

## **Annual Quality Assurance Report (AQAR)**

**Name of the Institution** : **PEC University of Technology, Sector-12, Chandigarh**  
**Year of Report** : **August 2013- July 2014**

### **An overview of PEC University of Technology**

The PEC University of Technology, Chandigarh was originally established as Mugalpura Engineering College at Lahore (now in Pakistan) on November 9, 1921. The name of the institute was later changed to Maclagan Engineering College and it started functioning under the name on March 19, 1924. In the year 1931, the college got affiliated to Punjab University, Lahore. After partition in 1947, the college was shifted to Roorkee (India) and was renamed as East Punjab College of Engineering. In the year 1950 the word East was dropped and it came to be known by its now popular name – PEC (Punjab Engineering College).

Towards the end of December 1953, the institute shifted to its present campus in Chandigarh to function under Govt. of Punjab. In 1966, with the formation of Union Territory of Chandigarh, the institute came under the control of the Chandigarh Administration.

In October 2003, the Govt. of India notified the Punjab Engineering College as a Deemed to be University. In June, 2009, the institute was accordingly rechristened as PEC University of Technology. The institute is governed by Board of Management and gets a grant – in- aid from the Chandigarh Administration.

The present campus of the institute extends over an area of 146 acres of the land situated close to the Shivalik hills. Besides the academic and residential buildings, the campus also provides essential amenities like shopping centre, community centre, banks, post office, student centre, gymnasium, swimming pool, play fields, faculty guest house and dispensary etc. There are four hostels for boys and two for girls. About 300 houses exist inside the campus for the faculty and supporting staff. In addition, Neelgiri Apartments provide accommodation for research scholars.

University has always endeavored to achieve standards in academics, research and other curricular activities which are par excellence within country and also at the international level. Keeping this in mind, it has entered into a number of collaborations with universities and industries like NJIT- USA, IBM, ALSTOM-INDIA, INTEL, ESIGELEC-FRANCE, UWA-AUSTRALIA etc.

Nine different UG programmes and thirteen PG programmes are offered in various disciplines. Also regular PhD programmes are offered in areas of Basic Science and different disciplines of Engineering.

The students of the institute develop their personalities through participation in various technical, sports, cultural and social activities at national and international level. During the year 2013-14, 100% students were placed in different companies with highest package of 12.71 lacs. The institute was able to undertake a good amount of consultancy and research projects.

In pursuance of National action plan of the NAAC the Internal Quality Assurance (IQAC) Cell has been established in PEC University of Technology, Chandigarh as per the UGC guidelines in August 2010 under the Chairmanship of Director, PEC University of Technology. IQAC has defined the objectives of the institute and worked out an action plan to achieve the same.

The constitution of the IQAC is as under :-

<b>Sr. No.</b>	<b>IQAC Members</b>	<b>Name and Designation</b>
1	Chairperson ( Head of HEI)	Prof. Manoj K. Arora, Director, PEC University of Technology
2	Members from the institute	Eight senior teachers of different disciplines and one senior administrative official of the institute
3	External Experts on Quality Management/Industry/Local Community	1. Mr. P K Verma, Management Expert 2. Dr. Dhirender Tayal, Former President of PECOSA 3. Prof. S C Vaidya, Dean, University Business School
4	Coordinator of IQAC and Member Secretary	Dr. (Mrs.) Neelu Jain, Associate Professor, E&EC. Deptt. , PEC University of Technology

Goals and functions of IQAC are as under:-

1. To develop a quality system for conscious, consistent and catalytic programmed action to improve the academic and administrative performance of the PEC University of Technology.
2. To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.
3. To develop a system for conscious and consistent improvement in the performance of the institution.
4. To channelize the efforts and measures of the institution towards academic excellence.

As one of the major functions of IQAC, the Annual Quality Assurance Report of the Higher Education Institution has been prepared in the prescribed format based on the quality parameters/assessment criteria developed by the relevant quality assurance body (like NAAC, NBA) for the first time for the academic year starting from August 2013 to July 2014.

## Section-A

**Plan of action chalked by IQAC in the beginning of the year (August 2013- July 2014) towards quality enhancement is as under:-**

- Appropriate action to be taken for engagement of all the scheduled classes as per the academic calendar
- Random monitoring of classes to verify the engagement of classes
- To develop a mechanism for complete transparency of student evaluation
- Declaration of results within a stipulated period of time
- Updation of academic programs
- Complete transparency of student's attendance
- Upgradation of classrooms
- Renovation of faculty rooms
- Uploading of upto date information on PEC web server

## **Section-B**

### **1. Activities reflecting the goals and objectives of the institution**

The goals and objectives of the institution are as under :

- To become a centre of excellence in technical education and research, and to occupy a place amongst the most eminent institutions of the nation
- To build across the institution a culture of excellence in teaching and learning
- To enhance the institution standing as the institution of choice for students across the country and to augment the presence of international students to at least ten percent of the student body
- To cultivate a field in which new ideas, research and scholarship flourish leading to emergence of creators, innovators, leaders, and entrepreneurs
- To design the education through a continuous process so that the students qualifying from the institution have the top rating in placement
- To achieve excellence in application-oriented research in the selected areas of technology so as to contribute towards the development of the region and the nation
- To promote co-curricular and extra-curricular activities for overall personality development of the students
- To develop responsible citizenship amongst students through awareness and acceptance of ethical values
- To build a family of alumni and friends to create a network of allegiance and support for the institution
- To inculcate the fundamentals of work ethics in the students in order to produce morally responsible technocrats
- To increase intellectual, physical, emotional and spiritual strength of the students

Activities reflecting the above mentioned goals and objectives are as under:

The unique features of education system that make the institute a center of excellence in technical education and place amongst the most eminent institutions of the nation are:

- Teaching, learning and evaluation system similar to IITs

- Wi fi enabled academic area and hostel area; ICT enabled
- Lecture delivery using both blackboards and LCD projection facilities
- Summer courses for slow students
- Complete transparency: all answer scripts are shown to the students
- Rapid evaluation of mid-term and end-term exams: within 96 hours
- Early announcement of results: within 20 days
- Student feedback for all courses and faculty by all students

The institute follows an Academic calendar which is approved by Senate and prepared in advance for one academic year by office of Dean Academic Affairs in consultation with other functionaries.

The Departmental Under-Graduate Committee (DUGC) and Departmental Post-Graduate Committee (DPGC) of each department design the curriculum and syllabi for UG & PG programmes respectively. These are then sent to the Senate Under-Graduate Committee (SUGC) and Senate Post-Graduate Committee (SPGC) respectively.

The SUGC and SPGC forward these with their comments / observation to the Curriculum Design & Monitoring Committee (CDMC) whose final recommendations are then considered by the Senate of the PEC University of Technology. The curriculum is finally implemented after the approval of the Senate.

Learning is made student centric through project based activities and the concept of design points. Also the laboratory experiments are design oriented. Compulsory educational tours, Workshop training are other methods of providing learning experiences. Students have to undergo a compulsory full semester internship in Industry/Institute.

Employability is ensured by introducing six months internship having high level of interactions with the industry, industrial visits and interaction with the industrial experts through extension lectures. More than 60 companies visit for campus placements every year and all eligible students are placed. Any comments the companies give regarding curriculum are given due consideration. The marketing brochures are sent to different companies.

To enhance sponsored research, the institute has introduced an incentive scheme for faculty and also listed annual targets for applying for sponsored projects. Under the incentive scheme, faculty members undertaking sponsored projects are provided financial

benefits for academic activities. Approximately 6 percent of the annual budget is allocated for promotion of research. Each faculty member has been provided with laptops/desktops for the research and educational purposes. They are also provided with In-house funds for the promotion of research activities and the PG students are involved in these activities.

Faculty at PEC has expertise in various research areas of interest to industry and society, and is involved in consultancy through approximately 880 projects worth Rs 2.82 crores during last five years. The DRP & D acts as a liaison between the institute and industry/ Government bodies to undertake projects. The institute has well established rules and guidelines for the consultancy projects. Collaborative projects are undertaken through MoUs with Intel, Alstom, Philips, ABB, IBM, CSIO, MIA and others

For motivation to achieve higher goals the achievements of the faculty are published in a PEC Newsletter and Alumnus Prof Trikha award has been instituted for best research publication to two faculty members every year.

Students are also encouraged to participate in research through sponsored projects and industrial collaborations. The institute provides financial help to students who participate in seminars, conferences and workshops relating to technical fields.

The student Chapters of the Technical Societies namely ISTE, IETE, IEEE, SAE, IIM, Ae.SI, IEE and SME are functional in the institute. Students are encouraged to be members of these and other similar technical societies and to participate in cultural as well as technical activities on the campus through events like PECFEST, TECHFEST etc. For the all round development of the students, the college provides a host of various students activities ranging from personal-hobbies to technical interests. The students are encouraged to become a member of these bodies to help broaden their horizons. Various students clubs are: Art and Photography, Robotics, Music, Dramatics, Speaker's Association and Study Circle (SAASC), Projection-Design, Rotaract and Energy and Envirovision club.

The institute offers counselling services to help the students to work through their problems, to develop self awareness and to over come problems. The services of a professional counselor for personal counselling are available to the students. Scholarships in the form of full free ship on tuition fee are available for specific number of economically weaker section students/women/physically handicapped students.

In order to produce morally responsible technocrats, students are involved in community based projects like inclusive growth and also participate in extension activities of NSS and NCC through a compulsory course in NCC/NSS/Physical Education for first year students. The NSS unit of the institute has a tie up with the Commonwealth Youth Asia Center, Chandigarh under the Commonwealth Youth Credit Initiative (CYCI) and has formed two women self help groups.

With the aim of strengthening its link with the alumni, the institute has set up an Alumni Affairs office. At present PEC is interacting with three Alumni Associations namely PEC Old Boys Association (PECOBA), PEC Old Students Association (PECOSA) and PEC Alumni Society (PALS). Some of the areas where the institute receives regular contributions are: scholarships and awards, lectures, short courses, workshops, career guidance, curriculum development, internships, placements, academic collaborations and MOU's with industry. PECOSA has been instrumental in channelizing the help offered by various alumni in the form of scholarship awards to the tune of Rs 1.00 lac (total) to bright students every year.

## 2. New Academic Programmes Initiated

The various new P.G. programmes initiated are tabulated as under:-

<b>S. No.</b>	<b>Department Initiating Programme</b>	<b>Title</b>	<b>Intake</b>	<b>Year of Start of Programme</b>
1.	Department of Computer Science and Engineering	Computer Science and Engineering (Information Security) on self-supporting basis	23	2010
2.	Department of Material Science and Metallurgy	Total Quality Engineering and Management (Interdisciplinary programme on self-supporting basis)	21	2011
3.	Department of Production Engineering	Industrial Design (Interdisciplinary programme on self-supporting basis)	23	2011



### 3. Innovations in Curricular Design and Transaction

New Scheme for under graduate courses was implemented in the year 2010. Differences in the Old Scheme and the New Scheme are tabulated as under:-

#### Old Scheme BE Implemented in 2010

S.No.	Courses	Course Structure
1	Humanities	3
2	Basic Sciences ((Physics, Chemistry, Math)	6
3	Labs (Non Deptt.)	2
4	Engineering Core & Technical Arts	9
5	Department Core	15
6	Lab (Deptt.)	7
7	Department Electives	3
8	Open Elective	1
9	Capstone Projects	2
10	Workshop Project	1
11	Industry Internship semester	Compulsory

#### New Scheme BE Implemented in 2014

#### CREDITS BREAK-UP FOR B. E. PROGRAMME CURRICULAR COMPONENTS

- (a) Institute Core Courses (ICC)
  - a) Humanities and Social Sciences (HSSC)
  - b) Basic Sciences (BSC)
  - c) Engineering Sciences (ESC)
  - d) General Science (GSC)

#### Credits

- 04
- 08+08\*
- 04+12\*
- 03
- \* Department Specific

**Total**

**39**

<b>(b) Department Core Courses (DCC)</b>	<b>60</b>
a) Class Contact Core courses	02
b) Introduction to (Discipline) Engineering	04
	02
c) Engineering Analysis and Design	04
d) Technical Communication	08
e) Minor Project	Non-credit
f) Major Project	20
g) Industrial Tour	
h) Practical Training/ Internship	
<b>Total</b>	<b>100</b>
<b>(c) Humanities, Social Sciences and Management Elective Courses (HSSMEC)</b>	<b>03</b>
	<b>03</b>
a) Humanities and Social Sciences	
b) Management Studies	
<b>Total</b>	<b>06</b>
<b>(e) Departmental Elective Courses (DEC)</b>	<b>12</b>
<b>(f) Open Elective (GSEC/HSEC)</b>	<b>04</b>
<b>(g) Co-Curricular Activities (CCA)</b>	<b>02</b>
a) Discipline (To be awarded after Final year)	02
	02
b) NCC/NSS/Sports (First Year)	
c) Sports/Proficiency (Second year to Final year and to be awarded after final year)	
<b>Total</b>	<b>06</b>
<b>(f) Minor Specialization Courses (MSC)</b>	<b>20</b>
<b>or</b>	
Departmental Honour Courses (DHC)	
<b>Grand Total</b>	<b>167</b>
(For those who <b>do not opt</b> for minor specialization/honours)	
<b>Grand Total</b>	<b>187</b>
(For those who <b>opt</b> for degree with honours)	

**Old Scheme ME  
Implemented in 2005**

**New Scheme ME  
Implemented in 2013**

**4. Inter-Disciplinary Programmes Started**

The various interdisciplinary P.G. programmes started are tabulated as under:-

<b>Sr. No.</b>	<b>Year of Starting the P.G. Programme</b>	<b>Name of the Course</b>	<b>Department initiating the course</b>	<b>Coordinators</b>	<b>Intake</b>
1.	2011	Total Quality Engineering and Management (self-supporting)	Department of Material Science and Metallurgy	Prof. P. Thareja	21
2.	2011	Industrial Design	Department of Production Engineering	Prof. Parveen Kalra	23

## 5. Examination Reforms Implemented

<b>Examination System prior to year 2005</b>	Examinations were conducted on behalf of the Panjab University, Chandigarh as Punjab Engineering College was an affiliated College with the Panjab University
<b>Examination System after year 2005</b>	After 2005 the institution became deemed university. The institution started following a continuous evaluation and grading system for the courses as mentioned in the “Rules and Regulations for the Undergraduate Programmes” (Clause 6).

The relevant portion Clause 6 (Teaching Evaluation) from “Rules and Regulations for the Undergraduate Programmes” is as under.

### TEACHING AND EVALUATION

#### Teaching

**a) Medium** - The medium of instruction and evaluation is English.

**b) Approval of Courses** - Each course along with its weightage in terms of credits is approved by the Senate Standing Committee as per the procedures laid down by the Senate. Only approved courses may be offered during any semester/ summer term.

**c) List of Courses** -The list of courses to be offered by a department is finalized before the beginning of the semester/ summer term by the concerned Head, taking into consideration all the requirements and the recommendations of the standing committee of the Senate. The list of all courses offered by the Institute in an academic term will be made available to the students before the date of registration for that term.

**d) Conduct of Courses-** Each course is conducted by the Instructor-in-charge, assigned by the Head of Department, with the assistance of the required number of tutors and other instructors. The Instructor-in-charge is responsible for conducting the course, making the question paper, holding the examinations in his/her course, getting the answer scripts evaluated by the team of tutors and other instructors, awarding grades at the end of the semester/summer term and transmitting the grades to the Academic Section through the Head of the Department within the prescribed time limit (i.e., 96 hours after the conduct of the End Semester Examination).

**e) Teaching Assignments** - The Instructors-in-Charge, instructors and tutors for all the courses offered by a department during the semester / summer term are designated by the concerned Head. If any other department is also required to participate in teaching a particular course, the respective Head designates the instructor and /or tutor.

**f)** A teacher is expected to follow the approved curriculum. However, he/she can deviate from it in case it is felt that such deviation will improve the academic purpose of the course. In no case, this will be treated as a ground for complaint by the students.

## **Evaluation**

The evaluation of the students is a continuous process and is based on their performance in mid-semester examinations, end semester examination, quizzes/short tests, tutorials, assignments, laboratory work (if any), make-up examinations (if applicable), etc.

In general, there shall be no choice in test/examination papers.

The Instructor-in-charge, assisted by the team of tutors and other instructors, is responsible for making the question paper, conducting the examination in his/her course, getting the answer scripts evaluated by the team of tutors, and awarding the grades. The grades are forwarded through the Head of the Department who will ensure that proper standards have been used.

The complete transparency will be maintained in evaluation system. The graded scripts of quizzes, tests, and mid-semester examinations will be returned to the students within a reasonable time. The answer scripts of the final examinations will be shown to the students after marking. All instructors will notify a time for such access within three days of the examination. A student may point out errors or omissions, if any, in marking in writing on the cover sheet of the answer script. The instructor will take these into account before submission of grades.

The final grades earned by all students registered in a course will be submitted by the Instructor-in-charge to the Academic Section through the Head of the Department within 96 hours after the conduct of the End Semester Examination.

### **a) Schedule of Examinations -**

The end-semester examination and the mid-semester examinations will be held within the periods allocated in the Academic Calendar. In exceptional circumstances, the Dean, Academic Affairs may permit holding the examinations outside these periods.

### **b) Make-up Examinations –**

If a student, for bonafide reasons such as illness, etc., fails to appear in the end-semester examination in one or more course(s), he/ she may make a request personally or through someone to SUGC for a make-up examination within two days of the date of the scheduled examination. Such a request must, however, be made on a prescribed form, available in the Academic Section, giving reasons for the failure to appear in the end-semester examination with a certificate from a Government Hospital/Institute Dispensary, in case the failure was due to illness. In case, Govt. hospital/dispensary or institute dispensary is not in the vicinity of the student, the institute shall depute a doctor for medical examination of the student at the cost of student.

Only one make-up examination, for the end-semester examination, is allowed per course. For failures to appear in mid-semester examinations, etc., it is entirely up to the Instructor-in-charge to ascertain the proficiency of the student by whatever means he/she considers appropriate if he/she is satisfied of the student's bonafides.

## **Grading System**

The performance of the student in a course is reported in terms of broadband grades. The following letter grades are used:

### **Letter Grade Performance Grade Points**

A Excellent 10

B Very Good 8

C Satisfactory 6

D Marginal 4  
 E Deficient, reappear 0  
 F Failing 0  
 I Incomplete  
 N Not Eligible

S Satisfactory (for zero credit courses only) -

X Unsatisfactory (for zero credit courses only) -

The grade E may be awarded to a student only if the student's performance is within 5% of the cut-off performance for the last passing grade D.

The E grade will be available to the students in only the first and second semester courses. The reappear examination will be scheduled by the Academic Section.

