing and HRM	20 Years	02 + 02 (Thesis Submitted)
Dr. Sanjeev Garg	Ph.D.	Associate Professor	Marketing Management	19 Years	Nil
Dr. Mandeep Ghai	Ph.D.	Assistant Professor	Marketing Management	14 Years	Nil

12. List of senior

Visiting Fellows, adjunct faculty, emeritus professors:

NIL

13. Percentage of classes taken by temporary

faculty- programme-wise information: 10%

14. Programme-wise Student Teacher Ratio: As per Institute Norms

15. Number of academic support staff (technical) and

administrative staff:

sanctioned, filled and actual:

Vibha Rani (Clerk), Gurnam Singh (MTS)

16. Research thrust areas as recognized by major funding agencies:

NIL

17. Number of faculty with ongoing projects from

a) national b) international

funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise. : NIL

18. Inter-institutional collaborative projects and associated grants received : NIL

a) National collaboration b) International collaboration

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR,

AICTE, etc.; total grants received. : NIL

20. Research facility / centre with

- state recognition
- national recognition
- international recognition

21. Special research laboratories sponsored by / created by industry or corporate bodies:

NIL

22. Publications:

Dr. Jap preet Kaur Bhangu Professor)

1. Dalip Kaur Tiwana' And Such is Her Fate: An English Translation of Eho Hamara jiwana' published in Muse India: the Literary e-Journal. Issue 36 [0975-1815] **March-April 2011.**

2. ' Toni Morrison's The Bluest Eye: A Paradigm of African American Racial and Gender Struggle' Published in Indian Journal of World Literature and Culture. Pp.2229-7251. July -December2011

3. 'From Dubois to Baraka: The Shaping of African American Theatre' published in Journal of Drama Studies: An Intentional Journal of Research on World Drama in English. Vol.5 No.2[0975-1696]pp.76-88.July2011
4. 'Naipaul' India: A Million Mutinies Now : The Dynamics of Politics'' International Journal of English And Literature (ISSN2249-6912) Vol.3,Issue 3, AUG 2013, 97-102.I Impact Factor3.8526
5. 'Witches or Warriors: An Analysis of Toni Morrison' s Sula and Song of Solomon'',International Journal of English and Literature (ISSN 2249-6912) Vol.3,Issue3, Aug 2013, 109-116. Impact Factor3.8526
6. ' Negotiating Identity and History: Michael Ondaatje' s In the Skin of Lion and the English Patient, '' International Journal of English and Literature (ISSN 2249-6912) Vol.3, Issue 4,October 2013,11-18. Impact Factor 3.8526
7. ' Effects of Anxiety on Indian Engineering Students in the foreign Language Classroom, '' International Journal of English and Literature [ISSN 2249-6912] Vol.3,Issue 4, October2013, 49-60. Impact Factor 3.8526
8. 'The Circle of Illusion: Poems by Gurcharan Rampuri, '' Indian Journal of World Literature and Culture (ISSN)2229-7252) Vol.9&10 July 2013.167-170.
9. 'Naipaul' s India: A Wounded Civilization: The Dynamics of Politics'' International Journal of Multidisciplinary Educational Research (ISSN 2277-7881)Vol.3, Issue 8(1),Agu 2014,97-102.
Impact factor:2.735
10. Memory Identity and Transnationalism in Ondaatje's Divisadero'' International Journal of Multidisciplinary Educational Research (ISSN2277-7881) Vol. Issue9(4), Sept. 2014,200-213.Impact Factor 2.735 IC Value 5.16
11. 'Rushdie' Shame The Dynamics of Politics'' International Journal of Multidisciplinary Educational Research (ISSN 2277-7881) Vol.3, Issue 9(4), Sept. 2014,Impact Factor 2.735 IC Value 5.16
12. 'Margaret Atwood's Oryx and Crate: An Ecocritical Approach'', Vol.No.10,Nov.2014 International Journal of Research IJR ISSB 2348-6848 Peer Reviewed/ Indexed Impact Factor 3.541
13. 'Representations of Nature in Margaret Atwood's Oryx and Crate, '' Vol. 4 Issue to Dec.20014 25-32 International Journal of English & Literature (IJEL) ISSN-2249-8028(E) 2249-6912(P) Peer Reviewed/ Indexed/ Impact Factor 4.0867

14. "African American Young Adult Fiction : An Overview," International Journal of English and Literature ISSN 2249-8028 Volume 5 Issue 3 June 2015 91-96 Peer Reviewed / Indexed Impact Factor 4.4049 Index Copernicus Value (ICV)3.0
15. "Theme of Resistance in Selected Poems of Amiri Baraka," International Journal OF English and Literature ISSN 2249-8028 Volume 5 Issue 5 October 2015, 27-36 Peer Reviewed /Indexed / Impact Factor 4.4049 Index Copernicus Value (ICV)3.0
16. "Teaching English as a Second Language: An Evaluation of TESL Practices in Indian Context," *Language In India*, ISSN 1930-2940 Vol 15 June 2015, 23-34
17. "Routes to Roots: Negotiating Identity in Michael Ondaatje's *Running In The Family*," International Journal Of Humanities and Social Sciences," ISSN(P) 2319-393X ISSN (E) 2319-3948 Vol 5, Issue 1 Dec.-January 2016 157-164. Impact Factor 2.7367 Index Copernicus Value 3.0 NAAS Rating 3.19 (Paper Awarded Best Paper Certificate by the TJPRC Journals Best Paper Award Committee)
18. "A Study of Communicative Language Teaching Needs of Engineering Students of South Western Region of Punjab(India)," *International Journal of Linguistics and Literature*, ISSN (P) 2319-3956, ISSN(E) 2319-3964, Vol 5 Issue 1, December-January 2016. 29-38, Impact Factor 2.9819
19. "Theme of Resistance in the Selected Poems of Amiri Baraka," *International Journal of English and Literature*, Vol 5 Issue 5 October 2015 27-36 Impact factor 4.4049
20. "African American Young Adult Fiction: An Overview," *International Journal of English and Literature*, Vol 5 Issue 3 June 2015 91-96 Impact factor 4.4049

Dr. Pardeep Kumar Jain (Professor)

1. Contract Labour (Regulation and Abolition)Act, 1970- Need To Revisit Immediately Journal of international academic research for multidisciplinary (JIARM) Impact factor: 1.393 ISSN:2320-5083 June 2014
2. The Revitalization of Khadi - A Need the Hour: A Case Study at Sangrur (Punjab) NIET journal of Research in Cornmerce, Economics& Management Double- Blind Peer Rvieded Referred open Access International e-Journal -included in International Serial Directories. V-2(2012) 2231-4245 Impact factor: 3.067
3. Family Business: Challenges & Opportunities Paripex : Indian Journal of Research (IJR) Journal Iisted in International ISSN Directory,Paris), Paldi, Ahmadabad (Gujrat),2011 22501991 Impact factor:3.4163.

4. Dire Need of Attractive Action Agenda for Sick/Closed SMEs in Punjab. Indian Journal of Research (IJR)(Journal Listed in International ISSN Directory, Paris),2011 2249-555x Impact factor: 3.4163.
5. Impact of Globalisation in Boosting Indian SMEs: Special Reference to Punjab State Asian Journal of Research in Business Economic & Management (AJRBEM), 2249-7307 2012. Impact factor:0.376
6. The ombudsman' role in changing the conflict resolution System in institutions of higher education International Journal Educational Science and Research (IJESR), 2012 issn 2249-6947 Vol. 2, Sep 2012 23-30 Impact factor:3.2
7. Changing Dimensions in IR- Need for Strategy Lessons to Be Learnt From Maruti Violence International Journal Research in Management, Science& Technology E-ISSN 2321-3264 Vol.1No.1,June 2013 Impact factor:3.23
8. Mahatma Gandhi National Rural Employment Guarantee Act(MGNREGA) on the touchstone of Social Security Indian Journal of Applied Research,ISSN-2249-555X Vol.3 No. 1,Feb,2013. Impact factor:3.6241
9. Motivational Tools for employees in Banks: A Case study of Punjab National Bank, Hoshiarpur Asian Journal of Research In Banking and Finance, 2013 ISSN2249 7323 Impact Factor: 0.406
10. Implications of Labour welfare measures on Job Satisfaction and productivity: A Study of Cotton Textile Industry in Punjab International Journal of Management & Information Technology, ISSN2278-5612 Vol. 5,No.2 august,2 013 Impact Factor: 1.317
11. CHANGING LIVES THROUGH SOCIAL INNOVATION: A CSE STUDY OF KALGHIDAR TRUST, BARU SAHIB (HIMACHAL PRADESH) INDIA Journal of international academic research for multidisciplinary (jiarm ISSN: 2320-5083 Dec.2013 in-Impact Factor:2.417
12. Contract Labour (Regulation and Abolition) Act , 1970 -Need To Revisit Immediately Journal of international academic research for multidisciplinary (JIARM) Impact Factor: 1.393

Dr. Mahesh Kumar Arora (Professor)

1. Gaps in Practice of Literature into films: Analysis Selected. Film Adaptations of Macbeth, Research Scholar -An International Refereed Journal on Literary

- Explorations, Aug 2014, ISSN 2320-2101,IF 0.735
2. Post -9/11 Citizenship in Diaspora Literature and Film Adaptations: A Case Study of The Namesake, New Academia, April 2013, -3967, Impact Factor: 0.411
 3. The Treatment of Anticolonial Nationalism in Indian Fiction in English, International Journal of English and Literature, December 2013, 2249-8028, Impact Factor: 2.576
 4. Nation and Nationalism: An Inquiry into Contrasting Visions and Perspectives, International Journal of Linguistics and Literature, March 2014, 2319-3964, Impact Factor: 2.9819,
 5. Practical Understanding of Communicative Language Teaching: A Study of Engineering Institutes in Punjab, International Journal of Linguistics and Literature, March2014, 2319-3956, Impact Factor: 2.9819,
 6. Reaching English Language at Engineering and Technology Institutes in India: Problems and Remedies, International Journal of English and Literature, April 2014 , 2249-8028, Impact Factor: 4.0867,ICV: 3.0
 7. The Grotesque and Gender in Carson McCullers' s The Heart is a Lonely Hunter and The Member of the Wedding, International Journal of Multidisciplinary Educational and Research, April 2014, ISSN 2277-7881, IF2.735 ICV 5.16
 8. Teaching English Language at Engineering and Technology Institutes in India: Problems and Remedies, International Journal of English and Literature, April 2014, 2249-8028,Impact Factor: 4.0867,ICV:3.0
 - 9.The Grotesque and Gender in Carson McCullers's The Heart.is a Lonely Hunter and The Member of the Wedding, International of Multidisciplinary Educational and Research, April 2014, ISSN 2277-7881,IF2.735ICV5.16
 10. Portrayal of Anand in Sagar' s Bleeding Partition, Notions: A Peer Reviewed Journal of English Literature, December 2014,ISSN0976-5247
 11. Nine Transnational Film Adaptation of Macbeth: An Exploration QUOTE Unquote-International Journal of Language, Humanities and Management. Vol.3, No.1-2. ISSN: 2320-8759.Jan-Dec 2015.
 12. Portrayal of the Personal Trauma: An ANALYSIS OF Hazaar Chaurasi Ki Maa-The Text and the Film. Conference Proceedings of the UGC Sponsored Two Day National Seminar on Event, Memory and Literature: Trauma Narratives on the Indian Subcontinent. St. Thomas College, Kozhenchery, Kerala. Edited by febu George Mathai Kurichiyath and Annie George. 2015. ISBN:978-81923313-8-6.

