

Annual Quality Assurance Report (AQAR)

Name of the Institution : **PEC University of Technology, Sector-12, Chandigarh**
Year of Report : **August 2011- July 2012**

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. 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 :-

Sr. No.	IQAC Members	Name and Designation
1	Chairperson (Head of HEI)	Prof. Manoj Datta, 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. Dr Girish Sahni, Director, Central Scientific Instrumentation Organisation (CSIO), Sector-30, Chandigarh 2. Dr. Dhirender Tayal, Former President of PECOSA 3. Mr. DNV Kumara Guru, Director, External Relations, Indian School of Business, Mohali
4	Coordinator of IQAC and Member Secretary	Dr. (Mrs.) Neena Gupta, 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 academic year starting from August 2011 to July 2012.

SECTION-A

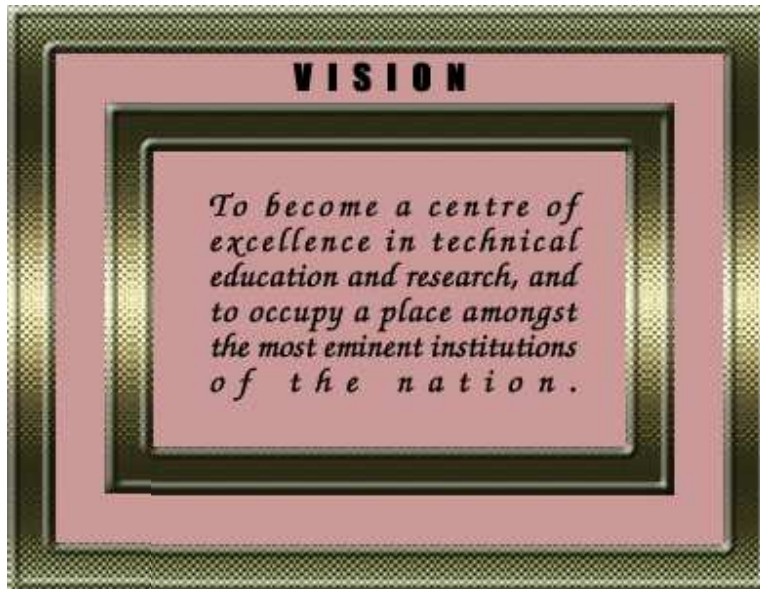
Plan of action chalked by IQAC in the beginning of the year (August 2011-July 2012) towards quality enhancement is as under:-

- 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.

Activities reflecting the goals and objectives of the institution

Vision & Mission of the College

Vision of the College



Mission of the College

- To build across the College a culture of excellence in teaching and learning with needed performance and accountability from all support activities.
- To enhance the College standing as the college of choice for students across the country; and to augment the presence of international students to at least ten percent of 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 College have the top rating in placement.
- To achieve excellence in application-oriented research in selected areas of technology to contribute to the development of the region and the nation.
- To promote co- and extra-curricular activities for over-all personality development of the students.
- To develop responsible citizenship 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 College.

2. New Academic Programmes initiated (UG & PG)

S.No.	Department Initiating Programme	Coordinator(s) of Programme	UG Title	PG Title	Dual Degree	Intake	Year of Start of Programme
1.	Electronics & Electrical Communication	Dr. Neelam Rup Parkash	-	VLSI Design	-	18+5*	2012 *
2.	Production Engineering	Prof. Parveen Kalra		Industrial Design		23	2011-12

* Part time 2 sponsored 3

3. Innovations in Curricular Design & Transaction – New Scheme for under graduate courses was implemented in the year 2010.

4. Inter-disciplinary programmes started

S.No.	Year of Starting the Programme	Main Area of the Course	Collaborating Department	Coordinators	Intake
1.	2011-12	Industrial Design	Production Engineering	Prof. Parveen Kalra	23

5. Examination Reforms Implemented

Examination Reforms after year 2005: PEC University of Technology became deemed university in 2005. Since then it has been following a continuous evaluation and grading system for the courses. The relevant portion Clause 6(Teaching Evaluation) (Annexure-III) from the “Rules and Regulations for the Undergraduate Programmes” is attached for ready reference. (Annexure-III)

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 1st and 2nd 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)
	Number of Students Qualified Gate for ME Admission
Electrical Engineering	09
Mechanical Engineering	35
Production Engineering	01