A student's overall academic performance within a given semester or in all the courses completed is measured by two grade point averages.

**Semester Grade Point Average (SGPA):** The performance of a student in a particular semester is measured by Semester Performance Index (SGPA), which is a weighted average of the grades secured in all the courses taken in a semester and scaled to a maximum 10.

If the grade points associated with the letter grades awarded to a student are  $g_1, g_2, g_3, g_4$  and  $g_5$  in five courses and the corresponding credits are  $w_1, w_2, w_3, w_4$ , and  $w_5$ , the SGPA is given by

$$SGPA = \frac{w_1g_1 + w_2g_2 + w_3g_3 + w_4g_4 + w_5g_5}{w_1 + w_2 + w_3 + w_4 + w_5}$$

For instance, suppose a student is registered for one 5-credit course, four 4-credit courses, and one 3-credit course during a semester, i.e. a total of 24 credits. If he secures A, B, A, B, C, and D grades, respectively in these courses, his SGPA will be calculated as follows:

$$SGPA = (5 \times 10 + 4 \times 8 + 4 \times 10 + 4 \times 8 + 4 \times 6 + 3 \times 4) / 24 = 190 / 24 = 7.9$$

SGPA is calculated up to one decimal place only.

**Cumulative Grade Point Average (CGPA)** - The Cumulative Performance Index (CGPA) indicates the overall academic performance of a student in all the courses registered up to and including the latest completed semester/summer term. It is computed in the same manner as the SGPA, considering all the courses (say,  $n$ ), and is given by

$$CGPA = \frac{\sum_{i=1}^n w_i g_i}{\sum_{i=1}^n w_i}$$

The grades of any and all repeated courses are included in the official transcripts. However, once a student repeats and passes a course in which he/she had failed earlier, the earlier fail grade will not enter in to the computation of CGPA. Incomplete grades are not included in computing the GPA until an appropriate letter grade is assigned.

The Institute follows a continuous evaluation system with considerable freedom being given to the course Instructor in deciding the pattern of evaluation and weightages. However, a typical theory course will have two mid-semester examinations carrying weight of 30 percent, one or two quizzes or short tests carrying 20 percent and an end-semester examination carrying 50 percent. The total marks thus obtained are converted to a letter grade. The conversion to letter grades may or may not be based on the relative performance of the students. The grades are on a scale of 10 with the grade A being the best and E and F being fail grades. Each letter grade has a grade point associated with it, as given in the above Table. The grade E will represent a marginal failing grade with performance within 5% of minimum passing grade D. A student getting an E

grade may be allowed a reappear in a repeat examination (allowed only once) to replace the performance in the regular end semester examination. Further, this grade will be available only to the students of 1<sup>st</sup> and 2<sup>nd</sup> semesters.

**Incomplete Grade 'I'** : For reasons acceptable to the Instructor, an I ( for Incomplete) grade may be assigned if a student fails to complete any of the required course work by the end of the semester. In all such cases, an *Incomplete Contract*, which is a formal agreement between the student and the instructor, is to be filed along with the grade report. An Incomplete Contract includes:

- The course work that remains to be completed.
- The date by which the specified work must be completed (no later than one month of the close of relevant semester).
- The final grade to be substituted for the I grade, if the specified work is not completed by the specified date.

The Incomplete Contract will be filled by the Instructor with the Academic Office when the Grade Sheet is submitted.

If the student completes the required work by the specified time, the instructor completes a grade change form indicating the final grade earned. The student should check with the instructor to ensure that a grade change form has been submitted.

If the student does not complete the required work by the specified time, the I grade is automatically replaced with the final grade specified by the Instructor on the Incomplete Contract. If a final grade is not specified, or if an Incomplete Contract is not filed, the I grade automatically reverts to an F grade after one month.

\*Grade N: A student who fails to fulfil the attendance requirement for a particular course shall not be eligible to appear in the end semester examination in that course and shall be awarded the grade 'N' for that course. He/she shall have to repeat the entire course.

**Project Grades** – Project grades finalized as per approved procedure shall be submitted by the last date specified for the submission of grades (i.e., within 96 hours of the last date of the end semester examination). If a student wishes to petition against the grade assigned, he/she should approach the Head of the Department within a week of the beginning of the next regular academic term. The HOD will report his recommendations to the Chairman, Senate for the final decision. The Chairman, Senate may also look into such a case directly.

**Grade Report** - A copy of the Grade Report is issued to each student at the end of the semester and a copy of same is also mailed to parents/guardian. A duplicate copy, if needed, can be obtained on payment of the prescribed fee.

**Withholding of Grades** – The grades of a student may be withheld if he/she has not paid his/her dues, or if there is a case of indiscipline pending against him/her, or for any other reason.

### **Honours Programme**

To provide sufficient challenge to the brighter students, an Honours programme will be offered. In this programme the students will be encouraged to overreach and undertake extra learning units, assignments, projects, etc., over and above what is prescribed for the regular course. A student will have to register for the course under the Honours programme at the beginning of the semester. Such courses will be identified with the letter H suffixed to the course number. The

grade in the Honours course will depend upon the student's performance in the regular material prescribed for the course as well as in the extra material covered. For a student to graduate with Honours, she/he must earn at least 65 credits in courses with H as a suffix. The Institute Senate shall provide rules for administration of the Honours programme.



## 6. Candidates Qualified: NET/SLET/GATE etc.

### Engineering Departments

Department	From Final Year (BE)	From M.E.
	Number of Students Qualified Gate for ME Admission	Number of Students Admitted with Gate Qualification
Civil Engineering	Information not available in the department	17 (10 Structure, 01 Highway) and (05 Structure, 01 Environment)
Computer Science and Engineering	-do-	25
Electrical Engineering	03	25
Electronics and Electrical Communication Engineering	Information not available in the department	25
Mechanical Engineering	15	25
Materials and Metallurgical Engineering	04	04

### Applied Science Department

M.Sc	Ph.D
No. of Students Qualified NET/SLET etc.	No. of Students Admitted with NET/SLET etc.
Not Applicable	One Student admitted with NET

## 7. Initiative towards Faculty Development Programme

A major initiative towards faculty development program taken by the institution is to encourage the faculty to attend various National/International Conferences and Short Term Courses by way of providing financial assistance, leave etc. Faculty is allowed to pursue post graduation, Doctoral Research, Post Doctorate under QIP and study leave is provided for the same.

List of National Conferences/ Short-Term Courses attended by the faculty of PEC University of Technology, Chandigarh during the year 2010-2011 is as under:

Sr. No.	Name	Date and Place
1.	Dr. Manoj Datta	Nov. 8-12, 2010 New Delhi
2.	Dr. Satyendra Singh	Dec. 14-18, 2010 IIT Kanpur
3.	Dr. R.R. Singh	Oct. 9-10, 2010 Guwahati
4.	Dr. S.K. Singh	Nov. 8-12, 2010 New Delhi
5.	Dr. S.K. Mangal	Oct. 29-30, 2010, Ludhiana
6.	Ms. Shobhna Dhiman	Dec 26-30, 2010, Manipal, Karnataka
7.	Sh. J.D. Sharma	Nov. 14-16, 2010, Bangalore
8.	Sh. Rakesh Kumar	Dec 27-29, 2010, IIT Kharagpur
9.	Dr. Rintu Khanna	Dec 20-23, New Delhi
10.	Dr. Alakesh Manna	Dec. 27-29, 2010, Khargpur
11.	Dr. Neelu Jain	Dec. 25-26, 2010, Chandigarh
12.	Dr. Satyendra Singh	Jan 3-8, 2011, Kanpur
13.	Dr. Umesh Sharma	Feb 19-20, 2011, Hyderabad
14.	Dr. Sanjeev Kumar	Feb. 2-5, 2011, Bangalore
15.	Dr. P. Thareja	Feb. 11-13, 2011, Chandigarh
16.	Dr. Uma Batra	Feb. 11-13, 2011, Chandigarh
17.	Dr. Vasundhara Singh	Feb. 11-12, 2011, Chandigarh
18.	Dr. Uma Batra	Feb. 23, 2011, Chandigarh
19.	Dr. Siby John	Mar 12-14, 2011, Kottayam, Kerla
20.	Dr. H. Kaur	Feb. 26-28, 2011, Chd.
21.	Sh. Jagdish Kumar	Mar. 26, 2011, Erode, Tamilnadu
22.	Sh. Rakesh Kumar	Mar. 28, April 01, 2011 IIT Kanpur
23.	Dr. R.S. Walia	June 25-29, 2011 IIT Roorkee
24.	Ms. Alka Jindal	June 15 to July 12, 2011, Patiala
25.	Dr. Tarlochan Kaur	June 22-23, Chitkara University
26.	Ms. Sandeep Kaur	June 22-23, Chitkara University
27.	Ms. Shobhna Dhiman	July 13-17, 2011 IIT Roorkee
28.	Ms. Rintu Khanna	July 23, 2011, Chitkara University
29.	Ms. Nipun Checkar	July 28-30, Chitkara University

List of International Conferences attended by the faculty of PEC University of Technology, Chandigarh during the year 2010-11.

<b>Sr. No.</b>	<b>Name</b>	<b>Date and Place</b>
1.	Dr. Tarlochan Kaur	Oct 27-29, 2010 Singapore
2.	Dr. P.J. Singh	Oct 12-15, 2010 USA
3.	Dr. Siby John	May 22-26, 2011, USA
4.	Ms. Puneet Chawla	July 06-08, 2011 London
5.	Dr. P.J. Singh	July 06-08, 2011 London
6.	Dr. Deoraj Prajapati	July 27-29, 2011 Paris
7.	Dr. Neelu Jain	August 27-28, 2011, China

List of QIP/Ph.D Programme/ME/Post Doctorate programmes attended by the faculty during the year 2010-11

<b>Sr. No.</b>	<b>Name</b>	<b>Department</b>	<b>Type of Leave</b>	<b>Date of commencement of leave</b>
1.	Sh. C.S. Jawalkar	Production Engg.	QIP	15.07.2010
2.	Sh. Sarabjit Singh	Mechanical Engg.	QIP	15.07.2010
3.	Sh. S.K. Soni	Mechanical Engg.	QIP	20.07.2010
4.	Sh. Arun Kumar	Electronics and Electrical Communication Engineering	Study leave for PhD at Manchester University	26.07.2010
5.	Ms. Sandeep Kaur	Electrical Engg.	QIP	18.07.2011

## 8. Total Number of Seminars/Workshop Conducted

S. No.	Name of Faculty	Department	Title of Conference/Workshop/ Seminar	Duration	Sponsored By/ Self Finance
1.	Dr. Anju Singla	Applied Science	One day National Seminar on “Entrepreneurship Opportunities and Challenges”	Nov 26 <sup>th</sup> , 2010	Sponsored By SBI, Punjab Infotech
2.	Dr P S Satsangi and Dr D R Prajapati	Mechanical Engineering	Short Term Course on Six Sigma and Research Methodology	Dec 20 <sup>th</sup> – 24, 2010	Self Finance
3.	Dr. Divya Bansal	Computer Science and Engineering	A one day seminar on “Data Protection and Cyber Security”	Dec. 27 <sup>th</sup> , 2010	Self Finance
4.	Dr. Anju Singla	Applied Science	Two day Workshop on “Leadership in Higher Technical Education”	Feb 23 <sup>rd</sup> - 24 <sup>th</sup> , 2011	Institute Financed
5.	Sh R K Mahajan and Sh J D Sharma	Materials and Metallurgical Engineering	Banking and Financial Services, Speakers : Dr V K Gupta (Dy. Managing Director, SBI) and Dr. Neelima Gupta	June 24 <sup>th</sup> , 2011	IIM Chandigarh Chapter and Moonlight Industries, Ludhiana
6.	Dr Shakti Arora and Dr S K Singh	Civil Engineering	National Workshop on “Best Practices of MSW Management in India” (with focus on Chandigarh).	Nov. 03 <sup>rd</sup> , 2011	PEC University of Technology and Chandigarh Administration

## 9. Research Projects    a)    Ongoing    b)    Completed

<b>External Projects</b>							
<b>S. No.</b>	<b>Name of Principal Investigator/ Co-Investigator</b>	<b>Department</b>	<b>Title of the Project</b>	<b>Year of Sanction</b>	<b>Sponsored by</b>	<b>Amount (in Lakhs)</b>	<b>Ongoing/ Completed (year of completion )</b>
1.	Ms. Sarita Singla	Civil Engineering	Experimental study of mechanical behaviour and durability of HPC	2006	AICTE	9.80	Ongoing
2.	Dr. L.N Sharma	Applied Sciences	Spatio-Temporal Monitoring Of A Glacier Using Satellite Remote Sensing and Luminescence	2007	DST	101.0	Ongoing
3.	Dr. Siby John	Civil Engineering	Assessment of geochemical parameters of ground water in Chandigarh	2007	DST	2.70	Ongoing
4.	Dr. Divya	Computer Science and Engg.	Design and development of dependable secure and efficient protocols for wireless mesh network	2009	DIT	46.64	Ongoing
5.	Dr. Arun K Lal	Mechanical Engineering	Establishment of new national MEMS Design Centre	2009	IISC, Bangalore	11.16	Ongoing
6.	Dr. T.K Jindal	Aeronautical Engineering	Design and Development of pulse detonation propulsion system test Rig	2009	TBRL	8.0	Ongoing
7.	Dr. Siby John	Civil Engineering	Monitoring and performance evaluation of STP at Raipur Khurd, Chandigarh	2010	Engineering Deptt. Chandigarh Administration	1.0	Ongoing
8.	Dr. R. S Walia	Production Engineering	Investigation of Hybrid Abrasive Flow Machining	2010	Institute of Engineers	23	Ongoing
9.	Dr. R. S Walia	Production Engineering	U.S Space Centre Moon buggy April, 2011	2011	DST, Chd. Admn., Govt. of Punjab	10.62	Completed 2011

**In-House Projects ( Sponsored by PEC University of Technology)**

<b>S. No.</b>	<b>Name of Principal Investigator/ Co-Investigator</b>	<b>Department</b>	<b>Title of the Project</b>	<b>Year of Sanction</b>	<b>Amount ( in lakhs)</b>	<b>Ongoing/ Completed (year of completion)</b>
1	Dr. Neena Gupta, Ms. Divya, Ms. Amita Soni	Electronics and Electrical Communication Engineering	Optical Communication System Design	2006	11.0	Completed in 2010
2.	Dr. Narendra Mohan	Production Engineering	Development of submerged arc welding fluxes	2006	10.0	Ongoing
3.	Dr. Uma Batra	Materials and Metallurgical Engineering	Establishment of state of the art lab-Material characterization lab	2006	20.0	Ongoing
4.	Sh. J.D.Sharma	Materials and Metallurgical Engineering	Development of ADI and its commercialization	2006	5.0	Ongoing
5.	Dr. T.K Jindal	Aeronautical Engineering	Centre for Research and Promotion of Non-Conventional Energy Sources	2006	1.0	Ongoing
6.	Dr. Uma Batra	Materials and Metallurgical Engineering	Enhancement of mechanical properties and biocompatibility of hydroxyapatite ceramic using sintering additives	2008	14.0	Ongoing
7.	Dr. S.KMangal	Mechanical Engineering	To set up semi active vibration control facility	2008	17.0	Ongoing
8.	Ms.Jyoti Kedia	Electronics and Electrical Communication Engineering	VLSI Design Lab	2008	12.0	Ongoing
9.	Dr. S K Singh	Civil Engineering	Geotechnical computational facility	2008	16.0	Completed 2010
10.	Dr. Sanjeev Kumar Dr. D.R Prajapati	Mechanical Engineering	Improving the Surface Properties of Important Die Steel Materials by Electrical Discharge Machining	2009	17.75	Ongoing
11.	Dr. Divya Dr. Sanjeev Sofat	Computer Science and Engineering	Wireless Sensor Networks Research Facility	2009	12.0	Ongoing
12.	Dr. Satyendra Singh Dr. Vasundhara Singh	Applied Science	Synthesis and Characterization of Nano-structured Materials for Memory Application and	2009	23.5	Ongoing

			Catalysis			
13.	Sh. Nagendra Sah Dr. Neelam R Prakash Ms. Jasbir Kaur	Electronics and Electrical Communication Engineering	Wireless Design and Planning Facility	2010	14.0	Ongoing
14.	Dr. R.S. Walia Dr. N.M Suri	Production Engineering	Developing Hybrid EDM Process	2010	23.0	Ongoing
15.	Sh. V. Rihani Dr. Neelu Jain	Electronics and Electrical Communication Engineering	Establishment of Facility for Embedded Systems	2010	20.5	Ongoing
16.	Dr. Divya Dr. Sanjeev Sofat	Computer Science and Engineering	Password Recovery Facility	2010	20.0	Ongoing
17.	Sh. Rakesh Kumar Sh. Kishori Lal	Aeronautical Engineering	Installation of Supersonic Open-jet Wind Tunnel with Data Acquisition System	2010	20.0	Ongoing
18.	Dr. Parveen Kalra Dr. R.S. Walia	Production Engineering	Ergonomics Evaluation of Industrial Systems and Consumer Products	2010	25.0	Ongoing

## 10. Patents Generated: NIL

## 11. New Collaborative Research Programmes

S.No.	Collaborating Agency	Area of Collaboration	Year of Collaboration and present status
1	Philips India Limited (List of rest of existing ongoing collaborations attached alongwith Annexure for reference of ongoing collaboration activity).	Innovation in technology	Started in September 2008 and further new projects started in September 2010
2.	Cyber Security and Research Centre	Information Security, Project Research	2007 (In force)
3.	Central Scientific and Research Organisation (CSIO), Sector-30, Chandigarh	Collaborative Research, Training and Academics	2008 (In force)
4.	Philips India Limited	Collaborative Research and Industrial Projects	2008 (In force)
5.	ABB Limited, India	Robotics Design	2009 (In force)
6.	Mohali Industrial Association	Industry Interface and industrial trainings	2009 (In force)
7.	PEC PECOSA Collaborations	Upgradation of Academic Curriculum and to initiate new collaborations	2009 (In force)
8.	PEC-IBM MoU	Advances in R&D to fulfill industry institute gap	2010 (In force)
9.	New Jersey Institute of technology (NJIT), USA	Academic and student exchange	2011 (In force)