13. Diasporic Cognizance in Zafar Anjum’s Writings: An Analysis” Conference of Migration in South East Asia and Far East. Punjabi University, Patiala, Punjab. Edited by Manjit Inder Singh and Tejinder Kaur. 2015. ISBN: 978-81-302-0327-1.
14. “Shakespeare in Popular Culture: Film–Realizations across World” *Academic Discourse* (ISSN 2278–3296), Vol. 1 No. 2. December 2013. pp. 63–71. (Refereed Journal)
15. “Shakespeare Goes to UK and Australia: Study of Roman Polanski and Geoffrey Wright’s Film Versions of *Macbeth*” *The Literati*. (ISSN: 2248–9576) Winter 2012 (12.2). pp. 96–105. (A Transnational Peer Reviewed Journal)
16. “Adapting *Hamlet* with Indian Ethos: An Assessment of *Eklavya: The Royal Guard*” *International Journal of Multidisciplinary Educational Research*. (ISSN 2277–7881) Vol. 2. No. 2. February 2013. pp. 68–77. (Peer Reviewed, Indexed and, listed at Ulrich’s Periodicals Directory, ProQuest U.S.A.) Impact Factor 2.735.
17. “*Macbeth* in World Cinema: Selected Film and TV Adaptations” *International Journal of English and Literature* (ISSN 2249–6912) Vol. 3. Issue 1. March 2013. pp. 179–188. (International Peer Reviewed Journal) Impact Factor 2.576.
18. “Re–Contextualizing *Macbeth* in Indian and Japanese Context: A Comparison” *International Journal of Multidisciplinary Educational Research*. (ISSN 2277–7881) Vol. 2. Issue 12(2) November 2013. pp. 168–83. (Peer Reviewed, Indexed and, listed at Ulrich’s Periodicals Directory, ProQuest U.S.A.) Impact Factor 2.735.
19. “Three UK Based film Adaptations of Shakespeare’s *Macbeth*: A Comparative Analysis” *International Journal of English and Education* (ISSN 2278–4012) Vol. 3. Issue 1. January 2014. pp. 387–91. (Peer Reviewed Journal)
20. Two films in Perspective: Comparative Analysis of the Psychological Situation of Macbeth’s Character”. *Quote Unquote – International Journal of Language, Humanities and Management*. (ISSN: 2320–8759). Vol. 1, No. 1–2. Jan–Dec 2013. pp 61-72. (Peer Reviewed International Journal)
21. “Shakespeare’s Poetic Language in Visual Terms: Analysis of Orson Welles’s and Geoffrey Wright’s Film Adaptations of *Macbeth*.” *Quote Unquote – International Journal of Language, Humanities and Management*. (ISSN: 2320–8759). Vol. 2, No. 1–2. Jan–Dec 2014. (Peer Reviewed International Journal)
22. “Nine Transnational Film Adaptations of *Macbeth*: An Exploration.” *Quote Unquote – International Journal of Language, Humanities and Management*. (ISSN: 2320–8759). Vol. 3, No. 1–2. Jan–Dec 2015. pp 44–74. (Peer Reviewed International

Journal)

23. "Treatment of Lady Macbeth: Five Cross-Cultural Film Adaptations of *Macbeth*" published in the edited book titled *Adaptation Studies: Literature through Cinema and Translation*. Edited by Mahesh Kumar Arora and Ritu Mohan. 2013. Pp. 99–114. (ISBN: 978–93–5113–289–9).
24. "Studying two Masterpieces: *The Guide* and *Guide*". Edited by Prof. Vivekanand Jha LNMU, Bihar. 2014. Pp. 61–77. (ISBN: 978–93–81030–74–5)
25. "Reading *The Namesake* before and after 9/11: the Text and the Film". Edited by Prof. Pradipta Mukherjee and Prof. Sajalkumar Bhattacharya Kolkata, West Bengal. (ISBN: 978–81–8043–111–1)

Dr. Pawan Kumar Dhiman (Professor)

1. Organization and Working of Public Distribution System'' A study of Punjab .''
INDIAN JOURNAL OF APPLIED RESEARCH'' vol.3issue 4, April, 2013
ISSN -2249- 555x Refreed/ Peer reviewed. Impact Factor00.8215
2. Role and Effectiveness of Public Distribution System in Providing Food Security in Indian'' INDIAN JOURNAL OF RESEARCH PARIPEX Vol.3/issue :5/ june,2013
ISSN-2250-1991. Refreed/ Impact Factor 0.3208
3. Management of Pubic Distribution System in Punjab: An Analysis of Sangrur Distt. Asian journal of Research in Business Economics&Management''
Vol. IV Issue -1 January, 2014 ISSN-2250--1673. Pee Reviewed /Refreed
4. Impact of public Distribution System on BPL Families an Analysis of Punjab
International Journal of Business management and Research Vol .4.Issue 2.April 2014
Trans Stellar ISSN 2249-6920 Peer Reviewed Impact Factor4;9926
5. A study on Marketing Strategies of self Help Groups in Punjab: Challenges and Constraints International Journal of Sales and Marketing Management.Research and Development May 2014 Trans Stellar 2249-6939 Impact Factor 5.3064
6. Impact of Public Distribution System on BPL Families an Analysis of Punjab.
International Journal of Business Management and Research Vol. 4.Issue 2 April 2014
Trans Stellar ISSN 2249-6920 Peer Reviewed Impact Factor 4.9926
7. Dimension and Apprehensions of Self- Help Groups -An analysis International Journal of Economics and Business Modeling ISSN/IS BN No. 0976531X Peer reviewed Impact factor Value 4.42(2012)
8. Role of Technical institutions in promoting Techno- Entrepreneurs- A Comparative

Analysis. pp International Journal : Actual Problems of Economics UKRAINE Dec. 2011. ISSN/IS BN No. 19936788. Indexed Impact Factor Value 0.039

Dr. Parveen Kaur Khanna (Professor)

1. Entrepreneurial Creativity in the Context of Team Diversity and Management in Journal of Arts, Management and Social Sciences (March 2011) ISSN 0975-4083.
2. Changing Facets of Women: An Indian Panorama in Research Journal of Social and Life Sciences (June 2011). ISSN 0973- 3914.
3. Silence and Re(birth): Heterogeneous phases in Shauna Singh Baldwin's What the Body Remembers in English Journal, Pragati Educational Society, Jalandhar (June 2011) ISSN 0975-4091.
4. Down the Memory Lane: The Philosophy of Sir Rabindra Nath Tagore in the Past and the Present in Journal of Arts, Management & Social Science (Sept. 2011) ISSN 0975-4083.
5. From Tradition to Modernity: Emergence of New Woman in Indian Fiction in English published In Protocol–Journal of Translation: Creative and Critical Writings (Winter 2011)
6. The Liberated New Woman: Deconstructing the Myth in the Novels of Anita Desai in Journal of Social and Life Sciences(December 2011). ISSN 0973-3914.
7. The Female Entrepreneur: Challenges and the Road Ahead in Journal of Social and Life Sciences (June 2012). ISSN 0973-3914.
8. Women Empowerment: A Myth or Reality in Journal of Social and Life Sciences (June 2013). ISSN 0973-3914.
9. Element of Dalit Subalternity especially in the of case Dalit Women in Balbir Madhopuri's Changya Rukh in Universal Research Report: An International Refereed Journal (April-June 2014) ISSN 2348-5612
10. Sangati as a Dialectics of Self and Dalit Female Paraiya Community. Journal of International Academic Research for Multidisciplinary.ISSN 2320-2083. July 2014. Impact Factor 1.393.
11. The Critical Analysis of Mahar Dalit Situation in Baby Kamble' s The Prisons We Broke. International Journal of Academic Research for Multidisciplinary. ISSN 2320-5083. December 2014.Impact Factor 1.393

12. Rudali as an epitome of Caste , Class and Gender Subalternity: An analysis of Mahasweta Devi's& Rudali , July 2014, Indian Journal of Applied Research, 2.165,2 Impact Factor
13. The idea of false sisterhood the post - feminist echoes in Rupa Bajwa's The sari shop, March 2015 - International Journal of Multidisciplinary Research and Development ,3.672 Impact Factor
14. Consensual violence against surrogate mothers is Kishwar Desai 's The Origins , Of love, Feb 2015- Parapet, journal : Indian Journal of Research Impact Factor 1.6714 Paripex
15. Sandwiched between two Faiths : The Critical Analysis of S.L. Bhyrappa,s novel Aauarana: the veil ,March 2015 International Journal of Scientific Research, Impact Factor 1.8651
16. Violence though Relegates the Critical Analysis of Perumal Mauregnan's one Part woman, International Journal of Multidisciplinary Research & Development,Impact Factor 3.762.
17. Physical and Psychological isolation in Bharati Mukherjee's The Tiger's Daughter, Jasmine & The Desirable Daughter. *International Journal of English and Literature (IJEL)*. Vol. 5, Issue 4, August 2015. ISSN (P): 2249-6912; ISSN (E): 2249-8028. International, Referred. Impact Factor - 4.4049
18. Challenge to Patriarchal Normativity in Marriage: The Critical Analysis of Shubha Menon's The Second Coming. *International Journal of English and Literature (IJEL)*. Vol. 5, Issue 5, Oct 2015. ISSN (P): 2249-6912; ISSN (E): 2249-8028. International, Referred. Impact Factor - 4.4049.
19. A quest for real identity in Bharati Mukherjee's Jasmine. *International Journal of Multidisciplinary Research and Development*. Vol. 2, Issue: 6, June 2015. E-ISSN: 2349-4182. P-ISSN: 2349-5979. International, Referred. Impact Factor - 3.762.
20. Innovation knows no gender: The Critical Analysis of Kavita Deshwani's *Betrayed*. Quote Unquote – International Journal of Language, Humanities and Management. (ISSN: 2320–8759). Vol. 3, No. 1–2. Jan–Dec 2015. (Peer Reviewed International Journal)

1. Dynamic environment - Strategic Indian Journal of Research Impact
Factor: 1.6714 ISSN-2250-1991 Vol.3, Issue.4 15th April, 2014
2. Small to Mall: A Study of Indian Journal of Applied Research Impact Factor:
2.1652 ISSN -2249- 555X Vol. 4, Issue.6 1st June, 2014
3. Small Retail Enterprises (SREs) And Their Role in Building Neighborhood
Community In India IOSR Journal of Humanities And Social Science (IOSR-
JHSS) Impact factor: 1.589 E-issn: 2279-0837, P- ISSN: 2279-0845. Vol. 19,
Issue5, Ver. VI (May. 2014), PP32-35
4. Dynamic Environment- Strategic Escape of Shopkeeper. Indian Journal of
Research. *Impact factor: 1.6714*. ISSN - 2250-1991. Vol.3, Issue. 4. April,
2014.
5. Small to Mall: A Study of Dynamic Diversification of Indian Retail Sector.
Indian Journal Of Applied Research. *Impact Factor: 2.1652*. ISSN- 2249 -
555x. Vol. 4, Issue. 6. 1st June, 2014.
6. Small Retail Enterprises (SREs) And Their Role in Building Neighborhood
Community In India. IOSR Journal Of Humanities And Social Science (IOSR-
JHSS) *Impact factor: 1.589*. E-ISSN: 2279-0837, P-ISSN: 2279-0845. Vol. 19,
Issue 5, Ver. VI (May. 2014), PP 32-35.
7. FDI in multi-brand retail in India: Pros and Cons. Quote-Unquote. ISSN 2320-
8759 Vol. 1, Issue 1. 2013.
8. SWOT Analysis: What Does FDI Hold For The Indian Retail Sector In 21st
Century? JIARM. *Impact factor: 1.625*. ISSN 2320-5083.
9. Evaluation of Indian retail sector with porter's five competitive forces: an
analysis
International Journal of Sales & Marketing Management Research and
Development. E-
ISSN:2249-8044.
10. Place of Ethics in Business for Sustainable Development –With Special
Reference to Small Retail Enterprises. ISBN: 978-81-927441-0-0. “Innovation
for Sustainability” (14th Feb., 2014) at Amity Business School, Amity
University Lucknow Campus, India (Published).
11. Opportunities And Challenges In The Era of Globalization In 21st Century.
ISBN: 978-81-924893-0-8. International Conference on “Advancements in
Engineering and Technology” (20-21 march, 2015) at Bhai Gurdas Institute of

Engineering & Technology, Sangrur.