Applied Sciences Department

M.Sc	Ph.D
No. of Students Qualified NET/SLET etc.	No. of Students Admitted with NET/SLET etc.
N.A.	One Student admitted with NET

7. Initiative towards Faculty Development Programme

International Conference/Workshop/Symposium Attended by faculty members

S.No.	Name of Faculty	Period
1	Neelu Jain	August 27-28, 2011, China
2	L.N. Sharma	Oct. 3-7, 2011, Taiwan
3	Rakesh Kumar	Nov. 28-30, 2011, Italy
4	P.S. Satsangi	Jan. 16-18, 2012, USA
5	Ajay Mittal	June 25-27, 2012, Aveiro, Portugal
6	Nagendra Sah	July 7-8, 2012, Paris, France

National Conference/Workshop/Symposium Attended by faculty members

S.No.	Name of Faculty	Period
1	Ajay Mittal	November 3-5, 2011, Shimla, H.P.
2	Harminder Kaur	November 3-5, 2011, Naini Tal
3	Reeta Mahajan	December 20-21, 2011, Noida
4	S K Singh	December 15-17, 2011, Kochi
5	Jagmohan Datt	November 13-16, 2011, Hyderabad
6	Prem Lata	November 10-12, 2011, Chandigarh
7	Jagdish Kumar	December 22-24, 2011, IIT Madras
8	Alakesh Manna	December 10-11, 2011, Pune
9	Sanjeev Kumar	December 15-18, 2011, Bangalore
10	R K Mahajan	December 26-31, 2011, Bangalore
11	Anju Singla	January 12-14, 2012, Delhi
12	Perminderjit Singh	January 20-22, 2012, Greater Noida
13	Shobhna Dhiman	February 15-18, 2012, PU, Chandigarh
14	Neelam Rup Prakash	February 27-02 March, 2012, NITTTR, Chandigarh
15	L.N. Sharma	February 26-29, 2012, IIT, Bombay
16	Satyendra Singh	February 20-24, 2012, NITTTR, Chandigarh
17	Uma Batra	February 17-18, 2012, PU, Chandigarh
18	Geeta Arora	March 26-28, 2012, NIH Roorkee
19	Loveleen Kaur Taneja	March 31, 2012, UIT, PU, Chandigarh

20	Rintu Khanna	March 31, 2012, UIT, PU, Chandigarh
21	Siby John	March 31-01 April, 2012, Chennai
22	R M Belokar	May 14-18, 2012, NIT Surat
23	Sanjeev Sofat	May 19 2012, Bhubaneshwar
24	Trilochan Kaur	May 29-01 June, 2012, IIT Delhi
25	Sanjeev Kumar	May 31-02 June, 2012, Mumbai
26	Padmawati	June 4-15, 2012, Thapar University Patiala
27	Jagdish Kumar	June 11-16, 2012, IIT Kharagpur
28	Neelu Jain	June 18-22, 2012, Chitkara University, Punjab
29	Jagdish Kumar	July 09-13, 2012, IIT Mandi
30	Rakesh Kumar	July 09-13, 2012, IIT Bombay
31	Jaimala Gambhir	July 09-13, 2012, IIT Mandi
32	P.S. Satsangi	July 17-22, 2012, IIT Kanpur
33	Meena Mahajan	July 16-04, August, 2012, Shimla

QIP/Ph.D Prgamme/ME/Post Doctorate

S.No.	Name of Faculty	Department	Period
1	C S Jawalkar	Production	15.07.2010
2	Sarabjit Singh	Mechanical	15.07.2010
3	S K Soni	Mechanical	20.07.2010
4	Arun Kumar	E &Ec	26.07.2010
5	Sandeep Kaur	Electrical	18.07.2011

8. Total number of Seminars/Workshop Conducted

S.No.	Name of Faculty	Title of Conference/Workshop	Period	Sponsored By/ Self Finance
1.	Dr. Shakti Arora Dr. S K Singh	Best practice of MSW Management in India (with focus on Chandigarh)	03.11.2011	Supported by Chandigarh Administration
2	Dr Sushant Samir Dr. D R Prajapati	Recent Developments in Mechanical Engg.	11.06.2012 to 22.06.2012	TEQIP-II
3	Dr. Balwinder Singh, Prof. S K Suman Dr. Rintu Khanna	Chandigarh-Solar City of the future : Planning and Implementation	28.02.2012	DST
4	Dr. Sanjeev Sofat Dr. Divya Bansal	Round Table Conference on Critical information infrastructure protection	28.08.2012	Self Finance
5	Dr. Divya Bansal Prof. Ajay Mittal Prof. Manvjeet Kaur	Faculty enabled programme on Nurturing Professionals for industry jointly with Infosys	12.09.2012	Self Finance