## 12. Research Grants Received From Various Agencies

<b>Sr. No</b>	<b>Principal Investigator / Co-Investigator</b>	<b>Title of Research Project</b>	<b>Funding Agency</b>	<b>Amount (Rs in Lacs)</b>
1.	Dr. L.N Sharma	Spatio-Temporal Monitoring Of A Glacier Using Satellite Remote Sensing and Luminescence	DST	101.00
2.	Ms. Sarita Singla	Experimental study of mechanical behaviour and durability of HPC	AICTE	9.80
3.	Dr. Siby John	Assessment of geochemical parameters of ground water in Chandigarh	DST	2.70
4.	Dr. Divya	Design and development of dependable secure and efficient protocols for wireless mesh network	DIT	46.64
5.	Dr. Arun K Lal	Establishment of new national MEMS Design Centre	IISC, Bangalore	11.16
6.	Dr. Siby John	Monitoring and performance evaluation of STP at Raipur Khurd, Chandigarh	Engineering Department Chandigarh Administration	1.00
7.	Dr. T.K Jindal	Design and Development of pulse detonation propulsion system test Rig	TBRL	8.00
8.	Dr. R. S Walia	U.S Space Centre Moon buggy April, 2011	DST, Chandigarh Administration, Govt. of Punjab	10.62

### 13. Details of Research Scholars

S No.	SID	Name	Department	Supervisor(s)	Year of Admissions	Title of PhD Thesis
1.	073002	Anita Rani Singla	Applied Science	Dr.Harminder Kaur	2007	Potentiometric studies on the complexes of $\text{Co}^{2+}$ , $\text{Ni}^{2+}$ , $\text{Cu}^{2+}$ , $\text{Zn}^{2+}$ , $\text{Cd}^{2+}$ , $\text{Sn}^{2+}$ , $\text{Hg}^{2+}$ and $\text{Pb}^{2+}$ with some novel drugs and fatty acids.
2.	073027	Rajesh .S	Applied Science	Dr.M.L.Gupta	2007	Impact of leadership behavior and organizational climate on employee commitment: A study of small scale enterprises in Delhi.
3.	073014	Radhe Shyam	Applied Science	Dr.Harminder Kaur Dr.R.Amutha	2007	Adsorptive Removal of toxic metals and organics by fly ash and other low cost adsorbents from aqueous solution.
4.	083002	Jatinder Kaur	Applied Science	Dr.Prem Lata	2008	Development of thermally stable insensitive high explosive compositions for futuristic Armament Stores.
5.	083004	Gulshan Kumar	Applied Science	Dr.Vasundhara Singh	2008	New Synthetic Approaches towards sphingolipids and related compounds.
6.	083005	Rajni Ratti	Applied Science	Dr.Vasundhara Singh	2008	Synthesis of ionic liquid clay based recyclable and recoverable catalytic systems.
7.	0930102	Gurpreet Kaur	Applied Science	Dr.Vasundhara Singh	2009	New Synthesis Methodologies for Potentially Bioactive Heterocycles.
8.	0930103	Renu Lamba	Applied Science	Dr.M.L.Gupta	2009	Indian financial inclusion drive through microfinance: A comparative study of MFIs and RRBs in the states of Punjab, Haryana and Himachal Pradesh.
9.	0930104	Upendra Tiwari	Applied Science	Dr.M.L.Gupta	2009	Title not yet decided
10.	0930105	Kanav	Applied Science	Dr.Harminder	2009	Synthesis Characterization

		Dhir		Kaur Dr.Jaspreet Kaur		and biological activity of diorgans and triorganotin (iv) complexes with some ligands.
11.	0930106	Anuskh a Sagwan	Applied Science	Dr.Anju Singla	2009	Impact of organizational culture on employees attrition: A study of IT industry in Punjab and Chandigarh.
12.	10301001	Naveen Kumar Gupta	Applied Science	Dr.Vansundhar a Singh	2010	Synthesis of Photo catalytic nano materials.
13.	11301001	Arpana Garg	Applied Science	Dr.Sucheta	2011	Title not yet decided
14.	11301002	Munish Kapila	Applied Science	Dr.M.L.Gupta	2011	Title not yet decided
15.	11301003	Parul Grover	Applied Science	Dr.Anju Singla	2011	Title not yet decided
16.	11301004	Pavitra Dhamij a	Applied Science	Dr.Anju Singla	2011	Title not yet decided
17.	11301005	Preeti Nandal	Applied Science	Dr.Vasundhara Singh	2011	Title not yet decided
18.	11301008	Satbir Singh	Applied Science	Dr.Asha Goel	2011	Title not yet decided
19.	11301009	Satwant Kaur Sahi	Applied Science	Dr.Vasundhara Singh	2011	Title not yet decided
20.	11301010	Shivani Gupta	Applied Science	Dr.Anju Singla	2011	Title not yet decided
21.	11301011	Sudhir Pujara	Applied Science	Dr.Sucheta	2011	Title not yet decided
22.	11301012	Kamal Kishore	Applied Science	Dr.Asha Goel	2011	Title not yet decided
23.	11301014	Akansh a Kapila	Applied Science	Dr.Harminder Singh	2011	Title not yet decided
24.	11301015	Amanp reet Longia	Applied Science	Dr.Vasundhara Singh	2011	Title not yet decided
25.	073003	Ashwa ni Kumar	Mechanical Engg.	Dr.S.K.Mangal	2007	Performance Analysis of Magneto-rheological Dampers.

26.	073007	Harlal Singh Mali (Degree Completed)	Mechanical Engg.	Dr.A.Manna	2007	An Experimental investigation on abrasive flow finishing of Al/SiCp-MMC.
27.	073010	Jujhar Singh	Mechanical Engg.	Dr.P.S.Satsangi Dr.R.S.Walia Dr.V.P.Singh	2007	Investigation of Ultrasonic assisted electric discharge machining performance.
28.	073013	Neeraj Singhal	Mechanical Engg.	Dr.R.S.Walia	2007	Title not yet decided
29.	073015	Rajesh Kumar	Mechanical Engg.	Dr.P.Kalra Dr.Arun K.lall	2007	Physiological Evaluation of Manual Handling of Low Loads at high Frequency.
30.	073019	Tejbir Kaur	Mechanical Engg.	Dr.V.P.Singh	2007	Title not yet decided
31.	073025	Anoop Kumar Singh	Mechanical Engg.	Dr.V.P.Singh Dr.Sanjeev Kumar	2007	Improving the Surface Properties of Super alloys by Electrical Discharge Machining Process.
32.	073026	Arindam Ghoshal	Mechanical Engg.	Dr.A.K.Lall Dr.A.Manna	2007	An Investigation on thermal behavior and optimization of parameter during ND:YAG laser cutting of Al/10vol%SiC-MMC.
33.	073029	Rakesh Kumar	Mechanical Engg.	Dr.S.K.Mangal	2007	Title not yet decided
34.	073030	Sanjay Kumar Kaushik	Mechanical Engg.	Dr.P.S.Satsangi	2007	Title not yet decided
35.	073031	Sushil Kumar	Mechanical Engg.	Dr.P.S.Satsangi Dr.D.R.Prajapati	2007	Application of Six Sigma Methodology for improved performance in Manufacturing industries-A case study.
36.	0930901	Harjinder Singh Pannu	Mechanical Engg.	Dr.D.R.Prajapati Dr.Sanjeev Kumar	2009	Title not yet decided
37.	0930902	Harry Garg	Mechanical Engg.	Dr.Arun.K.Lall	2009	Title not yet decided
38.	0930903	K.Z.Molla	Mechanical Engg.	Dr.A.Manna	2009	Experimental investigation Electrochemical Grinding of Al/ (Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> )-MMC.

39.	0930904	Sukhraj singh	Mechanical Engg.	Dr.D.P.Prajapti	2009	Design of Quality Control Chart for Auto correlated Data.
40.	0930906	Balraj Singh Brar	Mechanical Engg.	Dr.V.P.Singh Dr.R.S.Walia	2009	Study of Hybrid Abrasive Flow Machining Processes.
41.	10309001	Aman Kumar	Mechanical Engg.	Dr.P.S.Satsangi Dr.Perminder.J.Singh	2010	Title not yet decided
42.	10309002	Amit Kumar Tanwar	Mechanical Engg.	Dr.D.R.Prajapati Dr.Perminder.J.Singh	2010	Title not yet decided
43.	10309003	Mukesh Verma	Mechanical Engg.	Dr.A.Manna	2010	Title not yet decided
44.	10309004	Majid Mehra	Mechanical Engg.	Dr.V.P.Singh	2010	Title not yet decided
45.	11309001	Amoljeet Singh Gill	Mechanical Engg.	Dr.Sanjeev Kumar	2011	Title not yet decided
46.	11309002	Bhanupratap Singh	Mechanical Engg.	Dr.Arun.K.Lall	2011	Title not yet decided
47.	11309003	Karanpreet Bhopra	Mechanical Engg.	Dr.P.S.Satsangi	2011	Title not yet decided
48.	11309004	Rajwinder Singh	Mechanical Engg.	Dr.V.P.Singh	2011	Title not yet decided
49.	11309005	Amit Thakur	Mechanical Engg.	Dr.A.Manna	2011	Title not yet decided
50.	11309006	Jaspreet Hira	Mechanical Engg.	Dr.A.Manna	2011	Title not yet decided
51.	11309008	Abhishhek Chauhan	Mechanical Engg.	Dr.Sanjeev Verma	2011	Title not yet decided
52.	11309009	Bidyut Kumar Panda	Mechanical Engg.	Dr.Sanjeev Verma	2011	Title not yet decided

53.	09301101	Jagjit Singh Randhawa	Production Engg.	Dr.N.M.Suri	2009	Development of Fluxes for Submerged ARC welding of Stainless Steel.
54.	09301102	Raman deep Singh	Production Engg.	Dr.R.S.Walia	2009	Development and Investigation in centrifugal magnetic force assisted abrasive flow Machining Process.
55.	09301103	Sukhwinder Singh Bhullar	Production Engg.	Dr.P.Kalra	2009	Title not yet decided
56.	10310001	Jaswinder Singh	Production Engg.	Dr.Parveen Kalra/Dr.R.S.Walia	2010	To study the Impact Lifting Tasks on Indian Workers.
57.	10310002	Rahul O.Vasihya	Production Engg.	Dr.R.S.Walia/ Dr.P.Kalra	2010	Title not yet decided
58.	10310003	Jitender Kumar	Production Engg.	Dr.N.M.Suri	2011	Title not yet decided
59.	11308001	Gurpreet Singh Phull	Production Engg.	Dr.R.S.Walia	2011	Title not yet decided
60.	11308002	Arvind Kumar	Production Engg.	Dr.P.Kalra	2011	Title not yet decided
61.	11308003	Shamsher Singh Bargujer	Production Engg.	Dr.N.M.Suri/D r.R.M.Balokar	2011	Title not yet decided
62.	11308004	Vikas Bhardwaj	Production Engg.	Not yet decided	2011	Title not yet decided
63.	073005	Deepak Bhutani	Production Engg.	Dr.R.S.Walia/ Dr.Nagendra Mohan	2007	Study of Magnetic Abrasive Finishing Process.
64.	073001	Ajay Mittal	Computer Science and Engg.	Dr. Sanjeev Sofat	2007	A Stereo-Vision based obstacle detection technique for navigation.
65.	073006	Divya Bansal	Computer Science and Engg.	Dr.Sanjeev Sofat	2007	Design of framework for dependable, secure and efficient protocols for wireless mesh networks.

66.	083001	Nidhi Gautam	Computer Science and Engg.	Dr.Sanjeev Sofat Prof.Renu Vig	2008	Energy Efficient Data Dissemination Scheme in Wireless Sensor Networks.
67.	0930501	Manavjeet Kaur	Computer Science and Engg.	Dr.Sanjeev Sofat	2009	Design of a Multibiometric System using Fuzzy vault Template Security Technique.
68.	10305001	Kailash Kumar	Computer Science and Engg.	Dr.Sanjeev Sofat	2010	Title not yet decided
69.	073008	Jaimala Ghambhir	Electrical Engg.	Dr.Tilak Thakur	2007	Smart Grid Integration with Dfig Wind Power Plants for Flexible Power Network Operation.
70.	073017	Rashmi Vikal	Electrical Engg.	Dr.Shiv Narayan	2007	Design of Two Degrees of Freedom Controllers Using Evolutionary Algorithms
71.	10306001	Preeti Gupta	Electrical Engg.	Dr.Shiv Narayan	2010	Title not yet decided
72.	11306001	Abhishek Ghandhar	Electrical Engg.	Dr.Balwinder Singh	2011	Title not yet decided
73.	11306002	Ashu Valecha	Electrical Engg.	Dr.Shiv Narayan	2011	Title not yet decided
74.	11306003	Bhawana Tandon	Electrical Engg.	Dr.Shiv Narayan	2011	Title not yet decided
75.	11306004	Puneet Chawla	Electrical Engg.	Dr.Balwinder Singh	2011	Title not yet decided
76.	11306005	Reminder Kaur	Electrical Engg.	Dr.Tarlochan Kaur	2011	Title not yet decided
77.	11306006	Sulata Bhandari	Electrical Engg.	Dr.Tilak Thakur	2011	Title not yet decided
78.	11306007	Surbhi Bakshi	Electrical Engg.	Dr.Tilak Thakur	2011	Title not yet decided
79.	11306008	Kamal Kant Sharma	Electrical Engg.	Dr.Balwinder Singh	2011	Title not yet decided
80.	11306009	Shimi.S.L.	Electrical Engg.	Dr.Tilak Thakur Dr.Jagdish Kumar	2011	Title not yet decided
81 .	0830601	Inderpreet Kaur	E& EC. Engg.	Dr.Neena Gupta	2008	Performance Modeling of Hybrid Fiber Amplifier for DWDM Systems
82.	0830602	Shilpa Jindal	E& EC. Engg.	Dr.Neena Gupta	2008	A Novel 3 D Coding Technique for Performance Evaluation of OCDMA Systems

83.	0830603	Sukhwinder Singh	E& EC. Engg.	Dr. Neelam Rup Parkash.	2008	A Novel approach to extract and enhance the edges of noisy grey scale images.
84.	0930701	Divya	E& EC. Engg.	Dr. Neena Gupta	2009	An Efficient Coded OFDM Based Transmission Scheme for High Speed Optical Communication System
85.	0930702	Pamela Chawla	E& EC. Engg.	Dr. Deepak Bagai	2009	Title not yet decided
86.	0930703	Rita Mahajan	E& EC. Engg.	Dr. Deepak Bagai	2009	An Improved Learning Scheme for Cognitive Radio Engine Using Artificial Neural Networks
87.	10307005	Nagendra Sah	E& EC. Engg.	Dr. Neelam Rup Parkash	2010	Title not yet decided
88.	10307001	Gurpadam Singh	E& EC. Engg.	Dr. Neelam Rup Parkash	2010	Title not yet decided
89.	10307004	Kadam Vashist	E& EC. Engg.	Dr. Neena Gupta	2010	Title not yet decided
90.	10307003	Jyoti Kedia	E& EC. Engg.	Dr. Neena Gupta	2010	Title not yet decided
91.	10307002	Jasbir Kaur	E& EC. Engg.	Dr. Neelam Rup Parkash	2010	Title not yet decided
92.	0930201	Vandana Kansal	Aerospace Engg.	Dr. Tejinder Kaur Jindal	2009	Design optimization of an energy efficient wind turbine for high altitude areas and formulizing the guidelines for commercialization of technology.
93.	11301102	Tamanna	Materials and Metallurgical Engg.	Dr. Uma Batra	2011	Title not yet decided
94.	11301103	Ravinder Pal Singh	Materials and Metallurgical Engg.	Dr. Uma Batra	2011	Title not yet decided
95.	073027	Arman Singh	Civil Engg.	Dr. A.M. Kalra	2007	Title not yet decided
96.	083003	Sarita Singla	Civil Engg.	Dr. N.P. Devgan	2008	Title not yet decided
97.	0830301	Kewel Krishan Gupta	Civil Engg.	Dr. A.M. Kalra	2008	Title not yet decided
98.	0930301	Anil Kumar Sharma	Civil Engg.	Dr. Umesh Sharma	2009	Title not yet decided



99.	0930303	Karuna Sharma	Civil Engg.	Dr.Umash Sharma	2009	Development of Framework for Evaluation of various Capacity Enhancement Techniques for an Urban City.
100.	10302001	Mahesh Kumar	Civil Engg.	Dr.Tripta Goyal	2010	Development of integrated quality assurance Model upgradation for Highways
101.	10302002	Sunil Bhardwaj	Civil Engg.	Dr.S.K.Singh	2010	Title not yet decided
102.	11303002	Natraj Singh	Civil Engg.	Dr.N.P.Devgan	2011	Title not yet decided
103.	11303001	Maninder Kaur	Civil Engg.	Dr.Siby John	2011	Title not yet decided
104.	11303004	Uma Malik	Civil Engg.	Dr.A.M.Kalra	2011	Title not yet decided
105.	11303005	Nirpinder Jain	Civil Engg.	Not yet decided	2011	Title not yet decided
106.	11303006	Hitender Kumar	Civil Engg.	Dr.Pardeep kumar	2011	Title not yet decided
107.	11303007	Harpreet Singh	Civil Engg.	Dr.S.K.Singh	2011	Title not yet decided

## 14. Citation Index of Faculty Members and Impact Factor

### Publications of Faculty members

S. No.	Name of Faculty	Details of Publications	Citation Index	Impact Factor
1	Dr. T K Jindal	“Performance Analysis of a Free Piston Displacer Miniature Stirling Cryolooler” Proc Ingternational Cryogenic Engineering Conference ICEC-ICM2010, pp 93-99, 2011	Not known	Not known
2	Mr. Radhey Sham, Dr. T K Jindal, Mr. B S Babla	“Cryogenic processes- A review”, International Journal of Engg. Science and Technology, Vol. 1 Jan, 2011 pp 601-609	Not known	Not known
3	Mr. Radhey Sham, Dr. T K Jindal, Mr. B S Babla	“Thermodynamic analysis of free piston free displacer miniature cryocooler with real processes” International Journal of Engg. Science and Technology, Vol. 1 Jan, 2011 pp 464-470	Not known	Not known
4	Mr. Radhey Sham, Dr. T K Jindal, Mr. B S Babla	“Non Conventional – Energy Cooling for Rural Development” Published in International Journal of Theoretical and Applied Mechanics (IJTAQM) ISSN 0973-6085 Volume 6, Number 1 (2011) pp. 83-88	Not known	Not known
5	Alka Jindal	Contrast of Watermarking techniques in different domains IJCSI	Not known	0.242
6	Rupali Verma	International Journal of Computational Intelligence and Information Security, Sept. 2011 vol. 2 No. 9.	Not known	Not known
7	Dr Ranjeet Sehmi, RJ Hans Gill and Madhu Raka	“Estimates on conjectures of Minkowski and Woods” Indian Journal of Pure and Applied Mathematics, 41(4) 595-606, Aug 2010 ISSN 0019-5588 (Springer)	Not known	0.254
8	Dr Ranjeet Sehmi, RJ Hans Gill and Madhu Raka	“On conjectures of Minkowski and Woods for n=8”, Acta Arithmetica, 147.4(2011) 337-385. ISSN 0065-1036 ( ) 1730-6264(e) (Polish Academy of Sc.)	Not known	0.496
9	Dr H Kaur, R Amutha and Radhe Shyam	Utilization of Melia azedarach fruit based adsorbents for the removal of heavy metal ions from waste water. Asian Journal of Research in Chemistry. 4(11): 1772-1776, Nov, 2011	Not known	5.10
10	Dr H Kaur, R Amutha and Radhe Shyam	Influence of acid treatments of sugarcane bagasse carbon sample on the adsorption of Cu(II) and Pb (II) from aqueous solution. Asian Journal of Research in Chemistry. Vol.4,1668-1684, Nov 2011	Not known	5.10
11	Vasundhara Singh,	(S)- Garner aldehyde derived Baylis-Hilman	Not known	1.0