Dr. Sanjeev Kumar Garg (Associate Professor)

1. Country Of Origin Influences And Consumer Decision Making-A Study Of Indian Market

International Journal of Sales& Marketing Management Research and Development (IJSMMRD)ISSN:

2249-8044 Vol.5,Issue 6, 20155.7836

2. Ethnocentric Tendencies In Indian Consumers-An Empirical Study

International Journal of Sales& Marketing Management Research and Development(IJSMMRD)ISSN:

2249-8044 Vol.6,Issue 1, Feb.2016

3. Effect of Country Of Origin On Product Brand Names-A Study Of Indian Market In the proceedings of 34th IIER International conference (ICABMIT 2015) held in Singapore, on August19, 2015. ISBN : 978-93-8565-796

Dr. Mandeep Ghai (Assistant Professor)

1. An Analysis and Assessment of Entrepreneurship Development Program mes (EDPs) in Punjab’’ Asian journal Research in Business Economics& Management III issue -IX September 2013. ISSN 2250 -1673 Impact Factor Value 2.302

2. A Research on Interest Amongst Technical Youth towards Self Employment / Service in The Present Era’’ International Journal of Economics, Commerce & Research(IJECR) Volume- issue- 5; edition : Research on Interest amongst Technical Youth towards Self Employment/ Service in the Present Era. *International Journal of Economics and Research*. Volume - 5, Issue-5. October 2015.

3. A Study of Entrepreneurship Development Programmes in Promoting Entrepreneurship in Punjab: An Overview. *International journal of research in IT, Management*. Volume -5, Issue-9. September 2015.

4. Ethics and Social Responsibility in the corporate World-Need of The Hour International journal of research in economics. Volume -5, Issue-9. September 2015.

5. Effectiveness of Entrepreneurship Development Programmes in Promoting Self employment in Punjab: At a Glance. *International Journal of Research in Management*. Volume -5, Issue-10. October 2015.

23. Details of patents and income generated: NIL

24. Areas of consultancy and income generated: NIL

25. Faculty selected nationally / internationally to visit other laboratories /institutions /industries in India and abroad: NIL

26. Faculty serving in

a) National committees

1. Dr. JapPreet Kaur Bhangu is External Member, Senate of Dr. B. R. Ambedkar National Institute of Technology, Jalandhar.

2. Dr. Parveen Kaur Khanna is External Member, Board of Studies of Punjab Technical University, Jalandhar.

3. Dr. Mahesh Kumar Arora is External Member, Board of Studies of Punjab Technical University, Jalandhar.

4. Dr. Mahesh Kumar Arora is External Member, Board of Studies of BCET, Gurdaspur.

5. Dr. Mahesh Kumar Arora and Dr. Sanjeev Bansal are the editors of International Journal “*Quote Unquote – International Journal of Language, Humanities and Management. (ISSN: 2320–8759)*” published by Bahri Publications, New Delhi.

b) International committees: Nil

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs) : Nil

28. Student projects

29. Awards / recognitions received at the national and international level:

1. Dr. JapPreet Kaur Bhangu was awarded with Best Paper Award for the paper : “Routes to Roots: Negotiating Identity in Michael Ondaatje’s *Running In The Family*,” International Journal Of Humanities and Social Sciences,” ISSN(P) 2319-393X ISSN (E) 2319-3948 Vol 5, Issue 1 Dec.-January 2016 157-164. Impact Factor 2.7367 Index Copernicus Value 3.0 NAAS Rating 3.19

2. Dr. Mandeep Ghai was awarded with Best Paper Award for the paper: Research on Interest amongst Technical Youth towards Self Employment/ Service in the Present Era. *International Journal of Economics and Research*. Volume - 5, Issue-5. October 2015.

3. Dr. Parveen Khanna was awarded with Best Paper Award for the paper: Challenge to Patriarchal Normativity in Marriage: The Critical Analysis of Shubha Menon’s *The Second Coming*. *International Journal of English and Literature (IJEL)*. Vol. 5, Issue

5, Oct 2015. ISSN (P): 2249-6912; ISSN (E): 2249-8028. International, Referred.

Impact Factor - 4.4049.

4. Dr. Sanjeev Kumar Garg was awarded with Best Paper Award for the paper: “Effect of Country of Origin on Product Brand Names- A Study Of Indian Market” International conference on Advances in Business Management and Information Technology (ICABMIT 2015) held in Singapore, on August 19, 2015.

30. Seminars/ Conferences/Workshops organized and the source of funding (national /international) with details of outstanding participants, if any:

Year	Name of Activity	Duration	Funding Agency	Names of Coordinators
2014	FDP on Soft Skills Entrepreneurship Development	18/03/2014 to 22/03/2014	TEQIP	Prof. Mahesh Kumar Arora Prof. Sanjeev Bansal
2016	FDP on Organizational and industrial Communication	20/07/2016 to 30/07/2016	TEQIP	Prof. Mahesh Kumar Arora Prof. Sanjeev Bansal
2016	Workshop on Communication Skills and Personality Development	19/09/2016 to 23/09/2016	Self Funded	Prof. P. K. Jain Prof. Parveen Khanna Dr. Sanjeev Garg

31. Code of ethics for research followed by the departments:

To ensure the quality of the research work, the department uses various research online tools for checking the plagiarism. All the students and faculty members of M&H Department are also encouraged to carry out research for the betterment of society and development of nation in particular.

32. Student profile programme-wise:

33. Diversity of students:

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise: 04 Ph.D. candidates cleared NET (03 in Management, 01 in English)

35. Student progression:

36. Diversity of staff

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period:

In 2015-16: 02 (Dr. Mandeep Ghai, Assistant Professor and Dr. Sanjeev Garg, Associate Professor)

38. Present details of departmental infrastructural facilities with regard to

a) Library: 105 Books

b) Internet Facilities for staff & students: Department uses the internet facilities provided by the Institute through Administrative Computing Services and Systems (ACSS) for faculty, staff and students.

c) Total number of class rooms:

d) Class rooms with ICT facility:

e) Laboratories: 01 (Communication Lab)

f) Research Laboratory: Management Research Lab

39. List of doctoral, post-doctoral students and Research Associates:

a) From the host institutions/university: 14

b) From the other institutions/university- Nil

40. Number of post graduate students getting financial assistance from the university.

41. Was any need assessment exercise undertaken before the development of new programme (s)? If so, highlight the methodology.

42. Does the department obtain feedback from students: Yes, through Questionnaires:

43. List the distinguished alumni of the department:

44. Give details of student enrichment programmes (special lectures / workshops /seminar) involving external experts:

1. Expert Talk on Drug Deaddiction by Dr. Kaushtabh Sharma (IPS) Zonal Director NARCOTICS CONTROL BUREAU, New Delhi – 15th Feb 2017.

2. Expert Talk on Innovations in Welding Technology by Er. Kulwant Singh – 28th Feb 2017.

45. List the teaching methods adopted by the faculty for different programmes: Case Studies, Role Playing, Group Discussions, Debates, Mock Interview, etc.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored? : By getting the feedback from the students at regular interval.

47. Highlight the participation of students and faculty in extension activities. : NA

48. Give details of “beyond syllabus scholarly activities” of the department:

Organized and conducted ‘YOGAFEST’ from 4th-6th May 2016 by Dr. P. K. Jain (Professor M&H and Coordinator Yoga and Health Club)

49. State whether the programme/ department is accredited/ graded by other agencies?

If yes, give details.

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

51. Detail of major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department:

Strengths	Weaknesses
1. The department has well qualified, experienced & dedicated faculty.	1. The department lacks basic amenities like proper infrastructure and building.
2. The departmental faculty is pioneer in communicative, interactive & other soft skills.	2. Classroom facilities are in bad shape.
3. The department has proven track record of research and development activities.	
4. The department has been running MBA course successfully.	
5. The department has state of art, well equipped communication lab.	

Opportunities	Challenges
1. Application of various softwares in research projects	1. Saturation in job opportunities for students due to mushrooming up of so many institutions
2. To explore latest and innovative pedagogy methods	2. To enhance communication skills and interactive skill of the students from humble rural background
3. Expansion of the department by increasing no of courses and students' strength	

52. Future plans of the department:

1. To introduce new courses as per the demand of the market
2. To augment communication skills of the students of various streams in the institute so as to increase the employability.
3. Time to time various workshops will be organized to develop the entrepreneurship spirit and soft skills.

Evaluative Report of the Department

1. Name of the Department : Mathematics
2. Year of establishment :1991
3. Is the Department part of a School/Faculty of the university? Yes
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.) :

Name of the Programme	Specialization	Duration
M. Sc.	Mathematics	2 yrs
Ph.D	Mathematics	Minimum 3yrs

5. Interdisciplinary programmes and departments involved : No
6. Courses in collaboration with other universities, industries, foreign institutions, etc. : Nil
7. Details of programmes discontinued, if any, with reasons : NA
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System : Semester system
9. Participation of the department in the courses offered by other departments : No
10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others) * Information in this regard can be sought from administration section.

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1		8
Associate Professor	3		1
Assistant Professor	8		1

Other

Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. S. S. Dhaliwal	Ph. D.	Professor	Complex Analysis	27	03
Dr. Mandeep Singh	Ph. D.	Professor	Linear Algebra	27	01
Dr. Vinod Mishra	Ph. D.	Professor	History of Mathematics, Wavelet Analysis	24	02
Dr. Sushma Gupta	Ph. D.	Professor	Complex Analysis	25	02
Dr. V.K.Kukreja	Ph. D.	Professor	Mathematical modelling, Numerical analysis Boundary value problem	19	03
Dr. J.R.Sharma	Ph. D.	Professor	Numerical Analysis	19	02
Dr. R.K.Mishra	Ph. D.	Professor	Astrophysics (Cosmology)	22	02
Dr. R.K.Guha	Ph. D.	Professor	Numerical Analysis, Finance Mathematics	21	02
Sh. R.K.Goyal	M.Phil	Associate Prof	Statistics	26	
Sh.Yogesh Kapil	M.Sc. CSIR UGC NET	Assistant Prof.		4	

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors : Nil
13. Percentage of classes taken by temporary faculty – programme-wise information : only 10%

14. Programme-wise Student Teacher Ratio
15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual
16. Research thrust areas as recognized by major funding agencies
17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.:
18. Inter-institutional collaborative projects and associated grants received : Nil
 - a) National collaboration
 - b) International collaboration

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received:

A research project entitled *Solution of two-point boundary value problems by orthogonal collocation on finite elements using Hermite polynomials as basis*, was awarded by National Board of Higher Mathematics, Department of Atomic Energy, Mumbai, India, from March, 2010 to March, 2014 (4 Years). Total cost of project was Rs. 6,63,305/-.

20. Research facility / centre with
 - state recognition
 - national recognition
 - international recognition
21. Special research laboratories sponsored by / created by industry or corporate bodies : Nil
22. Publications:

Number of papers published in peer reviewed journals (national / international) : A total number of 115 research papers have been published from 2011 onwards.