9. Research Projects a) Ongoing b) Completed

External Projects						
S.No	Name of Principal Investigator/ Co-Investigator	Department	Title of the Project	Year of Sanction	Sponsored by	Ongoing/ Completed
1.	Prof. L.N Sharma	Applied Science	Spatio-Temporal Monitoring Of A Glacier Using Satellite Remote Sensing & Luminescence	2007	DST	Ongoing
2.	Prof. Sarita Singla	Civil Engineering	Experimental study of mechanical behaviour and durability of HPC	2006	AICTE	Ongoing
3.	Prof. Siby John	Civil Engineering	Assessment of geochemical parameters of ground water in Chandigarh	2007	DST	Ongoing
4.	Prof. Divya	Computer Science	Design and development of dependable secure and efficient protocols for wireless mesh network	2009	DIT	Completed
5.	Prof. Arun K Lal	Mechanical Engineering	Establishment of new national MEMS Design Centre	2009	IISC, Bangalore	Ongoing
6.	Prof. Siby John	Civil Engineering	Monitoring & performance evaluation of STP at Raipur Khurd, Chandigarh	2010	Engineering Deptt. Chandigarh Administration	Ongoing
7.	Prof. T.K Jindal	Aeronautical Engineering	Design & Development of pulse detonation propulsion system test Rig	2009	TBRL	Ongoing
8.	Prof. R. S Walia	Production Engineering	U.S Space Centre Moon buggy April, 2011	2011	DST, Chd. Admn., Govt. of Punjab	Completed
9.	Prof. Divya	Computer Science	Development of Cloud Based Framework for Delivering Security as a Service	2012	Deptt. of Information Technology Govt. of India, N. Delhi	Ongoing

In-House Projects						
1.	Dr. Narendra Mohan	Production Engineering	Development of submerged arc welding fluxes	2006	PEC University of Technology	Completed
2.	Dr. Uma Batra	Materials & Metallurgical Engineering	Establishment of state of the art lab-Material characterization lab			Ongoing
3.	Sh. J.D.Sharma	Materials & Metallurgical Engineering	Development of ADI and its commercialization			Completed
4.	Prof. T.K Jindal	Aeronautical Engineering	Centre for Research and Promotion of Non-Conventional Energy Sources			Completed
5.	Dr. Uma Batra	Materials & Metallurgical Engineering	Enhancement of mechanical properties and biocompatibility of hydroxyapatite ceramic using sintering additives	2008		Ongoing
6.	Dr. S.K Mangal	Mechanical Engineering	To set up semi active vibration control facility			Completed
7.	Ms. Jyoti Kedia	Electronics & Electrical Communication	VLSI Design Lab			Completed
8.	Dr. S K Singh	Civil Engineering	Geotechnical computational facility			Completed
9.	Prof. Sanjeev Kumar Prof. D.R Prajapati	Mechanical Engineering	Improving the Surface Properties of Important Die Steel Materials by Electrical Discharge Machining	2009		Ongoing
10.	Prof. Divya Prof. Sanjeev Sofat	Computer Science	Wireless Sensor Networks Research Facility			Ongoing
11.	Prof. Satyendra Singh Prof. Vasundhara Singh	Applied Science	Synthesis and Characterization of Nano-structured Materials for Memory Application and Catalysis			

12.	Prof. Nagendra Sah Prof. Neelam R Prakash Prof. Jasbir Kaur	Electronics & Electrical Communication	Wireless Design & Planning Facility	2010	PEC University of Technology	Ongoing	
13.	Prof. N.M Suri	Production Engineering	Developing Hybrid EDM Process				
14.	Prof. Neelu Jain Prof. Rita Mahajan	Electronics & Electrical Communication	Establishment of Facility for Embedded Systems				
15.	Prof. Divya Prof. Sanjeev Sofat	Computer Science	Password Recovery Facility				
16.	Prof. Rakesh Kumar Prof. Kishori Lal	Aeronautical Engineering	Installation of Supersonic Open-jet Wind Tunnel with Data Acquisition System				
17.	Prof. Parveen Kalra Prof. Rahul O Vaishya Prof. Rajesh Kumar Prof. Jagjit Singh Randhawa	Production Engineering	Ergonomics Evaluation of Industrial Systems and Consumer Products	2012	PEC University of Technology	Ongoing	
18	Dr. Sanjeev Sofat Prof. Manavjit Kaur Prof. Divya Bansal Prof. Ajay Mittal	Computer Science	Advanced facility in Biometric Sensor Technologies				
19	Dr. Tripta Goyal Dr. Pardeep Gupta	Civil Engineering	Study of Mobility Plan Components for Chandigarh				Ongoing
20	Prof Uma	Materials &	Bioceramic Coatings				Ongoing