	Gulshan Kumar and Sukhbir Kaur	adduct:a substrate for the synthesis of a lactone ceramide analogue via a sequential Heck reaction. ARKIVOC 2011(x) 148-159		
12	Vasundhara Singh, Gulshan Kumar, Sukhbir Kaur and Jasvinder Singh	An improved methodology for synthesis of new Ugi adducts and its application in combinatorial synthesis. ARKIVOC Jan 2011, Page 151-160	Not known	1.0
13	Vasundhara Singh, Gulshan Kumar and Sukhbir Kaur	Efficient synthesis of styryl analogue of (2S,3R,4E)-N2-Octa decanoyl-4-tetradecasphingenine in a cross metathesis reaction. HELVETICACHEMICA ACTA VOL 94(4).April 2011,650-655	Not known	1.2
14	Vasundhara Singh, Rajni Ratti and Sukhbir Kaur	Synthesis and characterization of recyclable and recoverable MMT-clay exchanged ammonium tagged carbapalladacycle catalysts for Mizoroki-Heck and Sonogashira reactions in ionic liquid media. J.Mol.Cat.A Vol 334 (1-2), Jan 2011.page 13-19	Not known	3.0
15	Vasundhara Singh, Rajni Ratti, Sukhbir Kaur and Michael Vaultier	Preparation, Characterisation and catalytic activity of MMT-Clay exchanges Sulphonic Acid Functionalised ionic liquid for transesterification of $\beta$ -Ketoesters. Vol 11, Issue 6,20 Feb 2010, pages:505-507	Not known	3.0
16	Prem Lata, Jatinder Kaur, V.P.Arya	Determination of solvent contamination and characterization of ultrafine HNS particles after solvent recrystallization. International journal of 'Propellants, Explosive and Pyrotechnic'. 35,487-493,2010	Not known	0.992
17	Divya Bansal, Sanjeev Sofat	"Beacon Spoofing Attack: Impact and Security in Wireless Mesh Networks", CiiT International Journal of Wireless Communication, Pring: ISSN 0974- 9756 and Online: ISSN 0974-9640, June 2011	Not known	0.572
18	Nagender Shah, Dr. Neelam Rup Prakash	Implication of Propagation Modeling in Coverage Prediction" in the international Journal of Computer Science and technology (IJCST), Vol 1,1, 1SEP,2010 Page No. 41-44, ISSN: 0976-8491 (Online)	Not known	Not known
19	Dr. Neelam Rup Prakash	"Improvement in Spectrum Sensing by Locally Optimal Detection Techniques in Cognitive Radio, IFRSA International Journal of Computing, Vol, 1 PP. 504-509, 2011	Not known	Not known
20	Dr. Neelam Rup Prakash	"An Efficient Implementation of Low Power Logic Functions using Novel GDI Cells", CIIT International Journal of Programmable	Not known	0.492

		Device Circuits and Systems, Vol-3, No 6, PP292-296, May 2011		
21	Dr. Neelam Rup Prakash	“ Dimensional Analysis and Segmentation of touching rice grains”, IFRSA International Journal of Digital image processing, Vol 2, No 7, pp 189-193	Not known	0.652
22	Dr. Neelam Rup Prakash	Automatic Segmentation of Touching Rice Grain Using Image Processing, CIIT International Journal of Digital image processing, Vol 2, No 7, pp 203-206	Not known	0.652
23	Dr. Neelam Rup Prakash	“An Enhanced Method for Period-3 Based Exon and Gene Prediction”, CIIT International Journal of Fuzzy Systems, Vol 2, No 2, pp 19-27	Not known	0.441
24	Dr. Neelam Rup Prakash	“An Efficient Implimentation of Oversampled Cosine Modulated Trans Multiplexers” , International journal of advanced Engineering and Applications, pp 310-315	Not known	0.572
25	Dr. Neelam Rup Prakash	“Implication of Propagation Modelling in Coverage Prediction” International Journal Of Computer Science and Technology, Lets Talk Innovative, Vol. 1, PP. 41-44	Not known	0.656
26	Dr. Neena Gupta, Ms.DivyaDhawan	“Implementation of DGE for Performance Optimization of Hybrid Fiber Amplifiers” International Journal of Computer Science and Technology IJCST, pp 45-47, (ISSN: 0976-8491, ISSN: 2229-4333 (Print)) Vol. 1, Issue 1, September 2010	Not known	Not known
27	Dr. Neena Gupta	Realization of All-optical NOR gate at 10-Gb/s by cascading OR and NOT gates” CIIT Journal of Programmable Devices and Circuits, vol. 3. No. 6, May 2011 Print: ISSN 0974 – 973X and Online: ISSN 0974 – 9624	Not known	0.492
28	Jyoti Kedia, Dr. Neena Gupta	“High Performance Electrical and Optical Interconnects”, CIIT International Journal of Programmable Device Circuits and Systems, July 2011	Not known	0.492
29	Jyoti Kedia, Dr. Neena Gupta	“On-Chip Optical Interconnects: A Viable Approach, IJCSET, Feb 2011, Vol 1, Issue 1,58-61, ISSN: 2231-0711	Not known	Not known
30	Dr. Neena Gupta, Ms.DivyaDhawan	“Performance Analysis of Pseudo-Orthogonal Codes at 10 Gbps for 16 users in Free Space”, CIIT International Journal of Networking and Communication Engineering, Print: ISSN 0974 – 9713 and	Not known	0.569

		Online: ISSN 0974 – 9616 ,DOI:NCE052011011, May 2011		
31	Ms.DivyaDhawan, Dr. Neena Gupta	“ Performance Improvement of Triple Play Services in FTTH/BPON using OFDM”, CIIT International Journal of Networking and Communication Engineering, Vol 3, No 8, June 2011 pp 538-543, ISSN 0974 – 9713 and Online: ISSN 0974 – 9616	Not known	0.569
32	Dr. Neena Gupta, Ms.DivyaDhawan	“Design and Comparative Analysis ,of FSO link by using CW laser” accepted for International Journal of Computer Science and Technology (IJCST), ISSN : 0976 – 8491 (Online), ISSN : 2229 – 4333 (Print), 2011	Not known	Not known
33	Dr. Neena Gupta, Ms.DivyaDhawan	“Design and Comparative Analysis of Free Space link with Optical CDMA Pseudo-orthogonal (PSO) “Flattened Matrix Code” at 10 Gbps”, accepted for Publication in International Journal of Mobile and Adhoc Network (IJMAN)ISSN (Online) 2231–6825, ISSN (Print) 2249-202X, 2011	Not known	Not known
34	Dr. Neena Gupta, Ms.DivyaDhawan	“Implementation of SOA-based All-Optical and and OR Gates at 10-Gb/s”. accepted for International Journal of Computer Science and Technology (IJCST), ISSN : 0976 – 8491 (Online), ISSN : 2229 – 4333 (Print), 2011	Not known	Not known
35	Dr. Neena Gupta	“A Complete survey on Erbium Doped Fiber Amplifier Optimization” The World Congress on Engineering 2011 (WCE 2011) 6-8 July, 2011 at London,U.K.,Paper ID- ICEEE_9	Not known	Not known
36	Dr. Neena Gupta	“An Efficient Model of Hybrid Fiber Amplifier for Gain Enhancement” International Conference for Future Challenges in Wireless Communications, Optical Communications and Networks” Nov 27 -29, 2010, Chandigarh. Paper ID: IC07, pp 32-35, Organizer-IEI, Supported By World Federation of Engineering Organizations(WFEO), The Federation of Engineering Institutes of South and Central Asia(FEISCA)	Not known	Not known
37	Dr. Neena Gupta	“Optimization of Solar Energy Using EDFA” International Conference for Future Challenges in Wireless Communications,	Not known	Not known

		Optical Communications and Networks” Nov 27 -29, 2010, Chandigarh. Paper ID: IC08, pp 36-39, Organizer-IEI, Supported By World Federation of Engineering Organizations(WFEO), The Federation of Engineering Institutes of South and Central Asia(FEISCA)		
38	Dr. Neena Gupta	“Statistical Analysis of Gain Flattening Components for Hybrid Amplifiers”10th International Conference on Numerical Simulation of Optoelectronic Devices, NUSOD2010, 6th -9th September, 2010, at Georgia Atlanta(US) , Paper ID- MP10, pp- 17-18. Organizer-IEEE Photonics Society,NJ, IEEE Catalog No. CFP10817- PRT, ISBN: 978-1-4244-7015-0, © 2010 IEEE	Not known	Not known
39	Dr. Neena Gupta	“Effective and Efficient Conversion of Solar Energy Using Hybrid Optical Amplifier” 10th International Conference on Clean Energy, ICCE 2010, 15th -17th September, at the Salamis Bay Conti Hotel, Famagusta, N. Cyprus, Paper Reference # 5-16, Organized by; the Energy Research Centre (ERC) of Eastern Mediterranean University, in cooperation with Clean Energy Research Institute (CERI) of University of Miami and International Association for Hydrogen Energy (IAHE)	Not known	Not known
40	Dr. Neena Gupta	“Simulating Gain Optimization with Simulation Hybrid Amplifier Using TFF,” accepted for International Conference on Electrical and Communication Engineering, ICECE 2010,at Singapore 25th -27th August, Paper ID Code:SG69560, The Refereed Conference Proceedings is (ISSN: 2070- 3740 and ISSN: 2070-3724) reviewed and indexed by Thomson Reuters ISI, SCIRUS, Google Scholar, Engineering Index (Compendex), EBSCO, GALE, DOAJ, INTUTE, Scientific Commons and Electronic Journals Library), organized by WASET (World Academy of Science, Engineering and Technology)	Not known	Not known
41	Dr. Neena Gupta	“Impact of Length of Erbium on Gain of EDFA” accepted for International	Not known	Not known

		Conference on Communication Systems and Computer Networks, ICCCN 2010, at Singapore 25th -27th August, Paper ID Code:SG69000. The Refereed Conference Proceedings is (ISSN: 2070-3740 and ISSN: 2070-3724) reviewed and indexed by Thomson Reuters ISI, SCIRUS, Google Scholar, Engineering Index (Compendex), EBSCO, GALE, DOAJ, INTUTE, Scientific Commons and Electronic Journals Library), organized by WASET (World Academy of Science, Engineering and Technology)		
42	Dr. Neena Gupta, Ms.DivyaDhawan	Implementation of SOA-based All-Optical Nand Gate, International Conference on Transparent Optical Networks	Not known	Not known
43	Dr. Neena Gupta, Ms.DivyaDhawan	“Design of SOA-based All-Optical Nand Gate at 10 Gbps”. accepted for International Conference on Wireless Networks and Embedded Systems, WECON 2011 at Chitkara University, Rajpura, Punjab, 18-20 July 2011	Not known	0.29
44	Dr. Neena Gupta, Ms.DivyaDhawan	“Performance Analysis of Free Space optical Systems - A Review”, accepted for International Conference on Wireless Networks and Embedded Systems, WECON 2011 at Chitkara University, Rajpura, Punjab, 18-20 July 2011	Not known	0.29
45	Dr. Neena Gupta, Ms.DivyaDhawan	“Parameters Affecting Free Space Optics System”, accepted in National Conference on VLSI, Embedded Systems, Signal Processing and Communication Technologies (NCVESCO), Chennai, April 7-8, 2011	Not known	0.97
46	Dr. Neena Gupta	<b>Book chapter</b> , “Hybrid fiber amplifier” accepted for publication in the book “optical communication systems” ISBN 979-953-30-230-1 by IN-TECH Publishers (Europe).	Not known	Not known
47	Nagender Shah	“Soil Testing using Avr Microcontroller”, in the proceeding of National Conference of Futuristic Application in Electronics Engg. (NCFCEE-11) organised by institute of Information Technology and supported by IETE Pune, March 10-11,2011, Page 226-229	Not known	Not known
48	Nagender Shah	“Controlling of Irrigation Valve Through Mobile Using GSM Modem”, in the proceeding of National Conference of	Not known	Not known

		Futuristic Application in Electronics Engg. (NCFAEE-11) organised by institute of Information Technology and supported by IETE Pune, March 10-11,2011, Page 1-5		
49	Jasbir Kaur	Comparative Analysis of AWGN channel for DAB System IJCEA July 2011	Not known	Not known
50	Jasbir Kaur	Assessment of Routing Protocols for wireless sensor network, National conference of emerging trends in Electronics and Comm, engg. April 2011	Not known	Not known
51	Jasbir Kaur	Improved LEACH Protocol for wireless sensor Networks, WICOM 2011	Not known	Not known
52	Amita Soni	“Error probability of linear and Adaptive linear Multiuser detection”, Journal of information and communication Technologies.	Not known	Not known
53	Harlal Singh Mali, A. Manna	Optimum selection of abrasive flow machining conditions during fine finishing of A1/15wt% SiC-MMC using Taguchi method. International Journal of Advanced Manufacturing Technology; Volume 50, 2010, PP.1013-1024	Not known	1.068
54	A. Manna, S.M. Salodkar	FNN based on-line monitoring of flank wear during turning of En-31 steel International Journal of Machining and Machinability of Materials; Vol.8, Nos. ½; 2010;PP.76-86	Not known	0.45
55	A. Manna, P.B. Mahapatra	Experimental study on processing of A1-A1 <sub>2</sub> O <sub>3</sub> /Gr <sub>p</sub> -MMC by liquid stirring Journal of Composite Materials; Vol. 44, No. 25, 2010, PP.3069-3079. (doi:10.1177/0021998310366362)	Not known	0.968
56	Alakesh Manna, Amandeep Kundal	Micro Machining of nonconductive A1 <sub>2</sub> O <sub>3</sub> ceramic on developed TW-ECSM setup. International Journal of Manufacturing, Materials and Mechanical Engineering; Vol. 1(2), 2011, PP. 46-55	Not known	0.41
57	D.R. Prajapati, and P.B. Mahapatra,	Economical Comparison of proposed X chart with MEWMA Chart”. International Journal of Quality and Reliability Management, Vol. 27 No. 4, pp. 475-485, Emerald publication, UK 2010	Not known	0.83
58	D. R. Prajapati	A new approach to monitor the process dispersion”. International Journal of Productivity and Quality Management (IJPQM), Vol. 6, No. 4, pp. 518-519,	Not known	0.857



		Inderscience Publication, USA		
59	D. R. Prajapati	A new approach to monitor the process dispersion” International Journal of Quality and Reliability Management, Vol. 28, Issue 3, pp.280-297, Emerald publication, UK	Not known	0.83
60	Sushil Kumar, P.S. Satsangi and D.R Prajapati	“Optimization of green sand casting process parameters of a foundry by using Taguchi’s method”. International Journal of Advanced Manufacturing Technology, Vol. 55, pp. 23-24, Springer Publication	Not known	1.06
61	Sushil Kumar, D.R. Prajapati and P.S. Satsangi	“Design for six sigma to optimize the process parameters of a foundry”. International Journal of Productivity and Quality Management (IJPQM), Vol. 8, No. 3, pp. 333-355, Inderscience Publication, USA	Not known	0.857
62	Dr. Uma Batra	“Sol - gel synthesis of pure and crystalline nano $\beta$ -TCP powder”, International Conference on Polymer Science and Engineering: Emerging Dimensions ‘PSE-2010’, 26-27 Nov. 2010.	Not known	Not known
63	Dr. Uma Batra	Uma Batra, ‘Failure Analysis of Steam Turbine Rotor Disk’ in Journal of Failure Analysis and Prevention : Volume 10, Issue 3 (2010), Page 178. (ISSN: 15477029).	Not known	Not known
64	Dr. Uma Batra	Seema Kapoor, Uma Batra, “Hydroxyapatite nanopowder synthesis and study of its thermal and structural behavior”, presented in International Conference on Polymer science and Engineering: Emerging Dimensions ‘PSE-2010’, Nov. 26-27, 2010 organized by University Institute of Chemical Engineering and Technology, Panjab University	Not known	Not known
65	Dr. Uma Batra	Uma Batra, Seema Kapoor, J D Sharma, “Nano-Hydroxyapatite/Fluoridated and Unfluoridated Bioactive Glass Composites: Structural Analysis and Bioactivity Evaluation, International conference on Advances in condensed and nano materials	Not known	Not known

		(ICANM-2011)” at Panjab University, February 22-26, 2011 Chandigarh.		
66	Dr. Uma Batra	J. D. Sharma and Uma Batra, “Retained Austenite in Cu-Ni-Mo based ADI in relation to wear characteristics”, proceedings 48 <sup>th</sup> National Metallurgist Day and 64 <sup>th</sup> Annual Technical meeting held on 14-16 Nov., 2010 at National Science Complex, Indian Institute of Science, Bangalore organized by Indian Institute of Metals.	Not known	Not known
67	Dr. Uma Batra	J D Sharma, Uma Batra, Seema Kapoor, “Improvement of sintering kinetics and densification of $\beta$ - TCP ceramic, Prof Ram Chand Paul International Conference on emerging trends in chemistry organized by Panjab University, Chandigarh, February 11-12’ 2011.	Not known	Not known
68	Dr. Uma Batra	Uma Batra, Seema Kapoor, Physico-chemical and In-vitro Biological Properties of Zinc Doped Hydroxyapatite Nano Powders, ICMAT11, International Conference on Materials for Advanced Technology, Suntec, Singapore, 26 <sup>th</sup> June to 1 <sup>st</sup> July’ 2011.	Not known	Not known
69	Dr. Uma Batra	Uma Batra and J D Sharma, “Wear Behavior of Cu Alloyed Austempered Ductile Iron” Symposium: Processing, Microstructure and Properties of Cast Irons and Cast and Forged Specialty Steels , Materials Science and Technology 2011,organised by ASM,ACER, ISandT.	Not known	Not known
70	Dr. Uma Batra	Uma Batra, Seema Kapoor , Suchita Kohli, “Characterization and structural analysis of Zn-substituted Nano hydroxyapatite” Symposium: Next Generation Biomaterials, Materials Science and Technology 2011,organised by ASM,ACER, ISandT.	Not known	Not known
71	Prof. P Thareja	“India’s Skill Development National Mission Progress”, IFHE DIGEST, International Federation of Hospital Engineers, 2011 (Dec/Jan 2011).	Not known	Not known
72	Prof. P Thareja	“See (You succeed)–Strategise”, Energise (The) Entrepise Quality World, Vol VIII, Sep 2010.	Not known	Not known