Monographs
Chapters in Books
Edited Books :

 1. Dr. J. R. Sharma was the guest editor of the special issue "*Iterative Methods and Dynamics for Nonlinear Problems*" in the Journal: **Discrete Dynamics in Nature and Society** (Hindawi Journal).
 2. Dr. S. S. Dhaliwal edited a chapter in a book published by

Springer.

Books with ISBN with details of publishers :

Dr. Vinod Mishra published a book entitled "Theory of Transforms with Applications" published by Ane Books Pvt. Ltd., New Delhi. in 2017 (ISBN no. 978-93-8546-260-3).

Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : All research papers have been enlisted in International database- Web of Science/Scopus.

Citation Index – range / average

SNIP

SJR

h-index

Impact Factor – range / average

Impact factor	Number of journals
0-1	24
1-2	30
2-3	01
3-4	01

23. Details of patents and income generated : Nil

24. Areas of consultancy and income generated : Nil

25. Faculty selected nationally / internationally to visit other laboratories / institutions/ industries in India and abroad:

- i) Dr. R. K. Mishra visited Tribhuvan University, Kathmandu, Nepal in 2012.
- ii) Dr. V. K. Kukreja visited Rhodes (Greece), to attend International Conference of Numerical Analysis and Applied Mathematics (ICNAAM-13), September 21-27, 2013. (Funding from SLIET & INSA)
- iii) Dr. V. K. Kukreja visited Vancouver (Canada), to attend International Congress of Industrial and Applied Mathematics (ICIAM-11), July 18-22, 2011. (Funding from SLIET & DST)
- iv) Dr. Mandeep Singh attended "Matrices and Operators Conference" in honour of Sixtieth birthday of Rajendra Bhatia, at Department of Mathematics, Indian Institute of Science, Bangalore from 27 to 30th December, 2012(Bhatia Fest).

- v) Dr. Mandeep Singh attended “Advanced School and Workshop on Matrix Geometries and Applications” at ICTP, Trieste, Italy from 1 to 12 July, 2013.
- vi) Dr. Mandeep Singh attended “The 19th International Linear Algebra Society Conference (ILAS 2014)” at Sungkyunkwan University, Seoul, Korea from 6 to 9 August, 2014.
- vii) Dr. Mandeep Singh attended 10th Uttarakhand State Science and Technology Congress (USSTC) 2015-16, as an expert in the Mathematics, Statistics & Computer Science discipline, at Vigyan Dham, Jhajra, Dehradun from 10 to 12 February, 2016.
- viii) Dr. Mandeep Singh delivered lecture in Short term course “Research Trends in Applied Mathematics” at Department of Mathematics, Dr. B. R. Ambedkar national Institute of Technology, Jalandhar from 30 November to 4 December, 2015.
- ix) Dr. R. K. Guha delivered lecture in National workshop on “Advances and Applications of Mathematical Modelling” held in DAV Institute of Engineering & Technology, Jalandhar from Feb. 2-3, 2013.
- x) Dr. R. K. Guha delivered lecture in National conference on “Recent Advancements in Mathematics” held in Beant College of Engineering & Technology, Gurdaspur from Feb. 2-3, 2014.
- xi) Dr. R. K. Guha delivered two lectures in Faculty Development Programme-cum-Workshop on ‘Numerical & Computational Techniques in Engineering’, held in DAV Institute of Engineering and Technology, Jalandhar from May 19 – 25, 2014.

26. Faculty serving in

- a) National committees:
 - (i) Dr. S. S. Dhaliwal is a member of BOS, Maharaja Ranjit Singh Punjab Technical University, Bathinda
 - (ii) Dr. S. S. Dhaliwal is a member of BOS, Inder Kumar Gujral Punjab Technical University, Jalandhar.
 - (iii) Dr. S. S. Dhaliwal is a member of BOS, Sri Guru Granth Sahib World University, Fatehgarh Sahib.
 - (iv) Dr. S. S. Dhaliwal is a member of BOS Mata Gujri College, Fatehgarh Sahib.
 - (v) Dr. S. S. Dhaliwal is a member of BOS, Punjabi Uni., Patiala.
 - (vi) Dr. Mandeep Singh is a member of board of studies of Mata Gujri College, Fatehgarh Sahib.
 - (vii) Dr. Mandeep Singh is a member of board of studies of Dr. B. R. Ambedkar national Institute of Technology, Jalandhar.
 - (viii) Dr. Mandeep Singh is a member of board of studies of Central University of Haryana, Mahendragarh.
 - (ix) Dr. Sushma Gupta is a member of board of PG studies of Mata Gujri College, Fatehgarh Sahib.

(x) Dr. R. K. Mishra is serving as a member of SENATE, NIT, Puducherry.

- b) International committees :
- c) Editorial Boards : Journal of Applied Mathematics
- d) Reviewer:

1. Dr. V. K. Kukreja acted as reviewer for

- ELSEVIER (Computer & Chemical Engineering, Chemical Engineering Science)
- ANZIAM (Australian & New Zealand J. of Industrial and Applied Mathematics)
- UKSIM (International Journal of Simulation- Systems, Science and Technology)
- HINDAWI (Mathematical Problems in Engineering)
- IOS Press (J of Computational Methods in Sciences and Engineering)

2. Dr. R. K. Mishra acted as reviewer for

- Astrophysics and Space Science
- Journal of Mathematical Analysis
- Waset Journal (France)
- American Research Journals (USA)

3. Dr. J. R. Sharma acted as reviewer for

- Applied Mathematics & Computation (Elsevier),
- Applied Mathematics Letters (Elsevier),
- Journal of Computational & Applied Mathematics (Elsevier),
- Computer & Mathematics with Applications (Elsevier),
- Numerical Algorithms (Springer),
- Applied Numerical Mathematics (Elsevier),
- Numerische Mathematik (Springer),
- International Journal of Computational Methods (World Scientific),
- International Journal of Computer Mathematics (Taylor & Francis),
- Journal of Applied Mathematics (Hindawi),
- Abstract & Applied Analysis (Hindawi),
- Mathematical Communications,
- Journal of Computational Methods in Sciences and Engineering etc.

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

Mr. Yogesh Kapil, Asstt. Prof., attended 30th Orientation Course conducted by Human Resource Development Centre, Punjabi University, Patiala from 20 June to 16 July, 2016.

28. Student projects

- percentage of students who have done in-house projects including inter-departmental projects : 100%
- percentage of students doing projects in collaboration with other universities / industry / institute : Nil

29. Awards / recognitions received at the national and international level by

- Faculty
Dr. V. K. Kukreja was one of the co-author with Ms. Bharti Gupta for the paper which got **Best Poster** award from **Punjab Academy of Sciences, Patiala** during **14th Punjab Science Congress**, SLIET, Longowal, India, February, 2011.
- Doctoral / post doctoral fellows
- Students

30. Seminars/ Conferences/Workshops organized and the source of funding (national international) with details of outstanding participants, if any.:

- National Conference on Recent Trends in Mathematics and its aspects in Engineering (RTMA-2011) was held on Dec. 16-17, 2011. Number of participants was approx..40.
- Two day workshop on MATLAB under TEQIP was organized on March 22-23, 2013.

31. Code of ethics for research followed by the departments:

The faculty in the department of Mathematics is engrossed in research and the department encourages its students and faculty members to follow code of ethics. In order to carry forward the legacy of the department, different online tools for checking the plagiarism are used to ensure the quality of the research work.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M. Sc. 2011		1	17	100%	100%
M. Sc. 2012		0	4	100%	100%
M. Sc. 2015		5	11		
M. Sc. 2016		5	14		

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M. Sc. 2011		100%	Nil	Nil
M. Sc. 2012		100%	Nil	Nil
M. Sc. 2015		13%	87%	Nil
M. Sc. 2016		11%	89%	Nil

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise: Information is not available.

35. Student progression

Student progression	Percentage against enrolled
UG to PG	
PG to M.Phil.	
PG to Ph.D.	

Ph.D. to Post-Doctoral	
Employed	
<input type="checkbox"/> Campus selection <input type="checkbox"/> Other than campus recruitment	100%
Entrepreneurs	

36. Diversity of staff

Percentage of faculty who are graduates	
Of the same university	None
From other universities within the state	50%
From other universities from other states	50%
From universities outside the country	Nil

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period : Nil

38. Present details of departmental infrastructural facilities with regard to

a) Library : Total number of books - 400.

b) Internet facilities for staff and students

Department uses the internet facilities provided by the Institute through Administrative Computing Services and Systems (ACSS) for faculty, staff and students. Faculty, Staff and students can access internet through Wi-Fi, and LAN.

c) Total number of class rooms

d) Class rooms with ICT facility

e) Students' laboratories: The department has one lab - Numerical Methods and Computations Lab.

f) Research laboratories

39. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/university

Ph.D. degree awarded from 2011 onwards: 15

S.No.	Name of Student	Title of Thesis	Year of Completion
1.	Mr. Sukhwinder Singh	Some Differential Subordinations and Their Applications to the Study of Univalent and Multivalent Functions.	2011
2.	Mr. Sanjeev Kumar	Development and Analysis of Some New Iterative Method for Numerical Solutions of Non-linear Equations.	2012
3.	Ms. Rajni Sharma	Iterative Method for Numerical Solutions of Non-linear Equations	2012
4.	Ms. Sabina	Wavelet-Galekin Technique for Solving Certain Numerical Differential Equations and Inverse ILL-posed Problems.	2012
5.	Ms. Rupinderjit Kaur	Inequalities Involving Matrix Functions.	2014
6.	Mrs. Puneet Gupta	Numerical Solutions of Nonlinear Equations Some Improved Iterative Methods.	2014
7.	Mr. Ajay Kumar Mittal	Solution of Two Point Boundary Value Problems By Orthogonal Collocation On Finite Elements Using Hermite Basis.	2014
8.	Mr. Arunesh Kumar Pandey	Certain Investigations on Hidden Connections Between Finsler Geometry & Theory of Relativity along with Study of Various Cosmological Consequences.	2015
9.	Ms. Chanchal	Certain Aspects of the Expansion of Bianchi I & II Universes with Time Varying Cosmological Constant 'A' and Gravitational Constant 'G'.	2015
10.	Ms. Sarika Verma	Properties of Some Integral Operators Involving Analytic Functions.	2015
11.	Mr. Dinesh Kumar	Analysis of Wave Propagation in Viscothermoelastic Materials.	2015
12.	Mr. Ishfaq Ahmed Ganaie	Solution of Differential Equations Using Hermite Collection Method.	2015
13.	Ms. Harpreet Kaur	Wavelet Technique for Solving Certain Differential, Integral and Integro-Differential Equations.	2015

14.	Mr. Raj Kumar	Convolution Properties of Some Univalent Harmonic Functions.	2015
15.	Ms. Bharti Gupta	Application Of Orthogonal Spline Collocation Method for the Solution of Diffusion Problems.	2016

List of Ph. D students Registered in the Department of Mathematics

S.No.	Name of Students	Status	Name of The Guide
1	Ms. Gurbinder Kaur	Part Time	Dr. R.K.Guha
2	Ms. Himani Arora	Part Time	Dr. J.R.Sharma
3	Mr. Rajinder Pal	Part Time	Dr. Mandeep Singh
4	Ms. Manpreet Kaur	Part Time	Dr. S.S.Dhaliwal. Dr. Sushma Gupta
5	Mr. Avtar Chand	Full Time	Dr. J.R.Sharma & Dr. R.K.Mishra
6	Ms. Deepali	Full Time	Dr. S.S.Dhaliwal and Dr. Sushma Gupta
7	Ms. Ravneet Kaur	Part Time	Dr. V.K.Kukreja
8	Ms. Dimple Rani	Part Time	Dr. Vinod Mishra
9	Mr. R.K.Goyal	Part Time	Dr. V.K.Kukreja
10	Mr. Yogesh Kapil	Part Time	Dr. Mandeep Singh
11	Ms. Anchal Aggarwal	Full Time	Dr. Mandeep Singh
12	Mr. Deepak	Full Time	Dr. J.R.Sharma
13	Ms. Chinu	Full time	Dr. S.S.Dhaliwal and Dr. Sushma Gupta
14	Ms. Heena Dua	Full time	Dr. R. K. Mishra
15	Mr. Sunil Kumar	Full time	Dr. J. R. Sharma
16	Mr. Sonu	Full time	Dr. R. K. Guha

- b) from other institutions/universities
40. Number of post graduate students getting financial assistance from the university.
 41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.
 42. Does the department obtain feedback from
 - a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
 - b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, the feedback mechanisms and the post-corrective measures are among the best practices prevalent in the institution in terms of academic excellence and its sustenance. The feedback by the students on every subject taught is made mandatory and hence gives the institution an insight in to all aspects of the teacher and the course taught. It is reviewed by the in-charge concerned and summary report is prepared and forwarded to respective faculty. Based on this feedback, corrective measures are identified by in-charge concerned / faculty if required.

- c. alumni and employers on the programmes offered and how does the department utilize the feedback?
43. List the distinguished alumni of the department (maximum 10)
 44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.
Expert lectures delivered by
 - i) Professor A.Pradhan .
 - ii) Prof. Oscar João Abdounur of Instituto de Matemática, University of São Paulo, Brazil delivered a talk on Mathematics with historical connections on May 23, 2011.
 - iii) Prof. Bhudev Sharma delivered a Lecture on information theory in 2015.
 45. List the teaching methods adopted by the faculty for different programmes:

Theory, assignments and tutorials

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?
- Detailed planning of course delivery at the beginning of the semester.
 - Academic progress monitoring at department level during the semester.
 - Student's learning monitoring is done by assignments, test and quizzes and also linking these components with internal assessment of students which becomes the part of grade at the end of semester.
 - Faculty Course Files: All faculty members maintain their course file in which they have to keep record of all the tests, assignments, quizzes given to the students in a due course of time.
 - Review of course completion report at the end of semester.
 - Compilation and Analysis of student's Feedback.
 - Ensuring course coverage in Question Papers.
47. Highlight the participation of students and faculty in extension activities:
- a) Attending Conferences/Seminars/FDP
 - b) Participation in the institute level programs
48. Give details of "beyond syllabus scholarly activities" of the department.
- a) National science Day celebration
 - b) Hindi Divas.
49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.
50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied:
- Faculty members are actively engaged in various research areas. In pure mathematics, research is being carried out in operator theory and geometric function theory. In applied mathematics, mathematical modelling, cosmology and numerical Analysis are the main fields wherein research is going on. Thus the department is contributing in the generation of new ideas.
51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.:
- **Strengths:**
 - i. The department has well qualified, experienced and dedicated faculty and

- staff.
- ii. Exclusive computer lab with up-to-date technology necessitated for Mathematics students is functional.
- iii. Two year M. Sc. Course is running successfully.
- iv. Research activities are in full swing. The department has so far produced 15 Ph. D.s and 16 research scholars are registered for their Ph.D.
- v. There is a constantly adapting and evolving curriculum.
- **Weakness:**
 - i. Very few journals available online.
 - ii. Enough faculty and staff positions are not sanctioned in proportion to the increased student intake.
 - iii. Lacking in inter-disciplinary research.
 - iv. Shortage of smart classrooms.
 - v. Class room facilities are inadequate.
- **Opportunities:**
 - i. Subscription for online journals needs to be increased.
 - ii. A seminar hall needs to be developed for conducting seminars by faculty and PG students.
 - iii. More opportunities for training of faculty and students is required.
- **Challenges:**
 - i. Inadequate number of employees.
 - ii. Large class size.
 - iii. Lack of students' commitment towards Mathematics.
 - iv. Failure rate.

52. Future plans of the department:

- i) More emphasis will be given on the organization of workshops, symposiums, seminars, faculty development programs and conferences for faculty, staff and students in the department.
- ii) Interdisciplinary research will be promoted.

Evaluative Report of the Department

1. Name of the Department: Mechanical Engineering

2. Year of establishment: 1991

3. Is the Department part of a School/Faculty of the university? Yes

4. Names of Programmes offered:

Name of the Programme	Specialization	Duration
ICD (Integrated Certificate and Diploma)-5 No.	CAF, CFF, CWG, CTD, CAC	3 yrs
B.E.	GME, GWT	4 yrs
M. Tech.	PGMSE, PGWLF	2 yrs
Ph.D	Mechanical	Minimum 3yrs

5. Interdisciplinary programmes and departments involved: NIL

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

At present department is not offering any course in collaboration with other universities, industries, foreign institutions etc.

7. Details of programmes discontinued, if any, with reasons:

Due to restructuring 2 year certificates / 2 year diplomas and three year degree have been discontinued and 4 year Degree started.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

Semester

9. Participation of the department in the courses offered by other departments:

Yes, department attends open elective courses offered by other departments.

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others):

Year:2011-12

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	5	1	0	3
Associate Professors	11	18	0	18
Assistant Professors	28	09	14	23

Year:2012-13

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	5	5	0	5
Associate Professors	11	15	0	15
Assistant Professors	28	10	15	25

Year:2013-14

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	5	5	0	5
Associate Professors	11	17	0	17
Assistant Professors	28	10	16	26

Year:2014-15

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	5	5	0	5
Associate Professors	11	17	0	17
Assistant Professors	28	9	16	25

Year:2015-16

	Sanctioned	Filled		Actual (including CAS & MPS)
		Regular	Contract	
Professor	5	9	0	9
Associate Professors	11	11	0	11
Assistant Professors	28	11	17	28

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Faculty Profile

NAAC-Evaluative Report Mechanical Engineering

Serial No.	Name	Qualification	Designation	Specialization	Years Experience	No.of PhD\ M.Tech Students guided for last five years.
1	Dr. V. Sahni	PhD	Prof.	THERMAL, AUTOMOBILE	31	PhD-2 M-6
2	Dr. Pradeep Gupta	PhD	Prof.	PRODUCTION, INDUSTRIAL ENGG.	25	PhD.-3 M-14
3	Dr. P. K. Singh	PhD	Prof.	DESIGN, MANUFACTURING	23.5	PhD-1, M.-13
4	Dr. Kulwant Singh	PhD	Prof.	WELDING	20	PhD-2, M.-19
5	Dr. Rajesh Kumar	PhD	Asso. Prof.	PRODUCTION, INDUSTRIAL	24	PhD-3, M.-12
6	Mr. Amrik Singh	M.E.	Asso. Prof.	PRODUCTION, INDUSTRIAL	33	M.-16
7	Mr. M. A. Akhtar	M.Tech	Asso. Prof.	THERMAL	25	M.-4
8	Dr. Manoj Goyal	PhD	Asso. Prof.	WORK STUDY, ERGONOMICS	23	M.-6
9	Mr. S. C. Verma	M.Tech	Asso. Prof.	HEAT POWER	23	M.-2
10	Mr. Anil Kr. Singla	M.E.	Asso. Prof.	CRYOGENIC, INDUSTRIAL, PRODUCTION	21	M.-6
11	Dr. R. K. Yadav	PhD	Asso. Prof.	THERMAL ENGINEERING, MATERIAL HANDLING	11	M.-10
12	Dr. R. K. Saxena	PhD	Prof.	MANUFACTURING AND DESIGN	21	M.-14
13	Dr. A. S. Shahi	PhD	Prof.	WELDING, METALLURGY	21	PhD- 3, M- 12
14	Dr. Arvind Jayant	PhD	Asso. Prof.	PRODUCTION ENGINEERING	20	M.-17
15	Dr. Shankar Singh	PhD	Prof.	MANUFACTURING, AUTOMOTIVE ENGINEERING	23	PhD-4, M-19
16	Mr. J. S. Gill	PhD	Asso. Prof.	WELDING	21	M-9
17	Dr. Jagtar Singh	PhD	Prof.	CRYOGENIC, BIO-ENERGY	20	PhD-2, M- 12
18	Mr. Rakesh Kumar	M.Tech	Asso. Prof.	CASTING, BIOFUELS	19	M- 6
19	Dr. Indraj Singh	PhD	Asso. Prof.	AUTOMOTIVE, THERMAL	20	M-8
20	Mr. Surinder Kumar	M.Tech	Asstt. Prof.	DESIGN, VIBRATION	10	M.-5
21	Mr. Harish	M.Tech	Asstt. Prof.	WELDING	11	M.-4

	Kumar Arya					
22	Mr. Sunil Kumar	M.Tech	Asstt. Prof.	DESIGN	11	M.-7
23	Mr. Mohd. Majid	M.Tech	Asstt. Prof.	WELDING	9	M - 10
25	Mr. Sumit Kumar	M.Tech	Asstt. Prof.	SYSTEM DYNAMICS, ROBOTICS	7	M.-1
26	Mr. Vivek Kumar	M.Tech	Asstt. Prof.	MANUFACTURING, SYSTEM DYNAMICS	13	M-5
27	Mr. Anuj Bansal	M.Tech	Asstt. Prof.	SURFACE ENGINEERING, CRYOGENICS, FLUID MECHANICS, PNEUMATIC CONVEYING	2	M.-2
28	Ms. Ankita Omer	M.Tech	Asstt. Prof.	MATERIAL SCIENCE	1	
29	Mr. Lalit Ahuja	M.E.	Asstt. Prof.	PRODUCTION	4	
30	Mr. Jonny Singla	M.E.	Asstt. Prof.	DESIGN, VIBRATION	3	

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors: NIL

13. Percentage of classes taken by temporary faculty – programme-wise Information

Years	Programmes	% of Load taken by contract faculty
2011-12	Certificate	60.61
	Diploma	43.02
	Degree	20.36
2012-13	Certificate	60.99
	Diploma	42.85
	Degree	16.42
2013-14	Certificate	61.91
	Diploma	41.81
	Degree	17.55
2014-15	Certificate	57.91
	Diploma	39.36
	ICD	61.32
	Degree	24.67
2015-16	Diploma	43.14
	ICD	63.25
	Degree	35.4

14. Programme-wise Student Teacher Ratio

Years	Programmes	Student-Teacher Ratio
2011-12	Certificate	30.7
	Diploma	26.7
	Degree	27.2
	PG	20.6
2012-13	Certificate	45.68
	Diploma	27.68
	Degree	29.4
	PG	18.22
2013-14	Certificate	44.02
	Diploma	25.08
	Degree	28.69
	PG	16.53
2014-15	Certificate	36.52
	Diploma	22.47
	ICD	36.98
	Degree	34.69
	PG	16.81
2015-16	Diploma	13.5
	ICD	36.64
	Degree	34.2
	PG	18.3

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual:

Year:2012-13	Sanctioned			Actual
		Filled	Contract	
Sr. Technician/ Technician	16	7	6	13
Clerk/SSS	4	01		01
L.A.	4	01		01
M.T.S.	2	02		02

Year:2013-14	Sanctioned			Actual
		Filled	Contract	
Sr. Technician/ Technician	16	5	3	08
Clerk/SSS	4	01		01
L.A.	4	01		01
M.T.S.	2	02		02

Year:2014-15	Sanctioned			Actual
		Filled	Contract	
Sr. Technician/ Technician	16	5	6	11
Clerk/SSS	4	01		01

Year:2011-12	Sanctioned	Filled	Actual
Sr. Technician/ Technician	16	7	07
Clerk/SSS	01	01	01
L.A.	4	01	01
M.T.S.	02	02	02
L.A.	4	01	03
M.T.S.	2	03	01

Year:2015-16	Sanctioned			Actual
		Filled	Contract	

Sr. Technician/ Technician	16	5	5	10
Clerk/SSS	4	01		01
L.A.	4	01		01
M.T.S.	2	03		03

16. Research thrust areas as recognized by major funding agencies: Major thrust area of department is Welding and Manufacturing.