73	Prof. P Thareja	“Value stream mapping in aid of Lean Production in Automotive industry”, 8th International conference on Manufacturing Research, University of Durham, UK, 16 Sep. 2010	Not known	Not known
74	Prof. P Thareja	Atul Vats and Priyavrat Thareja, Lining Pains and lance Strains - A Case Study to Competing Productivity, Journal of Materials and Metallurgical Engineering, Volume 1, Issue 2, June, 2011, Pages 9-20.	Not known	Not known
75	Prof. P Thareja	Kaur Inderpreet, Kumar Shilpi, Thareja P, (2010), “Impact of Attendance On Performance Of students using ANOVA, International Journal of Systemics, Cybernetics and Informatics (ISSN 0973-4864), # APR10-06,	Not known	Not known
76	Prof. P Thareja	Thareja P., Jayjee Gagandeep Kaur, Dhawan Isha, Singla Preety, (2011) Comparative Analysis of PowerPoint and Blackboard Teaching Methodologies, Current Trends in Information Technology, Volume 1, Issue 1, May, 2011, Pages 9-16	Not known	Not known
77	Prof. P Thareja	Amrinder Chahal, Thareja Priyavrat, , Avtar Singh, (2010), Managing Class Room Quality Better - A Journey THRU QFD , Quality World, Vol IX, No 1, Jan 2011 also available at <a href="http://papers.ssrn.com">http://papers.ssrn.com</a> .	Not known	Not known
78	Prof. P Thareja	Thareja Priyavrat and Sanjay Kumar Kaushik (2010), ‘Vsm In Aid Of Lean Production In Automotive Industry-A Case Study’ Proceedings of the 8th International Conference on Manufacturing Research ICMR 2010- Advances in Manufacturing Technology XXIV (Ed Professor V I Vitinov and Prof D Harrison).	Not known	Not known
79	Prof. P Thareja	Thareja Priyavrat, D D Sharma, P B Mahapatra, Holean Education- A paradigm for Thee, Omniscience, Volume 1, Issue 1, February, 2011, 1-21pp	Not known	Not known
80	Prof. P Thareja	Thareja Priyavrat (2010), See You Succeed-Strategise, Energise (The) Enterprise Quality World, Vol VIII, No 9, Sept 2010	Not known	Not known
81	Prof. P Thareja	P. Thareja: Member of the SG (writing Group), ANSI/ISO/ASQ Z1.11- 200X; AMERICAN NATIONAL STANDARD,	Not known	Not known

		QUALITY MANAGEMENT SYSTEM STANDARDS—REQUIREMENTS FOR EDUCATION ORGANIZATIONS (American Society for Quality Standards Committee).		
82	Prof. P Thareja	Mehta J.C., P. Thareja, “India’s skill development NATIONAL mission progress”, IFHE DIGEST, International Federation of Hospital Engineers, 2011	Not known	Not known
83	Prof. P Thareja	Thareja Priyavrat ‘See (You Succeed) - Strategise, Energise (The) Entrepriese Quality World, Vol VIII, No 9, Sept 2010	Not known	Not known
84	Prof. P Thareja	Thareja P (2010) A Total Quality Organization Thro’ People, “Investing in a People’s Mould)” (Part 30) FOUNDRY, A Journal of Progressive Metal Casters, Vol. xxii, No. 6, issue 132, Nov/Dec 2010 , pp37-44	Not known	Not known
85	Prof. P Thareja	Thareja P (2010) A Total Quality Organization Thro’ People, “ Let’s Set-up, Execute, Transform ” (Part 29) FOUNDRY, A Journal of Progressive Metal Casters, Vol xxii, No. 5, issue 131, Sept/Oct 2010	Not known	Not known
86	Prof. P Thareja	Thareja Priyavrat, (2011), ‘Consulting the Management For Man2metamorphosis’, Consulting Ahead (The Journal of Consultancy Development centre), Vol 5 Issue 1, January 2011 pp 49-58.	Not known	Not known
87	Prof. P Thareja	Thareja Priyavrat (2010), Recasting TKSL in a Sound Mould-The Road Map to a Foundry’s Revival – Prognosis of a Recouped Unit, FOUNDRY, A Journal of Progressive Metal Casters, Vol. xxii, No. 6, issue 132, Nov/Dec 2010 , pp 53-57	Not known	Not known
88	Prof. P Thareja	Sharma Atul, Thareja Priyavrat (2011) Journal of Production Research and Management, Volume 1, Issue 1, February, 2011, Pages pp 1-18	Not known	Not known
89	Prof. P Thareja	Minor Scandium - Zirconium Impacts on Aluminum-6 Magnesium Cast Alloys, Journal of Materials and Metallurgical Engineering, Vol. 1, No. 1, pp. 25-34, February 2011, Priyavrat Thareja and Malay K. Banerjee.	Not known	Not known
90	Prof. P Thareja	Trusting on the Soft Global Platform - A	Not known	Not known

		Functional Imperative Mannu Thareja and Priyavrat Thareja Wipro Technologies Ltd and PEC University of Technology OmniScience: A Multi-disciplinary Journal, Vol. 1, No. 1, pp. 25-32, February 2011.		
91	Prof. P Thareja	Thareja P, Sharma DD, Mahapatra PB, (2011),Holean Education - The Paradigm for Thee OmniScience: A Multi-disciplinary Journal, Vol. 1, No. 1, pp. 1-21, February 2011.	Not known	Not known
92	Prof. P Thareja	Thareja P, Sharma DD, Mahapatra PB, (2011), Total Quality Management – A Developmental Perspective, Journal of Production Research and Management Volume 1, Issue 1, February, 2011, Pages pp 34-52.	Not known	Not known
93	Prof. P Thareja	Thareja P (2011) “A Total Quality Organization Thro’ People, (Part 33) Fine Fiver to Jap’s Fibre” FOUNDRY, A Journal of Progressive Metal Casters, Vol. xxiii, No. 3, issue 135, May / Jun. 2011.	Not known	Not known
94	Prof. P Thareja	Thareja P (2011) “A Total Quality Organization Thro’ People, (Part 31), IFC is the way” FOUNDRY, A Journal of Progressive Metal Casters, Vol. xxiii, No. 1, issue 133, Jan / Feb. 2011	Not known	Not known
95	Prof. P Thareja	Thareja Priyavrat, Amrinder Chahal, Avtar Singh, (2010), Managing Class Room Quality Better - A Journey THRU QFD , Quality World, Vol IX, No 1, Jan 2011	Not known	Not known
96	Prof. P Thareja	Thareja Priyavrat, Thareja Mannu (2010), Men who Changed the Quality World, Quality World, Vol VIII, No 12, Dec 2010.	Not known	Not known
97	Prof. P Thareja	“Consulting the Management for Man2metamorphosis”, The Journal of consultancy development centre, Vol. 5, Issue 1, Jan 2011	Not known	Not known
98	Prof. P Thareja	Thareja P , A Total Quality Organization Thro’ People, (Part 34) Total Productive Maintenance of people, FOUNDRY, A Journal of Progressive Metal Casters, Vol. xxiii, No. 4, issue 136, Jul / Aug. 2011.	Not known	Not known
99	Prof. P Thareja	Thareja P A Total Quality Organization Thro’ People, “. ‘as sets’ of Strategy, Enterprise and Treats” (Part 28) FOUNDRY,	Not known	Not known

		A Journal of Progressive Metal Casters, Vol. xxii, No. 4, , issue 130, July/Aug 2010		
100	Prof. P Thareja	Thareja P A Total Quality Organization Thro' People (Part 32) Commonsense Alignment to Culture FOUNDRY, A Journal of Progressive Metal Casters, Vol. xxiii, No. 2, issue 134, Mar / Apr. 2011	Not known	Not known
101	Prof. P Thareja	Thareja P, (2010) A Total Quality Organization Through People: (Part 28) As Sets of Strategy Enterprise and Treats FOUNDRY, A Journal of Progressive Metal Casters, Vol. xxii, No. 4, issue 130, Jul/Aug 2010, pp 73-81.	Not known	Not known
102	Prof. P Thareja	Thareja Priyavrat, Amrinder Chahal, Avtar Singh, (2010), Managing Class Room Quality Better - A Journey THRU QFD , Quality World, Vol IX, No 1, Jan 2011 also available <a href="http://papers.ssrn.com">http://papers.ssrn.com</a> .	Not known	Not known
103	Prof. P Thareja	Thareja P 'Inculcating The Necessary Wisdom About Environment Part-I Through Quality Pedagogy' proceedings of National Seminar On Environmental Management In Metallurgical Industries Emmi-2010 , March 15-16, 2010, Dept Of Metallurgical Engineering,A Centre Of Advanced Study, Institute Of Technology , Banaras Hindu University, Varanasi-221005)	Not known	Not known
104	Prof. P Thareja	Priyavrat Thareja, (2010), Holean Education – A Roadmap To Sustainable Education, presented at 8th National Conference on Sustainable Development Role of Engineers and Technologists, New Delhi, 29th Nov 2010	Not known	Not known
105	Prof. P Thareja	“The Failing Entrepreneurs are best prepared in Professional colleges”, 17th EDIC National Conference on Entrepreneurial Innovations: case studies on Entrepreneurs, Incubators Incubatees and Parks, NITTTR, Chandigarh, 9-10th Nov. 2010.	Not known	Not known
106	Prof. J. D. Sharma	J.D. Sharma and Uma Batra, “ Retained Austenite in Cu-Ni-Mo based ADI in relation to wear characteristics”, proceedings 48th National Metallurgist Day and 64th Annual Technical meeting held on 14-16 Nov, 2010 at National Science Complex, Indian Institute of Science, Bangalore organized by	Not known	Not known

		Indian Institute of Metals.		
107	Prof. J. D. Sharma	J D Sharma, Uma Batra, Seema Kapoor, “Improvement of sintering kinetics and densification of $\beta$ - TCP ceramic, Prof Ram Chand Paul International Conference on emerging trends in chemistry organized by Panjab University, Chandigarh, February 11-12’ 2011.	Not known	Not known
108	Prof. J. D. Sharma	Uma Batra and J D Sharma, “Wear Behavior of Cu Alloyed Austempered Ductile Iron” Symposium: Processing, Microstructure and Properties of Cast Irons and Cast and Forged Specialty Steels , Materials Science and Technology 2011,organised by ASM,ACER, ISandT.	Not known	Not known
109	Dr. Mamta Sharma	“TEMPOS based humidity sensor: Neural Network approach”, International conference on next generation communication and computing systems (ICNGC-10), Dec. 25-26, 2010.	Not known	Not known

### 15. Honors/Awards of the Faculty: National and International - NIL

## 16. Internal Resources Generated

S.No	Department	Type of Activity Carried out	Gross Amount (Rs.)
1	Applied Science	Testing & Consultancy	Rs. 3,09,288
2	Civil Engineering	Testing & Consultancy	Rs. 86,74,416
3	Director Office	Consultancy	Rs. 9,46,466
4	Electrical Engineering	Consultancy	Rs. 12,000
5	Materials and Metallurgical Engineering	Consultancy	Rs. 51,147
6	Mechanical Engineering	Consultancy	Rs. 1,85,066

## 17. Details of departments getting Assistance/Recognition under SAP, COSIST (ASSIST)/DST, FIST, and other programmes: NIL



## 18. Community Services

S. No.	Faculty and Department involved	Type of Service	Community Benefited	Agency/Department Involved
1.	NSS and Applied Science Department	PEC-Shiksha Pariyojna	1. Underprivileged school students	Education Department, U.T. Chandigarh
2	NSS	Blood Donation Camp Twice in a Year	1. Thalassemic patients, 2. Accident Victims, 3. Anybody in need of emergency blood supply	PGIMER, Chandigarh  Rotary blood Bank Society
3	NSS	Tree Plantation Program in PEC Campus	1. People in the PEC Campus	Forest Department, U.T. Chandigarh
4	NSS	Training program for students for entrepreneurship project	1. People in the PEC Campus 2. Students volunteering for the program	Commonwealth, Niesbud, NSS-PEC
5.	NSS	Workshop coat stitching contract to Janta Colony Women Self Help Group	1. Students , as they get workshop coats at Cheaper prices than market, 2. Janta Colony Women as they get employment	PEC(Janta Colony is an adopted village of PEC nearby campus.)
6	NSS	Pickle Preparation and selling in Chandigarh  Self Help Group	1. Students, as they learn skills of making pickle and door to door marketing 2. People of Chandigarh, as they get fresh and hygienic pickle at cheaper rates	NSS, PEC
7	NSS	Community Policing	1. People of Chandigarh , as they come in contact with police directly and learn measures to keep their household safe	Chandigarh Police , Chandigarh
8.	Institute	Open House	Students of various government an private schools	PEC

### 19. Teachers and Officers Newly Recruited :

Contractual Faculty:12

Re-employed: 5

### 20. Teaching and Non-Teaching Staff Ratio from August 2010-July 2011

<b>Group Name</b>	<b>Present Post Filled</b>
A	126
C	187
D	117
<b>Ratio</b>	<b>1:2.41</b>

## 21. Improvement in Library Services

Computerization of Library	Availability of Dissertation Taken Online/Title	Availability of books by Accession No.
Completed	NIL	Details up till date 31.12.2011 1. Circulation section books (from Acc. No. 1 to 91,210) 2. Book Bank (from Acc. No. 1 to 3,689) 3. Hindi Punjabi Books (from Acc. O. 1 to 1,005)

## 22. New Books/Journals Subscribed and Their Value

S. No.	New Books Subscribed	Year 2009 – 2010		Year 2010 -2011	
	Hard Copy/E-Book	No. of Copies	Author	No. of Copies	Author
1	Hard copies	1461 (Expenditure Rs. 3,25856)	400	2452 (Expenditure Rs. 6,05,878)	362

S.No.	New Journals Subscribed	Year 2009 – 2010		Year 2010 -2011	
		No. of Copies	Expenditure (in Rs.)	No. of Copies	Expenditure (in Rs.)
1.	<b>Hard Copies</b>				
	a) Printed books	2239	5,99,963/-	2670	6,05,878/-
	b) Printed Journals	46	9,68,080/-	72	19,01,980/-
2.	<b>Online</b> E-Journals (INDEST)	6 databases	9,47,961/-	6 databases	19,28,770/-
3.	NPTEL Courses ( Including server, computers and printers)			Server-1 Computers-2 Printers-3	3,04,415/-

## 23. Courses In Which Student Assessment of Teachers Is Introduced and The Action Taken on Student Feedback:

A feedback report is taken from all the UG and PG students for all the courses after the end of each semester and the same is consolidated and analysed. The report on feedback is provided to all the faculty members through Head of Department for further improvements, if any, and retrospection of the faculty concerned. (Sample proforma is attached.)

### PEC Chandigarh Course Evaluation-Students' Response

Fill up one OMR sheet for each course you are registered for this semester. Please be careful in filling out the Course number and section number. For each question from 1 to 20, there are five variations available. The endpoints 1 and 5 have been explained in the question itself.

#### Basic Information

Course number **Block**.

Section number **Block**

#### About the Course:

1. The objectives of the course were made clear: Circle 1 for *not at all*, 5 for *definite yes*:
2. Level at which the course was taught: 1 for *too low*; 3 for *appropriate*; 5 for *too high*:
3. Was the homework adequate?: 1 for *too little*; 3 for *appropriate*; 5 for *too much*:
4. Were the tests/exams conducted at the appropriate level of difficulty? 1 for *too easy*; 3 for *appropriate*; 5 for *too tough*:
5. Do you believe you learnt something useful in the course? 1 for *no*; 5 for *definitely yes*
6. Did you enjoy learning in this course? 1 to 5 in *increasing level*
7. Was the prescribed textbook helpful? 1 for *no*; 5 for *definitely yes*

#### About the Instructor

8. Did the Instructor come well prepared to the class? 1 for *no*; 5 for *definitely yes*
9. Did the instructor introduce a new topic properly? 1 for *no*; 5 for *definitely yes*
10. Was the Instructor punctual in starting the class? 1 for *no*; 5 for *definitely yes*

11. Did the instructor encourage discussion/questions in class? 1 for *no*; 5 for *definitely yes*
12. Did the instructor use board and other teaching aids effectively? 1 for *no*; 5 for *definitely yes*
13. Was the Instructor approachable outside the class? 1 for *no*; 5 for *definitely yes*
14. How far did the instructor relate the theoretical concepts with practical applications? 1 for *little*, 5 for *very much*

#### About the Tutor: (fill up only if there were separately scheduled tutorials)

- 15: Were the tutorials/lab helpful? 1 to 5 in *increasing level*
- 16: Did the tutor encourage discussion in the class? 1 for *no*; 5 for *definitely yes*
17. Did the tutor use board effectively? 1 for *no*; 5 for *definitely yes*
18. Was the tutor punctual in starting the class? 1 for *no*; 5 for *definitely yes*
19. Did the tutor hold all the scheduled classes? 1 for *more than 4 classes missed*; 3 for *2 classes missed*, 5 for *none missed*.
20. Was the tutor approachable outside the class? 1 for *no*; 5 for *definitely yes*

My Class : BE  ME

Discipline \_\_\_\_\_

**This assessment pertains to**

**Course Number**

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------	----------------------	----------------------	----------------------

Darken corresponding bubbles

A	A	G	D	D	D
C	C	E	1	1	1
E	D	M	2	2	2
H	E	O	3	3	3
I	H	R	4	4	4
M	I	T	5	5	5
P	L	V	6	6	6
T	N		7	7	7
	P		8	8	8
	R		9	9	9
	S				
	T				
	U				
	Y				

Course Name \_\_\_\_\_

**My Section Number is**

<input type="text"/>	<input type="text"/>
----------------------	----------------------

Darken corresponding bubbles

A	①
B	②
C	③
D	④

**My assessment of the Course**

Q. No.	Response				
1	①	②	③	④	⑤
2	①	②	③	④	⑤
3	①	②	③	④	⑤
4	①	②	③	④	⑤
5	①	②	③	④	⑤
6	①	②	③	④	⑤
7	①	②	③	④	⑤

**My assessment of the Instructor**

Instructor's Name \_\_\_\_\_

Q. No.	Response				
8	①	②	③	④	⑤
9	①	②	③	④	⑤
10	①	②	③	④	⑤
11	①	②	③	④	⑤
12	①	②	③	④	⑤
13	①	②	③	④	⑤
14	①	②	③	④	⑤

**My assessment of the Tutor**

Tutor's Name \_\_\_\_\_

Q. No.	Response				
15	①	②	③	④	⑤
16	①	②	③	④	⑤
17	①	②	③	④	⑤
18	①	②	③	④	⑤
19	①	②	③	④	⑤
20	①	②	③	④	⑤

## 24. Feedback From Stakeholders

- |                   |  |
|-------------------|--|
| a) Students       | Feedback from students is collected every semester. At the end of the BE programme interaction is held with all outgoing students in small batches at the department level to know their life in the campus.<br><br>A proforma for specific feed-back on curriculum is also got filled up. |
| b) Alumni         | An alumni meet is organized every year at the institute level. And department level interactions are also organized to receive feedback.   |
| c) Employer       | Feedback from prospective employers is obtained by the Training & Placement office when the companies visit the institute for placements.  |
| d) Community      | Directions of Chandigarh administration are followed.  |
| e) Academic peers | Workshops/Seminars/Conferences attended and organized.   |
| f) Industry       | Industry experts are invited to the campus from time to time. Two persons from industry are regular members of the Senate.   |
| g) Parents        | Parents can meet the Dean Academic affairs to provide any feedback.  |

## **25. Unit Cost of Education - Per Student Cost**

Total No. of students: 2060

Total Expenditure for the year 2010-2011 : Rs. 2887.50 Lacs

Per student cost:  $2887.50 \div 2060 = \text{Rs. } 1.40 \text{ Lacs}$

## **26. Computerization of Administration and the Process of Admissions and Examination Results, Issue of Certificates**

The process of admissions is computerized to the extent that the admission procedure to B.E. Programme is partially on line. The examination results are also computerized.