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.: NIL

18. Inter-institutional collaborative projects and associated grants received: -

a) National collaboration: NIL

b) International collaboration: NIL

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received: Automated Design of Die for Part Product Model, Funded by-AICTE , Grant: 9.00Lac (Completed in March 2012)

20. Research facility / centre with

- **state recognition**
- **national recognition**
- **international recognition**

Department has good research facilities but at present it is not mentioned by such agencies.

21. Special research laboratories sponsored by / created by industry or corporate bodies: Department have good research laboratories but such facilities are not listed during the assessment period.

22. Publications:

	2011-12	2012-13	2013-14	2014-15	2015-16
Number of papers published in peer reviewed journals (National/international)	29	24	32	42	51
Monographs	1	NIL	NIL	NIL	NIL
Chapters in Books	1	NIL	1	NIL	1

Edited Books	NIL	NIL	NIL	NIL	NIL
Books with ISBN with details of publishers	1/ISBN: 978-3-8473- 0611-5	NIL	NIL	NIL	NIL
Number listed in international Database	NIL	NIL	NIL	NIL	NIL
Citation index-range/average	Range (0 – 392), Average: 55.67				
SNIP	99.86				
SJR	64.32				
Impact factor-range/average	Range 0-3.99 / 0.8438				
h-index	77				

23. Details of patents and income generated: 3

- 1) 'Design for Assembly with Variable Stiffness for use in Automobile Shock Absorber' —Accepted and Certificate of Registration of Design issued from the Office of Controller of Patents & Designs, Kolkata, on 25-02-2014.
- 2) Shock Absorber for Vehicles' –Accepted and Certificate of Registration of Design patent issued from the Office of Controller of Patents & Designs, Kolkata, on 06-05-2014
- 3) One patent on 'Regenerative Shock Absorber' submitted to Office of Controller of Patents & Designs, Kolkata in October 2015 (under review)

24. Areas of consultancy and income generated: Major thrust area of department is Welding and Manufacturing, however Rs. One Lac was generated through consultancy in 2009.

25. Faculty selected nationally / internationally to visit other laboratories /institutions /industries in India and abroad: NIL

26. Faculty serving in

a) National committees

Sr. No.	Name of the faculty with designation	Name of the Committee	Position Held
1.	Dr. V. Sahni, Professor	NAAC	Evaluator
2.	Dr. Rajesh Kumar	<u>IACSIT</u> , Singapore	Senior Member

b) International committees = NIL

c) Editorial Boards = NIL

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs,workshops, training programs and similar programs):

Sr. No	Name of Faculty	Post	Recharging Strategies	Name	Duration (Days)	Location	
1	Dr. Kulwant Singh	Professor	STC	Managemant capacity enhancement programme	april/4-9/2016	IIM Udaipur	
2	Dr. Rajesh Kumar	Professor	STC	Managemant capacity enhancement programme	oct. 26-31, 2015	IIM Kazipur	
3	Mr. Amrik Singh	Associate Prof.	STTP	Automation on Computer Application in Manufacturing	Feb. 6-10,2012	IIT Madras	
			STTP	Project Management using MS Project Primavera Software	June, 22-26,2015	Engg. Staff. Hyderabad	
			STTP	World Class Manufacturing	June, 13th-17th, 2016	College of Engineering Pune-India	
			Workshop	Aplied data science and business analytics using R	March, 4-9,2016	NIT Calicut	
			Workshop	Modelling Simulation and Optimization of Manufacturing System	Oct. 17-19,2013	NIT Warangal	
4	Dr. Arvind Jayant	Associate Prof.	Training	Arena Simulation Software	Feb, 18-21,2014	SNIC Bangalore	
			Managemant capacity enhancement programme		Oct/ 12-16/2015	IIM Trichy	Management capacity enhancement programme
			Sustainable Operation Management		Jun/3-5/2015	IIT Delhi	Sustainable Operation Management
			Hazardous Waste, Batteries Waste and E		Jun/11-15/2012		Hazardous Waste, Batteries Waste and E

			Waste Management			Waste Management
5	Dr. Jagtar Singh	Professor	STTP	Undergraduate Teaching of Material Science & Engineering	July, 11-17,2013	IIT Delhi
			STTP	2nd World Summit on Accreditation(WOSA) 2014	March, 8-10,2014	NBA, Delhi
6.	Mr. Vivek Kumar	Asstt. Prof.	STC	Bioenergy technologies for power and environmental applications	Dec/16-20/2013	SLIET
			STC	Supply chain management for sustainable performance	Jul/6-10/2015	DTU, delhi
			STC	Green operation Mangement on Concept and Decision model	Dec. 21-25,2015	SLIET Longowal
7	Mr. Mohd. Majid	Asstt. Prof.	STTP	Bioenergy technologies for power and environmental applications	Dec/16-20/2013	SLIET
			STC	Green operation Mangement on Concept and Decision model	Dec. 21-25,2015	SLIET Longowal
			STTP	Adhoc Networks & Cloud Computing	Jan., 13-17,2016	SLIET Longowal
8	Mr. Anuj Bansal	Asstt. Prof.	STP	Integrated Automation Technologies	June/ 1-6/2015	IIT Delhi
			STC	Green Operation Mangement on Concept and Decision model	Dec. 21-25,2015	SLIET Longowal

			STC	Surface Engineering	June, 23-28,2016	IIT Ropar
			STC	Computational Mathematics and FEM	July, 1-11,2016	NIT Goa

28. Student projects

- **Percentage of students who have done in-house projects including inter departmental projects:**
- **Percentage of students doing projects in collaboration with other universities /industry / institute:**

All the students undertake In-house Projects.

29. Awards / recognitions received at the national and international level by

- Faculty: **03**
- Doctoral/Post-doctoral fellows: **01**
- Students: **NIL**

30. Seminars/ Conferences/Workshops organized and the source of funding (national /international) with details of outstanding participants, if any:

Name of the Programme	Date	Co-ordinator(s)	Funding Agency	Total Expenditure	Target Audience
National Conference on Advancement in Mechanical Engg. and Energy Environment	Jan., 6-7,2012	Dr. Jagtar Singh and Dr. Indraj singh	TEQIP	1.5 Lac	UG/PG Students
Bioenergy Technologies for power and Environmental applications	Dec. 16-20,2013	Dr. Jagtar Singh	TEQIP	1.5 Lac	30 Participants Internal -13 External - 17

Green operation Management Concept and decision Model	21-25 Dec 2015	Dr. Arvind Jayant	TEQIP	2 Lac	Faculty and students
Trends in Welding and Manufacturing Research	13-14 Oct 2016	Dr. A. S. Shahi And Dr. R. K. Saxena	TEQIP	2.5 Lac	30 Participants
Research methods in Engineering and Technology	9-13 Jan 2017	Dr. P. K. Singh And Dr. Arvind Jayant	TEQIP	2 Lac	UG/PG Students (191 Participants)

31. Code of ethics for research followed by the departments:

The department is very particular about active research and it encourages its students and faculty members to follow ASME Code of Ethics. In order to carry forward the legacy of the ME Department different online tools for checking the plagiarism are used to ensure the quality of the research work. All the students and faculty members of ME Department are also encouraged to carry out research for the betterment of society and development of nation in particular.

32. Student profile programme-wise:

Name of the Programme	Applications Received	Selected		Pass percentage	
		Male	Female	Male	Female
Certificate(2011-12)	2358	231	1	49.78	0
Diploma(2011-12)	3880	186	1	84.4	100
B.E. (2011-12)	1100	128	2	93	100

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M.Tech(2011-12)	1238+CCMT*	58	0	100	NA
Phd.(2011-12)	609	11	0	18.18	NA
Certificate(2012-13)	1643	224	0	69.20	NA
Diploma(2012-13)	2909	184	2	85.33	100
B.E. (2012-13)	1165	130	1	93	100
M.Tech(2012-13)	1241+ CCMT*	48	2	96	4
Phd.(2012-13)	386	2	0	0	NA
Certificate(2013-14)	1439	209	0	51.20	NA
Diploma(2013-14)	2820	178	0	89.33	NA
B.E. (2013-14)	1021	129	0	0	NA
M.Tech(2013-14)	47+ CCMT*	40	3	93	7
Phd.(2013-14)	440	1	0	0	NA
ICD (2014-15)	2100	139	0	NA	NA
Diploma(2014-15)	309	94	0	90.43	NA
B.E. (2014-15)	792	188	3	NA	NA
M.Tech(2014-15)	13+ CCMT*	49	1	NA	NA
Phd.(2014-15)	443	8	0	NA	NA
ICD(2015-16)	2199	146	1	NA	NA
Diploma(2015-16)	228	98	1	NA	NA
B.E. (2015-16)	625	162	1	NA	NA
M.Tech(2015-16)	19+ CCMT*	44	3	NA	NA
Phd.(2015-16)	563	6	0	NA	NA

CCMT *: The admission to M.Tech is through CCMT.

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of Students from the Same University	% of students from other universities/board within the State	% of students from universities outside the State	% of Students From Other Countries
Certificate(2011-12)	Nil	73	27	NIL
Diploma(2011-12)	55	21	24	NIL
B.E. (2011-12)	66	15	19	NIL
M.Tech(2011-12)	NIL	3	97	NIL
PhD.(2011-12)	NIL	25	75	NIL
Certificate(2012-13)	Nil	74	26	NIL
Diploma(2012-13)	57	20	23	NIL
B.E. (2012-13)	74	10	16	NIL
M.Tech(2012-13)	NIL	4	96	NIL
PhD.(2012-13)	NIL	25	75	NIL
Certificate(2013-14)	Nil	42	58	NIL
Diploma(2013-14)	60	19	21	NIL
B.E. (2013-14)	77	3	20	NIL
M.Tech(2013-14)	NIL	5	95	NIL
PhD.(2013-14)	NIL	100	NIL	NIL
ICD(2014-15)	Nil	53	47	Nil
Diploma(2014-15)	100	NIL	NIL	NIL

B.E. (2014-15) 3yr Degree	75	8	17	NIL
4 yr Degree	NIL	NIL	100	
M.Tech(2014-15)	NIL	2	98	Nil
PhD.(2014-15)	NIL	100	NIL	NIL
ICD(2015-16)	NIL	58	42	NIL
Diploma(2015-16)	100	NIL	NIL	NIL
B.E. (2015-16) 3yr Degree	90	NIL	10	NIL
4 yr Degree	NIL	NIL	100	
M.Tech (2015-16)	NIL	17	83	NIL
PhD.(2015-16)	NIL	50	50	NIL

34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise:

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
GATE	×	×	6	8	7	8
NET	×	×	×	×	×	×
SET	×	×	×	×	×	×
Other Competitive Exams	×	×	×	×	×	×
Civil Service/ Defense/ Army	×	×	×	×	×	×

35. Student progression:

Student progression	2011-12	2012-13	2013-14	2014-15	2015-16
UG to PG	×	×	11.6	1.6	6.6
PG to Ph. D.	×	×	×	×	×
Ph. D. to Post-Doctoral	×	×	×	×	×
Employed					
<ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	52	42	26	60	24
Entrepreneurs	×	×	×	×	×

36. Diversity of staff

Percentage of faculty who are graduates	%
of the same university	3.3
from other universities within the state	33.4
from other universities from other states	63.3
universities outside the country	0

37. Number of faculty who were awarded M.Tech., Ph.D., D.Sc. and D.Litt. during the assessment period:

In 2011-12 = NIL

In 2012-13 = 1 (Ph.D)

In 2013-14 = 1(M.Tech)

In 2014-15 = 1(Ph.D), 1(M.Tech)

In 2015-16 = 3 (Ph.D)

38. Present details of departmental infrastructural facilities with regard to**a) Library:**

No. of Books:	--	469
No. of PG Thesis:	--	271

No. of Ph.D Thesis: -- 16

b) Internet Facilities for staff & students:

Department uses the internet facilities provided by the Institute through Administrative Computing Services and Systems (ACSS) for faculty, staff and students.