## **27. Increase in the Infrastructural Facilities**

In the financial year 2010-11, the following works were taken up by the engineering department:

1. Replacement of burnt out L.T. main cable from transformer to L.T. panel, leveling of 2 nos 750 KVA transformer checking and repair of protection system and replacement of batteries in charge in 11KV indoor substation in PEC.
2. Retile terracing to roof of H. No. 211-218 and 219-243.
3. Renovation of toilets and bathrooms in Gymnasium and Squash Court.
4. Retile terracing to roof of H. No. 31A to 34A.
5. Retile terracing to roof of H. No. 401-423.
6. Retile terracing to roof of H. No. 701-702.
7. Re-construction/Repair of boundary wall in PEC.
8. Construction of RCC wall and providing of barbed wire fencing on the top of wall of PEC.
9. Renovation of Faculty rooms of Mechanical Engg. Deptt.
10. Renovation of Faculty rooms of Electrical Engg. Deptt.
11. Providing AC points, steel shutter, CFL fitting and replacement of main switches etc. in CAD/CAM lab and new computer lab in Production Engg. Deptt.
12. Special repair of street lights and replacement of main cable leads in PEC.
13. Providing Aluminium partition in Physics lab.
14. Providing three phase power supply in for 4 Nos. motors and 4 Nos. 2x36 Wat. CFL fitting in Roto Dynamic Machine lab.

The proposed Master Plan for the expansion of university campus in the next year is as under:

Hostel expansion (~Rs.1.00 crore)

New Academic Block (~Rs.5.00 crore)

Synergy Block (~Rs.5.00 crore)

## 28. Technology Upgradation

The technology upgradation in the various sections like Engg. Departments, Computer Centre, Library and Auditorium is summarized as below:-

S.No.	Department	Lab development	New Equipments/Software purchased	Status
1.	Applied Science Deptt.	Physics Lab	Michalson interferometer (1)	Working
			Optical fiber Kit (2)	Working
			Computers (2)	Working
		Chemistry Lab	PH Meter (02 Nos)	Working
			Conductivity meter and Bridge (02 Nos)	Working
			HPLC Columns	Working
			Vacuum Pump	Working
Electronic Balance (01 Nos)	Working			
2.	Computer Science Deptt.	State of the Art : Password Recovery Facility Equipment/Software	FSAR with Hardware Accelerator, Password Recovery Toolkit and Distributed Network Attack and other utilities, Access Data Rainbow Tables	Working
		High Performance Computing Lab	HPC server capable of 2GPU, Thin Clients (10), Rack Based Server, CUDA Compilers and Librares	In progress
		Computer Vision Lab	Network Cameras AXIS 207W, Axis 211W	Working
3.	Electrical Engg. Deptt.	Advanced Control System	New Lab	Working
4.	Electronics and Electrical Communication Engineering	Basic Electronics	1. Digital Storage Oscilloscopes 2. Hand held Multimeters	Working
		Microprocessor Lab	1. MF- DYNA 85 – LCD 2. MF-ILC-V2 3. EASY 8051 Development system	Working
5.	Mechanical Engg.	CAD/CAM Lab	H.P. Server	Working

	Deptt.	-do-	PCs shared along Network together in local LAN environment	Working
		-do-	COMSOL, Intellesuite	Working
		Vibration Lab	Computerized electrodynamic vibration shaker	Working
		-do-	MR fluid water box, MR damper	Working
6.	Materials and Metallurgical Engg. Deptt.	Establishment of Biomaterials laboratory	pH meter, magnetic stirrer, Double Distillator, incubator, oven, spin coater with vacuum unit, ultrasonicator, furnace, analytical balance	Working
		Upgradation of CAMED lab	Software – Cast flow, Opticast and Soft cast	Working
7	Production Engg. Deptt.	CAD	CATIA Purchased	Process for working
8	Information Technology Deptt.	Computer Vision Lab.	Stereo Vision Camera	Working

### Computer Center

<b>Software purchases</b>	Microsoft Campus agreement, Trend Micro Antiviruser 5
<b>Equipments</b>	27 Desktop, 1-Laser Printer, Server HP DL-350
<b>Band width</b>	8Mbps and 12 Mbps from NKN

### Library

S.No.	New Equipments/Software purchased	Status
1.	NPTEL courses (2010-11)	Working
2.	Computers -3	Working
3.	Printers -2	Working
4.	Server-1	Working

Level of Library Automation	<b>Medium</b>	
	Hard copy	Online
Journals magazines purchased	72 (2010-11)	1100 (2010-11)

**Auditorium**

<b>New equipments purchased in August -2010 to July 2011</b>	quantity
Split AC LG (1.5 ton)	10 Nos
Fire Extinguishers BC (Gas Type) 4 <sup>1/2</sup> KG	04 Nos

**Class room development: All the Lecture halls are equipped with LCD projectors.**

## 29. Computer and internet access and training to teachers, non-teaching staff and students

### Internet access

Bandwidth available	:	16 MBPS and 12 MBPS through NKN
How many hotspots are in college	:	50 approximate
How many server	:	15
List of software loaded on server	:	Email, WEB, DNS, DHCP, ACADEMIA, Robot Studio. MatLab, Trendmicro, Ciscoworks, Estinet, Cyberoam, Sonic point etc.
Battery backup (hrs.)	:	8 hours
Size of mail box	:	Faculty : 100MB      Students: 2GB

**Training to Teachers/Staff is provided by allowing them to attend short term courses and providing financial assistance for the same.**

PEC is a part of the National Knowledge Network. The NKN is a state-of-the-art multi-gigabit pan-India network for providing a unified high speed network backbone for all knowledge related institutions in the country. The purpose of such a knowledge network goes to the very core of the country's quest for building quality institutions with requisite research facilities and creating a pool of highly trained professionals. The NKN will enable scientists, researchers and students from different backgrounds and diverse geographies to work closely for advancing human development in critical and emerging areas.

### 30. Financial Aid to Students

Sr. No.	Event	Agency providing the financial aid	Amount (Rs.)
1.	Philips Innovation Projects – III	Philips India Ltd.	<b>2,56,000.00</b>
2.	NASA Great Moon Buggy Race April 2011 (USA)	Chief Minister Relief Fund Punjab	5,00,000.00
		Department of Science and Technology Chandigarh Administration	1,60,000.00
		PEC University of Technology	1,50,000.00
		Private Sponsors	2,52,500.00
			<b>10,62,500.00</b>
3.	Scholarship to M.Tech. and Ph.D students admitted with GATE	MHRD	8000 P.M. /student 14000 P.M./student
4.	Competition	DST, PEC and Pvt. Sponsors	Approx. 13 lakhs
5.	Scholarship (details in the next table)	PEC University of Technology	Approx. 1,50,00,000
6.	Sports	PEC University of Technology	38,00,000
7.	Clubs	PEC University of Technology	16,50,000
8.	Paper Publication, Souvenir, Magazines, other students related publications	PEC University of Technology	5,50,000
9.	PEC Fest	PEC University of Technology	6,00,000
10.	Tech Fest	PEC University of Technology	5,00,000
11.	Technical Societies	PEC University of Technology	3,00,000
12.	TandPO	PEC University of Technology	11,00,000
13.	Medical(Dispensary)	PEC University of Technology	5,50,000
14.	Financial Assistance for student projects	PEC University of Technology	20,00,000
15.	Financial Assistance for students attending conferences(National and International)	PEC University of Technology	6,00,000

Earn while learn programme (No. of students) : 01

### Details of Scholarship during academic year 2010-11

YEAR	TUITION FEE	HALF FREE SHIP	MERIT SCHOLARSHIPS	FEE WAIVER FOR WOMEN STUDENTS	BE-1 <sup>ST</sup> YEAR PHYSICALLY HANDICAPPED STUDENTS	FEE WAIVER FOR EWS	EXCESS FEE WAIVER	MERIT CUM MEANS	PURELY MEANS	GRAND TOTAL
1 <sup>st</sup> 2010	RS. 32,500/- PER SEM	64 32,500 * 64 = 20,80,000	9 32,500 * 9 * 2 = 5,85,000	12 32,500 * 12 * 2 = 7,80,000	7 32,500 * 7 * 2 = 4,55,000	18 32,500 * 18 * 2 = 11,70,000	1 32,500 * 1 * 2 = 65,000	--	--	51,35,000
2 <sup>nd</sup> 2009	RS. 25,000/- PER SEM	47 25,000 * 47 = 11,75,000	25 25,000 * 25 * 2 = 12,50,000	--	--	--	--	--	2 25,000 * 2 * 2 = 1,00,000	25,25,000
3 <sup>rd</sup> 2008	RS. 25,000/- PER SEM	33 25,000 * 33 = 8,25,000	21 25,000 * 21 * 2 = 10,50,000	--	--	--	--	14 25,000 * 14 * 2 = 7,00,000	--	25,75,000
4 <sup>th</sup> 2007	RS. 17,500/- PER SEM	50 17,500 * 50 = 8,75,000	23 17,500 * 23 * 2 = 8,05,000	--	--	--	--	09 17,500 * 9 * 2 = 3,15,000	03 (17,500 * 3 * 2 = 1,05,000	21,00,000
GRAND TOTAL	---	49,55,000	36,90,000	7,80,000	4,55,000	11,70,000	65,000	10,15,000	2,05,000	1,23,35,000

## 31. Activities and support from the Alumni Association

### Activities and Support from the Alumni Associations:

Alumni of PEC have been contributing in several ways. Some of the areas where the institute receives regular contributions are:

#### Financial

- Scholarships and Awards

The current scholarships and Awards instituted by various Alumni are tabulated as under:

#### Award instituted for the Faculty

Sr. No	Awarded by	Name of Award/Scholarship	Scholarship/Award	Number	Award /Scholarship Amount	Name of Donor with contact details	Criteria of Selection
1.	PECOSA	Dr D.N Trikha Excellence in Research Publication Award	Award	Two	Rs. 7500/- each+Certificate	Dr D.N Trikha,Alumunus of PEC, Q-11,South City,Gurgaon,12200	To recognize faculty members of PEC for excellence in research publications through the papers published in refereed international journals that have resulted from research done at PEC

#### Award instituted for the Students

Sr. No	Awarded by	Name of Award/Scholarship	Scholarship/Award	Number	Award /Scholarship Amount	Name of Donor with contact details	Criteria of Selection
1.	PALS and PECOSA	PECOSA/PALS	Scholarship	Nine	Rs. 5000/- each	PALS Sunil Suri, Treasurer <a href="mailto:surisunil@aol.com">surisunil@aol.com</a> Kulwant S Grewal President <a href="mailto:kalwant@ieee.org">kalwant@ieee.org</a> <a href="mailto:kgrewal@telcordia.com">kgrewal@telcordia.com</a>	Toppers of all branches on the basis of CUMULATIVE RESULTS OF 6 <sup>th</sup> semester
2	PECOSA	GOEL FELLOWSHIP	Scholarship	Three	Rs. 5000/- each	O.P. Goel (1956-Civil)	Students from BHATINDA/MANSA DISTT, PUNJAB who score maximum marks in CIVIL Engineering of 1 <sup>st</sup> , 2 <sup>nd</sup> , and 3 <sup>rd</sup> year based on 2 <sup>nd</sup> , 4 <sup>th</sup> and 6 <sup>th</sup> semester results
3	PECOSA	PECOSA SYDNEY SCHOLARSHIPS	Award	Two	Rs. 5000/- each	Gian Banga Australia <a href="mailto:Gian37@optusnet.com.au">Gian37@optusnet.com.au</a> Rakesh Mahajan <a href="mailto:Rakesh.Mahajan@mincom.com">Rakesh.Mahajan@mincom.com</a>	Overall 1 <sup>st</sup> and 2 <sup>nd</sup> position holders for Aeronautical and Civil based on cumulative results of 2 <sup>nd</sup> semester on rotation basis
4	PECOSA	NS ATTRI SCHOLARSHIPS In memory of Shamsher S Attri	Scholarship	Six	Rs.2500/- each	Narinder S Attri-USA <a href="mailto:narinderattri@aol.com">narinderattri@aol.com</a>	Toppers of Mechanical and Electrical branches of 1 <sup>st</sup> , 2 <sup>nd</sup> , and 3 <sup>rd</sup> year based on 2 <sup>nd</sup> , 4 <sup>th</sup> and 6 <sup>th</sup> semester results. In case there is a common candidate between PECOSA/PALS and NS ATTRI Scholarships then 2 <sup>nd</sup> position holders shall be



							eligible
5	PECOSA	-DO-	Scholarship	Two	Rs. 2500/- each	-do-	Overall 1 <sup>st</sup> and 2 <sup>nd</sup> position holders amongst all branches based on 1 <sup>st</sup> semester results
6	PECOSA	Prem Singh Kadian Memorial Scholarship	Award	Two	Rs. 5000/- each	Mr. Ajay Kadian	Fastest Girl and Boy in PEC on the following criterion : Girl and Boy standing 1 <sup>st</sup> in 100 meter race at college annual Athletic Meet.
7	PEC	Awtar-Teji Singh Fellowship	Fellowship	One	To cover at a minimum, tuition and fees to pursue graduate level studies at Berkeley	Sh. Awtar Singh	On the basis of merit from admitted graduate students in the Department of Civil and Environmental Engg. in the College of Engineering at the University of California, Berkeley. Fellowship recipients will be graduates of Punjab Engineering College Chandigarh.
8	PEC	MANTEC BRARA AWARD FOR EXCELLENCE IN CREATIVE WRITING and SPORTS	Award	One	6000/- each + certificate	Sh. Arvinder S Brara Mantech Consultants Pvt. Ltd. 805 Vishal Bhawan, 95, Nehru Place 011-26912435, <a href="mailto:braraa@manteconsultants.com">braraa@manteconsultants.com</a> <a href="mailto:ari_brara@yahoo.com">ari_brara@yahoo.com</a>	To recognize UG students of PEC for excellence in creative writing and sports.

### Technical

- Lectures
- Academic Collaborations
- MoUs with industry
- Short Courses , Workshops
- Curriculum Development

### Placements

- Internships
- Placements

### Social

- Jointly hosting reunions and Alumni Meets
- Career Guidance

Other relevant information

The institute has established an office to exclusively deal with all matters relating to alumni affairs, led by officer –in-charge Alumni affairs under the guidance of Chairman Alumni Affairs. The Alumni office very closely interacts with individuals/groups of alumni and PEC Alumni associations. At present PEC is interacting with following PEC Alumni Associations:

### **PECOSA**

PEC old student Association is an organization for those with a keen interest in PEC, and who wish to keep up to date with institute activities. Following are the Aims and Objects of the association.

- 1) To promote and inspire a feeling of fraternity amongst all the old students.
- 2) To strengthen the link and tie of fellowship amongst the present students, members of the teaching staff of PEC University of Technology and the old students.
- 3) To promote the link and encourage active interest in the progress and welfare of the PEC University of Technology.
- 4) To establish and organize centre at different places for fulfillment of aims and objectives.

### **PEC-PECOSA Interactions**

- PECOSA has been instrumental in channelizing the help offered by various alumnus in the form of scholarships to the tune of Rs. 1.00 lacs to two dozen bright students of PEC every year
- Student Project prizes and funding
- Guest lectures from alumni

### **PECOBA (Year of Establishment : 1967)**

PECOBA, i.e. Punjab Engineering College Chandigarh Old Boys Association, is an Alumni Association of Graduates of Punjab Engineering College Chandigarh and was founded in Delhi in May 1967 by Amarjit Singh Kohli of 1964 Mech passout. Its founder President is A.ArunKumar of 1962 Elect. It has chapters in several towns of India and abroad. PECOBA has organized more than 40 functions in Delhi and one in Karnal in the last 42 years. It published its first Directory of PEC alumni in 1980 listing details of 1953 alumni.

### **PALS (Year of Establishment : 1996)**

An acronym for PEC Alumni Society, are a group of people who share the common bonds of being associated to PEC University of Technology, formally Punjab Engineering College (PEC), either as a student or faculty. The PALS represent over five decades of alumni engaged in many occupations spanning research, education, defense, entertainment, management, finance, entrepreneurship, etc.



PALS aim to assist the PEC alumni in networking for personal and professional growth. Like many non-profit organizations, PALS are dependent on the contributions of the core group and the members of PALS.

### **32. Activities and support from Parent-Teacher Association: NIL**

### **33. Health services**

The institute has a dispensary on campus to meet the first aid and routine medical requirements of the students free of cost. In this dispensary the consultation is also provided to the members of faculty/ staff residing in the campus. A medical officer along with the other supporting staff/ pharmacist, nursing orderly and ward boy are available in the dispensary to attend to the patients. In case of emergency, patients are referred to Government multi speciality Hospital (GMSH) ,Sector -16 or Post Graduate Institute of Medical Education and Research (PGIMER),Sector-12.