- Faculty, Staff and students can access internet through Wi-Fi, and LAN.
- The campus is connected through fiber optics internet connection with 1Gbps connectivity through Network Knowledge Management.
- IP ADDRESSES are generated automatically through DHCP.
- CYBERROAM secured internet facility is provided to students, faculty and staff. No user can access the websites which are strictly prohibited by department.
- Wi-Fi facility is available in all hostels, academic, library and all other departments.

c) Total number of class rooms: 14(Class room), 4 (Tutorial)

d) Class rooms with ICT facility: 03

e) Laboratories: 16

1. Thermal Lab
2. Automobile & Auto farm lab
3. Heat Treatment Lab
4. Refrigeration & Air Conditioning lab
5. Strength of material lab
6. Industrial Engineering lab
7. Metrology lab
8. Advanced Machining lab
9. Advance casting lab
10. CAD/CAM Lab
11. Mechatronics/Industrial automation lab
12. Simulation lab
13. Theory of machine lab
14. Fluid Mechanics lab
15. Advance welding lab
16. Welding metallurgy lab

f) Research Laboratory: The research/experimental work are being carried out in the concerned lab.

39. List of doctoral, post-doctoral students and Research Associates

a) From the host institutions/university

Session	Name
2012-13	Anil Kumar
	Sachit Vardhan
2014-15	Jastej Singh
	Ankesh Mittal
	Maninder Singh

Part-time Doctoral students

Session	Name
2011-12	Mr. Ashwani Verma
	Mr. Rahul Dev Gupta
	Mr. Rakesh Kumar
2012-13	Gurdeep Singh
	Upender Kumar
	Tarun Bindal
2013-14	Harpeet Singh Aujla
2014-15	Mr. Anuj Bansal
	Anil Kumar
2015-16	Surinder Kumar
	Prashant Tripathi
	Yogeshwar Jasra

b) From the other institutions/university- Nil

40. Number of post graduate students getting financial assistance from the university.: NIL

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology. Yes

B.TECH.	At the Institute Level
ICD	At the Institute Level

42. Does the department obtain feedback from

a) Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

YES, the departments obtain feedback from the faculty on curriculum as well as teaching-learning-evaluation. The faculty members make sure that the programme objectives, course objectives and the outcome are met by the learners. If any modifications are required to fill the gap in this regard, would be reported by the faculty members concerned. Further, the faculty members recommend for the inclusion of the latest technology on a particular course based on their expertise and the need of the stakeholders.

b) Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

YES, the feedback mechanisms and the post-corrective measures are among the most valued best practices prevalent in the institution in terms of academic excellence and its sustenance. The feedback by the students on every subject taught is made mandatory and hence gives the institution an insight in to all aspects of teacher and the course taught. Summary report is prepared by the concerned teacher and corrective measures are taken if required.

c) Alumni and employers on the programmes offered and how does the department utilize the feedback?

YES, It is the regular practice of the University to collect the feedback from the Alumni and the employers. Alumni of different capacities including some of the entrepreneurs will be consolidated. The employers have often mentioned of the necessary improvements needed in the curriculum so that the students can obtain requisite skills

on par with the practices of industry. Alumni are included in the BOS and invited during revision of teaching scheme and syllabus.

43. List the distinguished alumni of the department:-

S No.	Year Passout	Name	Post	Company
1	2000	Winnerjit Singh	Vice Chairman	PRTC
2	2001	Gulshan Kumar	Assistant Manager	IOCL, Panipat
3	2002	Navpreet Singh	Head, HR	JCBL, Lalru
4	2002	Jaspal Singh	Manager	G.E., Pune
5	2002	Vinay Mehta	DGM	Godrej & Boyce, Mumbai
6	2003	Amit Jindal	Sr. General Manager	Hawkins Pressure Cooker,
7	2004	Mandeep Singh	Manager	Maruti Suzuki India Ltd.
8	2005	Vikas Saini	Sr. Manager	L&T, Faridabad
9	2005	Manish Gautam	Sr. Manager	TATA Motors
10	2011	Pratyush Bhaskar	Deputy Manager	Mahindra Swaraj, Mohali

44. Give details of student enrichment programmes (special lectures / workshops /seminar) involving external experts:

Name of Programme	Session	Co-ordinator(s)	Guest Faculty	Participants
Interaction with industrial expert on welding	2016-17	Dr. P. K. Jain and Dr. Kulwant Singh	Mr. Kulwant Singh, Welding inspector, Australian Navy	UG/PG Students

Interaction with industrial expert on NDT	2015-16	Dr. Kulwant Singh	Mr. N.D. Gaur, Chief Engineer (Rtd.), Nuclear Power Plant, Narora	UG Students
Interaction with industrial expert on Welding	2015-16	Dr. Kulwant Singh	Mr. Manmeet Singh, Sr. Manager, Godrej and Doyce Manufacturing	UG/PG Students
Interaction with industrial expert on Welding and Manufacturing	2015-16	Dr. Kulwant Singh and Dr. Indraj Singh	Mr. Navpreet Singh, Head, HR Department, JCBL Mohali	Faculty and students

45. List the teaching methods adopted by the faculty for different programmes:

- a) Class Room teaching
- b) Interactive teaching and learning using LCD projectors.
- c) Web based learning: NPTEL and Power point presentations
- d) Assignments and Quiz.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

- Detailed planning of course delivery at the beginning of the semester.
- Academic progress monitoring at department level during the semester.
- Student's learning monitoring is done by assignments, test and quizzes and also linking these components with internal assessment of students which becomes the part of grade at the end of semester.
- Faculty Course Files: All faculty members maintain their course file in which they have to keep record of all the tests, assignments, quizzes given to the students in a due course of time.
- Review of course completion report at the end of semester.
- Compilation and Analysis of student's Feedback.
- Ensuring course coverage in Question Papers.

47. Highlight the participation of students and faculty in extension activities.

- a) Attending Conferences/Seminars/FDP's
- b) Inter-departmental Competitions
- c) Departmental Society
- d) Participation in the institute level programs

- e) Participation of students and faculty in national level competitions: EFFICYCLE, Junkyard Warriors, Mahindra Baja SAEINDIA.

48. Give details of “beyond syllabus scholarly activities” of the department.

- 1) SMES/SAE Quizzes
- 2) All India essay writing competition
- 3) Group discussion
- 4) Best out of waste
- 5) Quest Technical and general awareness quiz
- 6) Mock test for placement
- 7) Multimedia quizzes.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details. Yes, NBA

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Involved in Emerging Research Areas like Welding, manufacturing i.e. EDM, ECM, wire EDM, cryogenic treatment to various engineering materials, alternative and biomass fuels for I.C. engines, modeling and simulation of various manufacturing processes.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department:

- **Strengths:**
 - i. Well qualified, experienced and dedicated faculty and staff.
 - ii. Well-equipped laboratory infrastructure.
 - iii. Diversity of students.
 - iv. Different levels of courses (ICD, UG, PG, Ph.D.) whereby one course can provide the student intake to next higher level course.
 - v. Research fellowships to support the research.
 - vi. Strong book bank through central and departmental library and access to various online journals.
- **Weakness:**
 - i. Locational disadvantage affecting faculty retention.
 - ii. Enough faculty and staff positions are not sanctioned in proportion to the increased student intake.
 - iii. Lacking in consultancy and funded research projects.

- iv. Shortage of smart classrooms.
- v. Class room facilities are inadequate.
- **Opportunities:**
 - i. To provide skilled manpower at different levels as per the local needs and global standards.
 - ii. To obtain research projects in the availability of different research funding agencies and to enhance the research contribution through research fellowships allocated to the department.
 - iii. Professional development of individual faculty through PDA.
 - iv. Time to time revision of course curriculum through academic autonomy.
 - v. Starting of non-formal courses.
- **Challenges:**
 - i. Relying on the adhoc arrangement of faculty and staff.
 - ii. Effect of global recession on placement.
 - iii. Mushrooming of large number of institutes which are creating confusion among students.
 - iv. Mobility of faculty due to remote location.

52. Future plans of the department.

- a) Alignment of the course curriculum with National Occupational Standards defined by National Skill Development Corporation (NSDC).
- b) More emphasis will be given on the organization of workshops, symposiums, seminars, faculty development programs and conferences for faculty, staff and students in the department.
- c) Interdisciplinary research will be promoted.
- d) Collaborations with industry people for the designing and development of curriculum and laboratory experimentation.
- e) To obtain the funded research projects.

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Mr. Rakesh Kumar

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Dr. Indraj Singh

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Mr. Anuj Bansal

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Evaluative Report of the Department

1. Name of the Department : **Physics**
2. Year of establishment :1991
3. Is the department part of a school/Faculty of the university?
Faculty of the university.
4. Name of the programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.

PG and Ph.D
5. Interdisciplinary programmes and departments involved
NIL
6. Courses in collaboration with other universities, industries, foreign institutions, etc
NIL
7. Details of programmes discontinued, if any, with reasons:
NIL
8. Examination system: Annual/Semester/Trimester/Choice Based Credit System
Semester system
9. Participation of the department in the courses offered by other departments.
Offering Physics curriculum to all branches of ICD as well as BE
10. Number of teaching posts sanctioned, filled and actual (Professors, Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	01	--	05
Associate Professors	02	01	01
Asst. Professors	06	07	02
Others			

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance:

Name	Qualification	Designation	Specialization	No. of years of Experience	No. of Ph.D/M.Phil Students Guided in last four years
A. S. Dhaliwal	MSc, MPhil, PhD	Professor	Radiation Physics	25	PhD=05
K. S. Kahlon	MSc, MPhil, PhD	Professor	Radiation Physics	26	PhD=03
K. S. Mann	MSc, MPhil, MEd, PhD	Professor	Radiation Physics	25	NIL
M. M. Sinha	MSc, PhD	Professor	Condensed matter physics	22	PhD=03
S. S. Verma	MSc, PhD	Professor	Computational Physics	23	PhD=03
S. S. Ghumman	MSc, MPhil, PhD	Associate Professor	Radiation Physics	26	NIL
P. Kaur	MSc, PhD	Assistant Professor	High Energy Physics	04	NIL
K. Aggarwal	MSc, MTech	Assistant Professor	Materials Science	04	NIL

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

NIL

13. Percentage of classes taken by temporary faculty

Name of the Program	% of Classes taken by temp. Faculty
1) Certificate/ICD	~50%
2) UG	~20%
3) PG	NIL

14. Programme-wise Student Teacher Ratio:

Year	Certificate/ICD		BE		PG	
	Theory	Practical	Theory	Practical	Theory	Practical
2010-11	50-60:1	25-30:1	50-70:1	25-35:1	-	-
2011-12	50-60:1	25-30:1	50-70:1	25-35:1	9:1	9:1
2012-13	50-60:1	25-30:1	50-70:1	25-35:1	4:1	4:1
2013-14	50-60:1	25-30:1	50-70:1	25-35:1	4:1	4:1
2014-15	50-60:1	25-30:1	50-70:1	25-35:1	4:1	4:1
2015-16	50-60:1	25-30:1	50-70:1	25-35:1	19:1	19:1

15. Number of academic support staff (technical) and administrative staff:

Sanctioned, filled and actual:

Presently there is one regular clerk, one regular technician, two regular lab attendants,
two contractual technicians and one contractual helper.

16. Research thrust areas as recognized by major funding agencies:

NIL

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give names of funding agencies, project title and

grants received project-wise:

NIL

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration: NIL

b) International collaboration: NIL

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

NIL

20. Research facility/ center with

a) state recognition

b) national recognition

c) international recognition

NIL

21. Special research laboratories sponsored by/ created by industry or corporate bodies.

NIL

22. Publications:

- Number of papers published in peer reviewed journals (national / international): 167
- Monographs: NIL
- Chapters in Books: NIL
- Edited Books: NIL
- Books with ISBN with details of publishers: NIL

- Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.):
- Citation Index – range / average: total citations: 693
- SNIP: 0.1 to 1.14
- SJR: 0.1 to 1.88
- impact factor- range/average: 0.1 to 6.0
- h-index: Max value is 13 (by Google Scholar)

23. Details of patents and income generated:

NIL

24. Areas of consultancy and income generated.

NIL

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad

NIL

26. Faculty serving in

- National committees
- International committees
- Editorial Boards
- any other (specify)

NIL

27. Faculty recharging strategies (Refresher / orientation programs, workshops, training programs and similar programs).

SNo	Faculty	Name of programme	Place	Duration
1.	Dr A S Dhaliwal	Management capacity enhancement programme: Training programme	Udaipur	Dec 15-20, 2014
2.	Dr M M Sinha	Management capacity enhancement programme for administrators	IIM Lucknow	May 25-29, 2015
3.	Dr S S Ghumman	Materials micro structure characterization using optical and scanning electron microscopy	IIT Hyderabad	Dec 20-14, 2015
4.	Dr P Kaur	Faculty development programme	SLIET	March 18-22, 2014
5.	Dr P Kaur	Statistical techniques using SPSS	SLIET	Oct 6, 2016
6.	Dr P Kaur	Research methods in Engg & Tech	SLIET	Jan 9-13, 2017
7.	Ms K Aggarwal	Advances in solar energy technologies	IIT Delhi	Dec 9-15, 2014
8.	Ms. K Aggarwal	TEQIP sponsored faculty development programme on soft skills & entrepreneurship development	SLIET	March 18-22, 2014

9.	Ms. K Aggarwal	Recent trends in VLSI design & communication systems	SLIET	June 1-5, 2015
10.	Ms. K Aggarwal	Research methods in Engg & Tech	SLIET	Jan 9-13, 2017

28. Student projects

- percentage of students who have taken up in-house projects including inter-departmental projects: 100%
- percentage of students doing projects in collaboration with other universities / industry / institute: NIL

29. Awards / recognitions received at the national and international level by

- Faculty: three best poster awards in national conference and one in international conference
- Doctoral / post doctoral fellows: NIL
- Students: NIL

30. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

- 2nd National Conference on Advanced Materials and Radiation Physics (AMRP-2011) during Nov 4-5, 2011. Funded by the institute.
- 3rd National Conference on Advanced Materials and Radiation Physics (AMRP-2013) during Nov 22-23, 2013. Funded through TEQIP-II.
- 4th National Conference on Advanced Materials and Radiation Physics (AMRP-2015) during March 13-14, 2015. Funded through TEQIP-II

31. Code of ethics for research followed by the departments

Following the instructions/orders issued from time to time by the institute

32. Student profile program-wise:

Name of the Program (refer to question no. 4)	Session	Applications received	Selected		Pass percentage	
			Male	Female	Male	Female
PG (MSc Physics)	2011-12	Data with SET office	03	07	100	100
	2012-13	Data with SET office	02	05	100	100
	2013-14	Data with SET office	01	03	100	100
	2014-15	Data with SET office	02	03	100	100
	2015-16	Data with SET office	09	10	---	---

33. Diversity of students

Name of the Program (refer to question no. 4)		% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
PG	2011-12	nil	100	-	-
	2012-13	nil	100	-	-
	2013-14	nil	100	-	-
	2014-15	nil	100	-	-
	2015-16	nil	42	58	-
PhD	2011-12	nil	67	33	-
	2012-13	nil	50	50	-
	2013-14	nil	100	nil	-
	2014-15	nil	nil	nil	-
	2015-16	25	50	25	-

34. How many students have cleared Civil Services and Defense Services

examinations, NET, SET, GATE, USMLE, PLAB, GPAT, NCLEX, CGFNS, IELTS

and other competitive examinations? Give details category-wise.

No data is available

35. Student progression

Student progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil	NA
PG to Ph.D.	02
Ph.D. to Post-Doctoral	Nil
Employed <ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	02
Entrepreneurs	No data available

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	NIL
from other universities within the State	75
from universities from other States	25
from universities outside the country	NIL

37. Number of faculty who were awarded M.Phil., DM, M Ch, Ph.D., D.Sc. and D.Litt. during the assessment period

NIL

38. Present details of departmental infrastructural facilities with regard to

- a) Library: There are 460 books in departmental library.
- b) Internet facilities for staff and students: yes, available
- c) Total number of class rooms: No demarcation is there but rooms are centrally allocated
- d) Class rooms with ICT facility and 'smart' class rooms: MSc class rooms are equipped with projector compatible with computer.
- e) Students' laboratories: two ICD labs, two for BE and one for MSc students.
- f) Research laboratories: There are six (4 experimental +2 theoretical) research labs.

39. List of doctoral, post-doctoral students and Research Associates

- a) from the host institution/university: NIL
- b) from other institutions/universities: NIL

40. Number of post graduate students getting financial assistance from the university.

NIL

41. Was any need assessment exercise undertaken before the development of new program(s)? If so, highlight the methodology.

MSc in physics was started in the year 2011 to cater the need of students in nearby areas

as other universities are nearly hundred kilometers from SLIET.

42. Does the department obtain feedback from

- a) faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

As per directions of IQAC-cell, the feedback is taken for appropriate measures.

- b) students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Constructive feedback was noted and subsequently incorporated in the curriculum after

discussing with BOS members.

- c) alumni and employers on the programs offered and how does the department utilize the feedback?

Whenever syllabi of various programme had been revised, alumni were involved.

43. List the distinguished alumni of the department (maximum 10): NIL

44. Give details of student enrichment programs (special lectures / workshops / seminar)

involving external experts:

- Prof. R S Salaria, Department of Computer Science, GNDU Amritsar, delivered four lectures along with lab practice on C++ programming during March 23 & 24, 2013.
- Prof. R C Verma, Department of Physics, Punjabi University, Patiala, delivered two lectures along with lab practice on programming with Mathematica software on March 25, 2013.

45. List the teaching methods adopted by the faculty for different programs including clinical

teaching.

For effective teaching a single method of teaching has not been used but a number of

methods/techniques have been used that are:

- Traditional method of teaching by using the black-board.
- discussion in the class room.
- use of projector whenever required.
- assignment work.
- developing the topics chronologically in order to maximize the learning art.
- providing the individual attention.
- attending the queries/comments of weak as well as gifted students.
- use of demonstrative technique wherever required.
- creating the curiosity among students about a particular topic.
- encouraging the students by rewarding them whenever need arises.
- recapitulating/revising the important points at the end of a chapter.

46. How does the department ensure that program objectives are constantly met and learning outcomes are monitored?

The required procedures for this task are in the pipeline of the institute.

47. Highlight the participation of students and faculty in extension activities.

- Organized ‘national education day’ on Nov 13, 2013
- Organized ‘national education day’ on Nov 11, 2014
- Organized ‘National Science day’ on Feb 28, 2014

48. Give details of “beyond syllabus scholarly activities” of the department.

- MSc students are encouraged to take part in summer/winter schools organized by other universities
- Efforts have been made/are being made to make the MSc students to handle the advanced equipments/software.

49. State whether the program/ department is accredited/ graded by other agencies?

If yes, give details.

No

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

- technique to handle the powdered biological materials to study their broadband dielectric properties have been developed.
- role of water and temperature in disrupting the corn starch present in corn flour have been studied through broadband dielectric spectroscopy.
- Enhanced facilities for research in the field of materials synthesis and their characterization; and radiation physics.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

- well equipped labs provide quality education to students.
- students belonging to various states of India have got admission in M.Sc. programme.
- faculty have published good number of research papers in various national and international referred journals.
- Research labs are equipped with state-of-the-art equipments such as Electrically cooled X-ray detector, Electrochemical work station, Electron gun, Vector Network Analyzer, X-ray and gamma-ray spectrometers.
- licensed software such as FDTD, Fortran.
- National conferences organized by the department attract good number of researchers/ experts from all over the India.

Weaknesses:

- inadequate number of regular faculty.
- inadequate class rooms for MSc students.
- more space for MSc labs is desired.
- inadequate number of technical staff in labs.
- more rooms especially for research scholars working in computational physics are desired.

Opportunities:

- faculty as well as students can enhance their knowledge through available e-resources as well as laboratory equipments.
- adequate research facilities in the fields of materials science, radiation and computational physics, are available.

Challenges:

- to develop the appropriate attitude/skills among students so as they can be adjusted in the society.

52. Future plans of the department.

Efforts will be made

- to keep record of student progression
- to undertake the e-learning sessions for students so as they can make best use of e-resources provided by the institute.
- to provide the typical project work base on state-of-the-art-knowledge.

4. Declaration by the Head of the Institution

I certify that the data included in this Self-Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

Mr. Saini
28/3/17

Signature of the Head of the institution

with seal:

Director/ निदेशक

Sant Longowal Institute of Engg. & Tech
ਸੰਤ ਲੌਗੋਵਾਲ ਅਭਿਆੰਤਰਿਕੀ ਆਂ ਪ੍ਰੌਢੀਗਿਕੀ ਸੰਸਥਾਨ

Longowal - 148106, Punjab (India)

ਲੌਗੋਵਾਲ, ਸੰਗਰੂਰ, ਪੰਜਾਬ - ੧੪੮੧੦੬

Place: Longowal.
Date: 28-03-2017

Statement of Compliance

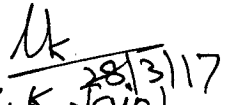
(Deemed Universities)

This is to certify that Sant Longowal Institute of Engineering and Technology University has complied with all the provisions of the following Regulations governing it:

- * UGC (Institutions Deemed-to-be-Universities) Regulations 2010 and further amendments, if any, notified by the UGC.
- * DEC approval for distance education programme.
- * Approval by the UGC and MHRD for main campus, off-campus and off-shore - as applicable.

Any false or misleading information provided by the institution, will be viewed seriously by NAAC and the accreditation given is liable to be withdrawn.

Date 28/03/2017


(Prof. V. K. Jain) 28/3/17
Name and signature with seal

of the Vice Chancellor
Director/ निदेशक
Sant Longowal Institute of Engg. & Tech
ਸੰਤ ਲੌਗੋਵਾਲ ਅਭਿਆੰਤਰਿਕੀ ਆਂ ਪ੍ਰੌਣੌਗਿਕੀ ਸੰਘਠਾਨ
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