### 34. Performance in sports activities

Following is the list of students who participated in various sports activities in the year 2010-11:

Sr. No.	Name of the student	Sport Activity
1	Munish thakur	1st north zone fencing (sabre event)
		Xviii junior national fencing (sabre event)
		Xxi senior national fencing
2	Tarun bahuguna	Junior under 20 national fencing
		Senior national fencing
3	Prabhjot grewal Gurleen boparai Atinder pal singh Parveen Utsav ragmi Ansh gill Atam parkash Sukrit ranjan Gursimrat singh Harpreet singh Sushil kumar Aviral Devender ahlawat Vikram pandey Harshmeet singh Punit basnet Binod poudel Deepit singh uppal	All india inter-varsity football
4	Arjun gupta Ankit beniwal Aman Sourabh Shivam Abhinav kashyap	North zone inter-varsity badminton
5	Sharanga doley Himanshu Mahesh chandok Sanal	North zone inter university table tennis

6	Amrinder singh Ajay singh verma Ravi kumar jha Sukhchain singh Ajit kumar Sangeet kumar Sumer singh Somvir singh Nitin deswal	North zone intervarsity volleyball
7	Ankit Aman Shivam Deepit Sourabh Swati jha Debarpita sen Vandana Chhaya rajput	Inter engineering deemed university badminton
8	Arpit kothari Sundeep singh Nitin wadhwa Akash garg Tanu singla Ankita kundra Monica deswal Manu jyoti	Inter engineering deemed university chess
9	Nipun sodhi Rajat saini Ajay Keshav jangra Prakhar gupta Nishant dangi Parveen Rohit heera Saurabh chopra Shivam gaur Amandeep singh Sahil Mohit sharma Mankiran singh Siddharth singh Ankit kumar	Inter engineering deemed university cricket

10	Madhav aggarwal Vaibhav gupta Rohan mehra Mohak goyal	Inter engineering deemed university lawn tennis
11	Sharanga doley Himanshu Mahesh chandok Sanal	North zone inter university table tennis
12	Amrinder singh Ajay singh verma Ravi kumar jha Ajit kumar Sangeet kumar Sumer singh Sunil kumar Sanchit arora Rahul aggarwal	Inter engineering deemed universities volleyball
13	Munish thakur Tarun bahuguna Gaurav manchanda Sukrit ranjan Harleen kaur	All india inter university fencing

### 35. Incentives to Outstanding Sports persons

Sr. No.	Particulars	Incentives
<b>1</b>	<b>Cash Awards:-</b>	
	i) Best Athlete (Boys) of PEC Annual Athletic Meet	Rs.1800/-
	ii) Best Athlete (Girls) of PEC Annual Athletic Meet	Rs.1800/-
	iii) 2 <sup>nd</sup> Best Athlete (Boys) of PEC Annual Athletic Meet	Rs.1200/-
	iv) 2 <sup>nd</sup> Best Athlete (Girls) of PEC Annual Athletic Meet	Rs.900/-
	v) Best March Past Squad during PEC Annual Athletic Meet	Rs.165/-
<b>2</b>	<b>Prem Singh Kadian Memorial Awards instituted by PEC Alumnus Sh. Ajay Kadian through PECOSA:</b>	
	i) Fastest Girl standing 1 <sup>st</sup> in 100 Meter Race during PEC Annual Athletic Meet	<b>Rs.5000/-</b>
	ii) Fastest Boy standing 1 <sup>st</sup> in 100 Meter Race during PEC Annual Athletic Meet	<b>Rs.5000/-</b>
<b>3</b>	<b>Prizes &amp; Certificates:-</b> First, Second and Third Position holders of various PEC Annual Athletic Meet Events	
<b>4</b>	<b>Sports Kit and Track Suits:-</b> Players of all PEC Teams	
<b>5</b>	<b>Advisor's Gold Medal for Best Sportsperson of B.E. Final Year who secured maximum points of sports performance during his stay in PEC for four consecutive years</b>	<b>Medal &amp; Certificate</b>



### 36. Student Achievements and Awards

List of students alongwith their Achievements in Cultural/Technical Events outside the institute at National/International level for the session 2010-2011 is as under:

S. No.	Name of students	Type of Activity/Achievement	Award Given	
			Agency Giving Awarded	Name of Award
1	Darwin Rajpal (4 <sup>th</sup> yr)	Aerospace Science Meeting	Orlando-Florida	NA
2	Mohit Virmani (4 <sup>th</sup> yr)	International W3C Workshop	Barcelona-Spain	NA
3	Abhinav Kapur Avneet Hira (2 <sup>nd</sup> yr) Davis Josaph(2 <sup>nd</sup> yr) Sudipto Dass(2 <sup>nd</sup> yr)	National Aerospace Olympiad	Technical Societies	2 <sup>nd</sup> prize
4	Sneha Aggarwal (4 <sup>th</sup> yr)	Algorithm Design for Qos	IISc-Bangalore	Patent Filed
5	Abhishek Mehta Abhinav Sharma Naman Kumar Anshul Bansal	Techkriti-2011	IIT-Kanpur	3 <sup>rd</sup> prize
6	Saurabh Aggarwal Eeshanee Arya Neha Gupta Abhishek Mehta Bhupinder Dangi	Octagon Mission	IIT-Chennai	4 <sup>th</sup> prize
7	Kaushal Vaishnav (4 <sup>th</sup> yr) Abhishek Arora (4 <sup>th</sup> yr) Amandeep Singh (3 <sup>rd</sup> yr) Rishabjot Singh (3 <sup>rd</sup> yr) Mohit Bagga (3 <sup>rd</sup> yr) Ankit Garg (3 <sup>rd</sup> yr) Navneet Singh (3 <sup>rd</sup> yr) Abhishek Pathanai (3 <sup>rd</sup> yr) Harpinder Singh (3 <sup>rd</sup> yr) Tarun Kumar (3 <sup>rd</sup> yr) Dheeraj Bhardwaj (3 <sup>rd</sup> yr) Chandan Gakhar (3 <sup>rd</sup> yr) Abeer Sharma (3 <sup>rd</sup> yr) Kunal Singhai (3 <sup>rd</sup> yr) Shubham Aggarwal (3 <sup>rd</sup> yr)	BAJA SAE INDIA-2011	SAE	2 <sup>ND</sup> PRIZE

	<p>Shashank Dua (3<sup>rd</sup> yr)          Bhavya Kumar Singh (3<sup>rd</sup> yr)          Sahil Bindlish (3<sup>rd</sup> yr)          Hemant Gupta (3<sup>rd</sup> yr)          Nishant Mathur (3<sup>rd</sup> yr)          Udayan Kabra (3<sup>rd</sup> yr)          Anmol Shore (2<sup>nd</sup> yr)          Jagjot Singh Cheema (2<sup>nd</sup> yr)</p>			
8	<p>Madhur Popli (3<sup>rd</sup> yr)          Gurjot Singh Bhatia (3<sup>rd</sup> yr)          Sanchit Arora (3<sup>rd</sup> yr)          Yakshu Madaan (3<sup>rd</sup> yr)          Gautam Pundir (3<sup>rd</sup> yr)          Shivam Mittal (3<sup>rd</sup> yr)          Mohit Kataria (3<sup>rd</sup> yr)          Ashish Sodhi (3<sup>rd</sup> yr)          Baibhav Jha (3<sup>rd</sup> yr)          Abinash Tripathi (3<sup>rd</sup> yr)          Jatin Sharma (3<sup>rd</sup> yr)          Kirti Kumar (3<sup>rd</sup> yr)          Ishank Arora (3<sup>rd</sup> yr)          Hitesh Singla (3<sup>rd</sup> yr)          Pulkit Kapoor (3<sup>rd</sup> yr)          Mahesh Mittal (3<sup>rd</sup> yr)          Ratul Arora (3<sup>rd</sup> yr)          Nitish (3<sup>rd</sup> yr)          Harnoor (3<sup>rd</sup> yr)          Prerit Sood (3<sup>rd</sup> yr)          Shankar (3<sup>rd</sup> yr)</p>	Formula SAE	SAE	Lightest vehicle
9.	<p>Kamal Garg (4<sup>th</sup> yr)          Amit Kalia          Varinder Pal Singh          Manish Bharti          Anuj Garg (2<sup>nd</sup> yr)          Jasmine Kaur (2<sup>nd</sup> yr)</p>	The Great Moon Buggy Race -2011	NASA-USA	Best International Team
10	<p>Prince Malhotra (4<sup>th</sup> yr)          Mohit Garg          Abhishek Patil          Rohan Garg          Abhishek Saggar (2<sup>nd</sup> yr)          Esha Aggarwal (2<sup>nd</sup> yr)</p>	The Great Moon Buggy Race -2011	NASA-USA	Best International Team
11	<p>Inderpal Singh          Sahil Thapa (4<sup>th</sup> yr)          Nitin Gandhi (3<sup>rd</sup> yr)</p>	Robowars	NIT –Jalandhar	3 <sup>rd</sup> Prize

12	Rohit Madaan Jaspreet Singh	Robowars	IIT-Bombay	Consolation prize
13	Sonal Gupta (4 <sup>th</sup> yr)	Line Followers	NSIT-Delhi	2 <sup>nd</sup> prize
14	Arjun Wadwalkar (4 <sup>th</sup> yr) Kapileshwar (4 <sup>th</sup> yr) Sudarshan Boss (4 <sup>th</sup> yr)	Phillips Innovation Project –II	Phillips	Consolation prize
15	Chintan Kaur (3 <sup>rd</sup> yr)	IEEE M V Chauhan All India Student Paper Contest - 2010	IEEE	3 <sup>rd</sup> prize
16	Chintan Kaur (3 <sup>rd</sup> yr)	International Conference on Communications and Signal Processing (ICCSP)-2011	NIT-Calicut	NA
17	Tejinder Singh Chahal (3 <sup>rd</sup> Yr)	Solo Singing Competition	IIT Ropar	2 <sup>nd</sup> Prize
18	Charandeep Singh (2 <sup>nd</sup> Yr) AnumehaBhasakar (3 <sup>rd</sup> Yr) KshitizKapur (4 <sup>th</sup> Yr) RajatMehrotra(4 <sup>th</sup> Yr)	Fusion Band Competition	IIT- Delhi	2 <sup>nd</sup> Prize
19	Paras Thakur (2 <sup>nd</sup> Yr)	Solo Instrumental Competition	IIT- Delhi	3 <sup>rd</sup> Prize
20	Paras Thakur (2 <sup>nd</sup> Yr)	Musician Institute	L.A (USA)	Select as a student
21	LakshayaSaini (2 <sup>nd</sup> Yr) Anoop Grover (2 <sup>nd</sup> Yr) Danish Aziz (2 <sup>nd</sup> Yr)	International Conference (CYP Asia Center)	Sri Lanka	Sent Video
22	Ms Puneet Soni(4 <sup>th</sup> year Metallurgy)	Modern enterprise category	7 <sup>th</sup> North-West quality award	2 <sup>nd</sup> Prize
23	Karaninderjeet Singh (4 <sup>th</sup> Yr) Naresh Kumar (3 <sup>rd</sup> Yr) Karanpreet Singh (3 <sup>rd</sup> Yr) Sushant Sharma (3 <sup>rd</sup> Yr) Himak Sharma (2 <sup>nd</sup> Yr) Eshu Sharma (2 <sup>nd</sup> Yr) Ashish Paul (2 <sup>nd</sup> Yr) Nancy Goel (2 <sup>nd</sup> Yr) AjinderKaur (3 <sup>rd</sup> Yr) Harpinderjit Singh (3 <sup>rd</sup> Yr) Yakshu Madaan (3 <sup>rd</sup> Yr)	Stage Play- Gadhe Ki Barrat	IIT- Delhi	1 <sup>st</sup> prize
24	HarshitBhamni (4 <sup>th</sup> Yr) Eshu Sharma (2 <sup>nd</sup> Yr) PankajKaushal (2 <sup>nd</sup> Yr)	Street Play- Newton kaSanwidhan	IIT-Delhi	1 <sup>st</sup> prize

	<p>Himak Sharma (2<sup>nd</sup>Yr)  Richa Bansal (2<sup>nd</sup>Yr)  Anubhav Aggarwal (2<sup>nd</sup>Yr)  Priyank Bijalwan (2<sup>nd</sup>Yr)  Ashutosh Mujaal (2<sup>nd</sup>Yr)  Manchitwan Jauhal (2<sup>nd</sup>Yr)  Atush Badyal (2<sup>nd</sup>Yr)  Gurjot Singh (1<sup>st</sup>Yr)  Chetan Khanna (2<sup>nd</sup>Yr)  Himanshu Goyal (1<sup>st</sup>Yr)</p>			
25	<p>Harshit Bhamni (4<sup>th</sup>Yr)  Eshu Sharma (2<sup>nd</sup>Yr)  Pankaj Kaushal (2<sup>nd</sup>Yr)  Himak Sharma (2<sup>nd</sup>Yr)  Richa Bansal (2<sup>nd</sup>Yr)  Anubhav Aggarwal (2<sup>nd</sup>Yr)  Priyank Bijalwan (2<sup>nd</sup>Yr)  Ashutosh Mujaal (2<sup>nd</sup>Yr)  Manchitwan Jauhal (2<sup>nd</sup>Yr)  Atush Badyal (2<sup>nd</sup>Yr)  Gurjot Singh (1<sup>st</sup>Yr)  Chetan Khanna (1<sup>st</sup>Yr)  Himanshu Goyal (1<sup>st</sup>Yr)</p>	Street Play- Love System Dhoka	IIM-Ahmdabad	Consolation Prize
26	<p>Manchitwan Jauhal (2<sup>nd</sup>Yr)  Richa Bansal (2<sup>nd</sup>Yr)  Arjun Datt Sharma (2<sup>nd</sup>Yr)  Sheema Arora (2<sup>nd</sup>Yr)  Vinayak Chopra (2<sup>nd</sup>Yr)  Atush Badyal (2<sup>nd</sup>Yr)  Nancy Goyal (2<sup>nd</sup>Yr)  Salony Jain (2<sup>nd</sup>Yr)  Megha (2<sup>nd</sup>Yr)  Ishupreet (2<sup>nd</sup>Yr)  Bhuvesh (1<sup>st</sup>Yr)  Armaan (1<sup>st</sup>Yr)  Gurjot (1<sup>st</sup>Yr)  Gaurav (1<sup>st</sup>Yr)  Sahil (1<sup>st</sup>Yr)</p>	Jalsa Street Play Competition	Art Gallery, Sector-10, Chandigarh	2 <sup>nd</sup> Prize
27	<p>Karan Maoudgil (4<sup>th</sup>Yr)  Anurag Aggarwal (4<sup>th</sup>Yr)  Shivani Singh (4<sup>th</sup>Yr)  Vishal Thakur (3<sup>rd</sup>Yr)  Ankesh Aggarwal (3<sup>rd</sup>Yr)  Neeti Sahdeva (3<sup>rd</sup>Yr)  Kirti Prakash (3<sup>rd</sup>Yr)  Peenaz Gupta (3<sup>rd</sup>Yr)</p>	Group Dance Competition	IIT- Delhi	2 <sup>nd</sup> Prize

	<p>Sanigdha Thakur (3<sup>rd</sup>Yr)  PuneetKralia (3<sup>rd</sup>Yr)  AtulyaAggarwal (3<sup>rd</sup>Yr)  IshanSethi (3<sup>rd</sup>Yr)  NavjotKaur (3<sup>rd</sup>Yr)  HarleenKaur (3<sup>rd</sup>Yr)  Vajira Paul (3<sup>rd</sup>Yr)  Manish Goyal (3<sup>rd</sup>Yr)  GauravRahi (2<sup>nd</sup>Yr)  Akshit Raja (2<sup>nd</sup>Yr)  Daanish Abdul Aaziz (2<sup>nd</sup>Yr)  ShreyaAdya (2<sup>nd</sup>Yr)  Tanya Bhatia (2<sup>nd</sup>Yr)  Divya Gupta (2<sup>nd</sup>Yr)  VrindaPopli (2<sup>nd</sup>Yr)  Nitish Garg (2<sup>nd</sup>Yr)  Ankita Das (2<sup>nd</sup>Yr)</p>			
28	<p>Karan Maudgil (4<sup>th</sup>Yr)  AnuragAggarwal (4<sup>th</sup>Yr)  Shivani Singh (4<sup>th</sup>Yr)  AkshayMahajan (4<sup>th</sup>Yr)  Vishal Thakur (3<sup>rd</sup>Yr)  Peenaz Gupta (3<sup>rd</sup>Yr)  GauravRathi (2<sup>nd</sup>Yr)  Akshit Raja (2<sup>nd</sup>Yr)  Daanish Abdul Aziz (2<sup>nd</sup>Yr)  ShreyaAdya (2<sup>nd</sup>Yr)  Nitish Garg (2<sup>nd</sup>Yr)  Ridhima Datta (2<sup>nd</sup>Yr)  Ankita Das (2<sup>nd</sup>Yr)  Navneet Gupta (2<sup>nd</sup>Yr)  PriyankaBhola (2<sup>nd</sup>Yr)  DivyaChaitnaya (2<sup>nd</sup>Yr)  Mohit Kumar (2<sup>nd</sup>Yr)  NipunDahra (2<sup>nd</sup>Yr)  Prakhar Gupta (2<sup>nd</sup>Yr)  PayalNiharika (2<sup>nd</sup>Yr)  Vijitdubey (2<sup>nd</sup>Yr)  Maniksangal (1<sup>st</sup>Yr)  Radhika Jain (1<sup>st</sup>Yr)  Radhika Sharma  AvnikaPuri (1<sup>st</sup>Yr)  ShubranshuChaudhry (1<sup>st</sup>Yr)  Ashish (1<sup>st</sup>Yr)  Ashish Gupta (1<sup>st</sup>Yr)  Anshit Malik (1<sup>st</sup>Yr)</p>	Group Dance Competition	DCE-Delhi	1 <sup>st</sup> Prize

	AkshitSingla (1 <sup>st</sup> Yr) Karan Taneja (1 <sup>st</sup> Yr)			
29	Fateh Singh Mann (2 <sup>nd</sup> Yr) RatulArora (3 <sup>rd</sup> Yr)	Consortium Managerial Fest	VNIT-Nagpur	3 <sup>rd</sup> prize
30	RatulArora (3 <sup>rd</sup> Yr)	Parivartan Ultimo Empresario competition	CEC-Landran	1 <sup>st</sup> prize
31	Abhinav Aman Sidharth	Parivartan Ultimo Empresario competition	CEC-Landran	2 <sup>nd</sup> prize
32	KirtiTripathi (2 <sup>nd</sup> Yr) AvijeetBoparai (2 <sup>nd</sup> Yr)	TATA Crucible	TATA	1 <sup>st</sup> Prize
33	GulsherSahni (1 <sup>st</sup> Yr) AnishNangia (2ndYr)	Debating Competition	NLU-Delhi	Quarterfinal Qualifiers

### **37. Activities of the Guidance and Counselling Unit**

Following are the activities undertaken by guidance and counselling unit in the year 2010-11:

1. Individual meetings of the Students Counselor with the students in need.
2. Sessions with students those who are suffering from severe problems.
3. Interaction with the parents of those students who are having severe problem.
4. Discussion with subject teachers of the students who are not able to perform well academically.
5. Psychological testing (in order to identify the problem of individual student).
6. Expert talks on personality development, psychological problems, personal and social problems.
7. Peer help group activities (in which students identify problems of their friends and refer them for counselling)
8. Psychotherapy is undertaken for faculty members.
9. Motivating students in need to visit counselling office and creating awareness regarding counselling in institute as well as hostels.

### 38. Placement Services Provided to Students

Number of the Companies	Number of Students Placed	Range of Package
93	425	Rs. 3.00 to Rs. 12.71 lacs p.a.

#### Top companies that visited the institution during the year 2010-11

- 1) Texas
- 2) LG Electronics
- 3) Tata Motors
- 4) Cisco
- 5) Goldman Sachs
- 6) Namura
- 7) Maruti
- 8) Trident
- 9) BHEL
- 10) Engineers India Limited
- 11) ST Ericsson
- 12) EDIFECS
- 13) DRDO
- 14) FUTURE FIRST

#### Recruitment done through placement cell during the year 2010-11

Department/ Programme (BE+ME)	Number of companies visited	Number of students recruited	Average Salary Per Annum (in lacs)	Highest Salary Offered Per annum (in lacs)
Aeronautical	06	08	5.14	5.5
Civil	12	49	3.86	9.0
Computer Science	18	33	6.19	12.71
Electrical	16	40	4.67	9.00
Electronics	22	70	4.23	8.50
I.T.	15	37	4.29	8.50
Mechanical	21	52	4.57	9.52
Metallurgical	09	23	3.59	4.59
Production	11	22	4.13	8.5



### 39. Development Programmes for Non-teaching Staff

Following are the details of the development program attended by non teaching staff. However, no programme was conducted for the same.

#### Programme Attended

S.No.	Name of the Staff member	Programme Attended	Duration	Institution (where attended)
1.	Ms. Maninder Kaur, Sr. Librarian	Refresher course in Library and Information Science	28.12.2010 to 17.01.2011	Guru Nanak Dev University, Amritsar
2.	Ms. Veena Manocha, Jr. Assistant	RTI	05.07.2010	U.T., Guest House

## 40. Good Practices of the Institution

### Good Practices in Curricular Aspects

- a) In the year 2005, the entire curriculum for undergraduate & Post graduate Programmes was re-designed in line with the latest trends. New concepts of Design points and Honours programme have been introduced. Courses like Mechatronics, Introduction to Engg. Design, Introduction to Manufacturing form an integral part of the curriculum.
- b) Academic Programmes are flexible in that they are credit-based and there are options available in Humanities, Departmental Electives and Open Elective Courses.
- c) Academic web server facility where the course materials, assignments etc. can be uploaded by the faculty for students' reference.
- d) Feedback from employers / alumni / outgoing students is obtained regularly and gets due consideration in the design / revision of curriculum.
- e) The curriculum and the scheme has again been revised and the revised courses have been offered w.e.f. the session 2010-11.
- f) Interdisciplinary Courses like Mechatronics, Unified Electrical Engineering and Unified Mechanical Engineering are also there.

### Good Practices in Teaching and Learning

- a) Technology Orientation: the curriculum has been framed such that a student is exposed to more of technology courses at the very beginning of the academic programme. The exposure to workshop practice has increased.
- b) Engineering Core: There is a vast engineering core knowledge that every engineer of whatever discipline must have. To meet this, the curriculum has two two-semester courses, namely, Integrated Mechanical Engineering, and Integrated Electrical Engineering. The first course is mandatory for all non-mechanical disciplines (Computer Science and Engineering, Electrical Engineering, Electronics and Communications Engineering, and Information Technology), and the second by all non-electrical disciplines (Aeronautical Engineering, Civil Engineering, Mechanical Engineering, Metallurgical Engineering, and Production Engineering).

c) Design Orientation: Design forms a very important part of engineering as a prescriptive discipline. Design training has been made an integral part of institute's curricula. To ensure that students learn to design, the design training is not confined to just a few capstone courses, but starts from the very beginning, and in as many courses as possible. The students undertake open-ended problems, the successful solutions of which require students to look up data-books, to integrate knowledge learnt in different courses or at least in different parts of a course, to understand that most design problems require iterative methods, to appreciate that optimization and sensitivity analyses are necessary tools of design, and to take holistic view of problems. To implement this, the design content of each curriculum is framed. For each 15-hour worth of design work required in a course, one *design point* is assigned to the course. A student must earn at least 30 *design points* before completing a B.Tech degree curriculum. Some of these design projects involve groups of students working together.

- d) Honours Programme: To provide sufficient challenge to the brighter students, an *Honours* programme has been offered. In this programme the students are encouraged to overreach and undertake extra learning units, assignments, projects, etc., over and above what is prescribed for the regular course. The grade in the *Honours* course depends upon the student's performance in the regular material prescribed for the course *as well as* in the extra material covered.
- e) Communication Skills: In addition to the regular courses a course on communication skills is offered after the college hours.
- f) Science and Mathematics: Each curriculum stresses the scientific basis of engineering practice. Each programme has at least 6 courses in science and mathematics, developed to train the students in the tools required for a specific discipline.
- g) Breadth and Depth Requirements: Each curriculum has been so designed that it covers the essentials of the major sub-divisions of a discipline. The students are required to select electives from within groups of courses classified according to the major sub-divisions of the discipline so that a depth area can be built.
- h) Information Technology: In today's information-oriented global economy, university graduates must be savvy users of information technology. That is why, the institute's programmes use information technology as an effective tool to deliver content.
- i) Experimental Methods: The laboratory courses are carefully designed so that a student learns that there is an experimental methodology, that it is field-independent, reliable, and can be followed to make decisions at each stage i.e. from formulating the objectives to

analyzing the results. The purpose of the laboratory experiments is *to teach* experimental methods to obtain design information *rather than to demonstrate* physical phenomena.

- j) Humanities and Social Sciences: Our students need to develop in an all-round manner and must understand the human and the social contexts within which all professional activities take place. For this reason the programmes should have about 5% content related to humanities and social sciences.
- k) Comprehensive Viva: There is a comprehensive oral examination at the end of the programme that tests a student on his comprehension of the discipline as a whole.

Besides above an innovative Academic web server facility has been in-house developed and implemented where the course materials, assignments etc. can be uploaded by the faculty for the reference of the students. Full semester internship in industry/research institutes during the sixth semester of BE programme gives the student good exposure to actual work environment. New courses like Mechatronics, Engineering Design, Introduction to Manufacturing etc. form an integral part of the BE curriculum. The evaluation process is completely transparent and continuous. Evaluated answer-books are available to the students within 96 hours of the end of the examination.

#### Good Practices in Research, Consultancy and Extension

##### A. Good Practices in Research

###### a. *In house project funding*

The faculty is encouraged to undertake In-house Research Projects by providing them internal funding for creation/enhancement of facility, which is useful to research students (M.Tech & PhD) as well as to the needs of the industry. A budget of approx. Rs. 100 lacs is provided for this purpose annually.

###### b. *Incentives for Sponsored Projects*

In order to encourage our faculty to undertake sponsored research, an incentive scheme has been initiated. One third of the funds received as overheads or 3% of the total fund received for the sponsored research project will be used as incentive for the faculty participating in sponsored research. The incentives may be used for any of the following research expenses except salary payments directly to the investigator/s:

- Financial assistance for attending conference (in India or abroad).

- Financial assistance to investigator/s of the concerned project travel (in India) for purposes related to research interaction with industry/institute/research organization/ faculty development program.
- Purchase of books/journal/research papers.
- Membership of professional society.
- Purchase of furniture/computing facility/ other infrastructure for the office.
- Hiring of manpower for short duration.
- Any other approved by the Director PEC

*c. Annual targets for Sponsored Research*

Each faculty member is expected to participate in sponsored research. Faculty is expected to have completed one major project (value more than Rs. 10 lakhs) every year as PI or Co-PI or one minor project (value less than Rs 10 lakhs) every four years.

*d. Concept of formation of Research Group*

Research Groups involving 3-4 faculty members, will be formed in the institute which will be provided In-house funds for carrying out research work on a relevant emerging areas and for organizing national or regional level events. Such research group may expand to a new Master's Programme and may eventually become an Inter disciplinary Centre/Department.

**B Good practices in Consultancy**

- a. High interaction with industry
- b. Providing inputs or expertise required in engineering projects by Chandigarh Administration
- c. Centre for Consultancy in Engineering at PEC to carry out larger consultancy projects sponsored by Govt./Semi Govt. or autonomus organizations using the faculty, student and other resources of the institute.

**C. Good practices Extension Activites**

- a. *Innovative Projects*

Philips innovation projects series is under progress for last three years. Six innovation projects have been completed involving more than 25 students and 6 faculty members of the PEC. At present Philips India Limited announced three new projects to be undertaken

by the students under guidance of our faculty. The research project includes the innovative solutions to Heat dissipation in mixer grinder, Burning chamber bottom plate for woodstove and Motion transfer through coupler. The institute provides full support to the students of the institute for execution and implementation of Innovation projects.

b. *Participation in competitive event at national and international levels*

The students of the Mechanical Engineering Department of the institute had participated in NASA the Great Moon Buggy Race-2009 at U.S Space & Rocket Center, Huntsville, Alabama, USA. The Moon Buggy, which is manual driven vehicle, was designed and manufactured by the participants for the said contest. The Chandigarh Administration and PEC University of Technology jointly funded the project. The students of the institute had participated in the Collegiate Design Series Competition FASE (Formula SAE) Australia competition held in Melbourne, Australia in 2009. The budget of the Collegiate Design Series Competition FASE (Formula SAE) was about Rs. 25.00 lacs jointly born by the Chandigarh Administration, Punjab Government & Trident Group.

c. *PEC Science and Maths Shiksha Priyojana*

The Inclusive Growth Project "PEC Science and Maths Shiksha Pariyojna" - an initiative of the NSS unit and Department of Applied Sciences was launched in August 2010. The main objective of the project is to teach Science and Mathematics to 50 underprivileged students of government schools of Chandigarh and the peripheral regions which come under the U.T. administration.

d. *NSS Activities*

The NSS unit of the university has a tie up with the Commonwealth Asia Center under the Commonwealth Youth Credit Initiative (CYCI) and has formed two women self help groups, one engaged in making pickle and the other in stitching. The students also engage in research projects on various societal problems that includes women and children.

The NSS unit of the university has adopted a nearby slum and work towards empowering them towards a better living. This includes the Commonwealth Youth Credit Initiative that has changed the lives of the women who are part of the self help group to a large extent who feel independent and contribute in the welfare of their family. Through the awareness drives and engagement programmes, there has been a change in the living of the slum dwellers who are now more responsible citizens.

*e. Energy and Envirovision Club*

The Energy and Envirovision Club works towards the betterment of the environment and energy conservation. The club has been taking initiatives in this direction with the sole purpose of serving mankind. Keeping in view the deteriorating condition of the environment, the Envirovision Club arises awareness and friendliness towards the environment and welcomes all those who want to join hands and work for the same cause. Activities of the club include tree plantation, Anti-polythene drive, Rain Water Harvesting project and Global Warming Rally.

*f. PEC Open House*

PEC Open House is an annual event organized with the aim to encourage the young school students to pursue engineering as their career. It seeks to aspire the future generation of our country by opening their minds to the developing technologies of the present time. Open House gives the students of all the departments of the institute to an opportunity to showcase their projects in front of the school students in the form of presentations and working models. The visiting schools are also acquainted with the laboratories and workshops of the college.

Good Practices for Development of Infrastructure

- a) Adequate funds for maintenance and up gradation of physical facilities.
- b) Adequate non-recurring budget for up gradation of laboratory equipment.
- c) LCD projectors for all lecture rooms.
- d) Wi-fi internet connectivity in academic area.
- e) Laptop with every student.

Good Practices for development of Learning Resources

- a) Adequate funds for purchase of books, journals, CDs.
- b) Membership of INDEST consortium.
- c) Technology Enhanced Learning Resources like NPTEL etc.
- d) Academic web server for uploading academic content.
- e) Online Public Access Catalogue for efficient user search from any location in the campus.

- f) Good learning ambience in library.

#### Good Practices in Student Support and Progression

PEC offers

- a) Scholarships/Free ships for SC/ST/EWS/Women/Meritorious students
- b) Counselling Service to help students facing stress
- c) Summer courses for slow learners
- d) Financial support to students to participate in national and international conferences
- e) Faculty support and financial assistance to students for undertaking major competitive projects
- f) Well placed alumni provide career guidance and mentorship
- g) Student exchange with foreign universities
- h) Students projects in collaboration with industry



## **41. Linkages developed with National/ International, academic/research bodies**

### **MOU with NJIT, USA**

A Memorandum of Understanding was signed and exchanged between PEC University of Technology, Chandigarh and New Jersey Institute of Technology (NJIT), USA on March 28, 2011 by Dr. H.Ross, Chief of Staff, NJIT and Dr. Manoj Datta, Director, PEC University of Technology. Dr. S. Saigal, Distinguished Professor and Dean New Jersey Institute of Technology (NJIT), USA who is an Alumnus of PEC, was the driving force behind the collaboration. The MoU was signed with the major objective of establishing academic collaboration and fostering student exchange between the two Universities. Dr. Vasundhara Singh, faculty in-charge at PEC and Dr. Sanjeev Sofat, Dean Academic Affairs facilitated the collaboration. This agreement includes various activities which will enable both PEC and NJIT to exchange students at both undergraduate and postgraduate levels for internship/projects and course work in regular engineering curriculum for a period of up-to six months to one year. The MoU will also foster co-operation for faculty exchange through deputation for short term assignments upto a period of one year and other activities which will include joint projects, joint supervision of doctoral students and other academic programmes of mutual interest. This agreement will be valid for the next five years.

## **42. Action Taken Report on the AQAR of the previous year**

The AQAR report is being prepared for the first time by the Institution and hence there is no previous AQAR report.

## **43. Any other relevant information the institution wishes to add: NIL**

## SECTION-C

### **Outcomes achieved by the end of the year**

#### **Academic Outcomes**

In the year 2011, a total of 370 students completed their B.E programme in various disciplines and 23 graduated with Honors. 167 ME students also completed their programme of studies this year. 2 PhD scholars have also completed their degrees. As per the plan of action for year 2010-2011, 90-95% of classes scheduled were actually engaged by the faculty alongwith complete transparency of student evaluation and timely declaration of results. Three new academic PG programmes out of which two are inter disciplinary were initiated and new scheme was implemented for UG programmes. All the classrooms were equipped with LCD projectors, white boards, Wi Fi etc.

#### **Training & Placement**

In the year 2011, 332 out of 364 eligible BE students of 2010-11 batch have been offered jobs through campus interviews conducted by 93 companies. 93 ME students also secured jobs through these interviews.

#### **Research & Development**

As an initiative towards faculty development programme, 36 faculty members attended various national/international conferences and short term courses. Also approximately 5 faculty members were sent by the institute for PhD programme under QIP. Seminars/workshops were conducted by the various departments in the institute for the faculty of engineering colleges and industry persons. As an outcome of the research, more than 100 papers were published in international/national journals and conferences by the faculty of various departments. More than 200 consultancy/testing projects were undertaken by the institute faculty.

#### **Sponsored Research, Consultancy and MOUs**

Some of the faculty members are pursuing research projects funded by external agencies like DST, AICTE, DIT, IISC Bangalore etc. of approximately 180 lacs. To further enhance the research output of the faculty, institute also provided funds for carrying out research in the form of in-house research projects. Some of the in-house research projects were completed in the year 2010 and rest are ongoing. An international linkage with New Jersey institute of technology, USA was developed which includes student and faculty exchange leading to joint projects and other activities upto a period of one year.

#### **Infrastructure Development**

Fourteen engineering works related to buildings, public health and electrical installation were taken up by the engineering department with the help of UT Administration.

### **Student Activities**

For encouraging students to participate and excel in various co-curricular and extra curricular activities at national and international level, financial aid was provided internally and by external agencies. Also students obtained financial aid for paper publication, technical societies, organizations of technical and cultural events sports etc. The students achieved several awards in cultural as well as technical events at national and international level like BAJA SAE India 2011, Formula SAE NASA, Great Moonbuggy race and technical events at IIT Kanpur, Chennai and IISC Bangalore etc.

Open House as an annual event of the institute was also organized in which the various projects made by the students of the institute were showcased to the school students. Over 300 students from 43 schools visited the institute to see the projects and have know-how about the institute.

### **Social Activities**

NSS took several initiatives towards the community schemes like PEC Shiksha Pariyojna to benefit under privileged students, Workshop coat stitching and pickle preparation contract to Self Help Group to benefit the women in terms of providing employment to them. To improve the learning resources library, approx. Rs. 44 lacs were spent for the purchase of nearly 2400 books and 72 journals. In the two Blood Donation camps held during the current session 778 units of blood were donated by the faculty, staff and students of the institute.

### **Technology Upgradation**

There is a continuous technology upgradation in the various engineering departments, computer centre, library etc in the form of purchase of state of art equipments, softwares, setting up of new labs and subscription of new journals and magazines etc.

### **Support from Alumni**

The Annual Alumni meet held in December 2010 witnessed participation by a large number of Alumni. The Alumni interacted with the faculty of their individual departments. Alumni have also instituted several awards and scholarships for the needy and the meritorious students of the institute through PEC Old Students Association.

## **SECTION-D**

### **Plans of the Higher Education Institute for the next year**

- To sustain and improve the overall performance of the institute on National and International level.
- To adopt best practices at the institute for teaching and research.
- To improve communication skills, enterpreunership skills and innovative skills etc. by way of encouraging the students to perform and to take part in national and international events.
- Undergo expansion by offering new programs in emerging areas like VLSI and Industrial Design.
- Take initiatives to fill vacant faculty posts.
- Take initiatives to rationalize the staff strength by increasing at certain levels and outsourcing at other levels.
- Increase sponsored research and consulting projects.
- To increase the number of students being admitted to PhD programme.
- To encourage faculty members to publish more number of research papers in refereed journals and national and international conferences.
- Encourage students to undergo overseas exchange programme.
- Engage with industry and alumni through annual meets in each department.
- Organize short courses and workshops/seminars/conferences by various departments.
- Undertake city initiatives every year and offer solutions for urban problems.
- Undertake department level or NSS level initiatives or affirmative action for helping the underprivileged through skill development /knowledge development.
- To upgrade the infrastructural facilities in the various departments of the institute and ensure optimum utilization of them.

**Name and Signature of the  
Director/Coordinator, IQAC**

**Name and Signature of the  
Chairperson, IQAC**