	Batra Prof. J.D Sharma	Metallurgical Engineering	on Titanium Alloy Bioimplants			
21	Dr. Neena Gupta Prof. Ms Divya Prof. Ms. Jyoti Kedia	Electronics & Electrical Communication	Photonic Systems and Network Design			Ongoing
22	Dr. T.K Jindal Prof. Y.S Chauhan	Aeronautical Engineering	Development of Pulse Detonation Test facility			Ongoing
23	Dr. Vasundhara Singh Dr. Satyendra Singh	Applied Science	Ionic Liquid Mediated Synthesis of Metal and Metal Oxide based Nanomaterials for Environmental Catalysis			Ongoing

10. Patents Generated, if any: NIL

11. New Collaborative Research Programmes

S.No	Collaborating Agency	Area of Collaboration	Year of Collaboration and present status
1	ICICI	To encourage and promote talent in premier educational institutions to bring forth new ideas and innovations in banking/finance industry.	2011 (in force)
2	Tata Consultancy Services (TCS)	To conduct Workshops for students, Faculty Development Programs for teachers, Students Awards to encourage healthy competition at colleges, Internships Training opportunity for students	2012 (in force)
3	Talwar and Talwar Consultants Pvt. Ltd.	TTC may from time to time need some problems to be resolved or some lab facilities, PEC shall provide assistance and logistic support as per applicable rules and regulations. TTC, through its national and international associates, professionals and patent agents, IP firms and IP Attorneys, shall provide support to PEC for establishing and IPR cell.	2012 (in force)
4	Zscaler, USA	Zscaler is intended to promote projects and research activities at PEC University of Technology in the area of Cloud Security.	2012 (in force)

12. Research Grants Received from Various Agencies

S.No	Principal Investigator / Co-Investigator	Title of Research Project	Funding Agency	Amount (Rs in Lacs)
1.	Prof. Divya	Development of Cloud Based Framework for Delivering Security as a Service	Deptt. of Information Technology Govt. of India, New Delhi	55.0

13. Details of Research Scholars

S. No.	SID	Name	Department	Supervisor(s)	Year of Admissions	Area of Specialization of Candidate
1.	083002	Jatinder Kaur	Applied Science	Dr.Prem Lata	2008	Chemistry
2.	0930102	Gurpreet Kaur	Applied Science	Dr.Vasundhara Singh	2009	Chemistry
3.	0930103	Renu Lamba	Applied Science	Dr.M.L.Gupta	2009	Humanities
4.	0930104	Upendra Tiwari	Applied Science	Dr.M.L.Gupta	2009	Mangement
5.	0930105	Kanav Dhir	Applied Science	Dr.Harminder Kaur Dr.Jaspreet Kaur	2009	Chemistry
6.	11301001	Arpana Garg	Applied Science	Dr.Sucheta	2011	Mathematics
7.	11301002	Munish Kapila	Applied Science	Dr.M.L.Gupta	2011	Finance
8.	11301003	Parul Grover	Applied Science	Dr.Anju Singla	2011	Finance
9.	11301004	Pavitra Dhamija	Applied Science	Dr.Anju Singla	2011	Humanities (HRM)
10	11301008	Satbir Singh	Applied Science	Dr.Asha Goel	2011	Mathematics & Algebra/Topology
11	11301009	Satwant Kaur Sahi	Applied Science	Dr.Vasundhara Singh	2011	Chemistry
12	11301010	Shivani Gupta	Applied Science	Dr.Anju Singla	2011	Marketing
13	11301012	Kamal Kishore	Applied Science	Dr.Asha Goel	2011	Mathematics
14	11301014	Akansha Kapila	Applied Science	Dr.Harminder Singh	2011	Chemistry & Inorganic Chemistry
15	11301015	Amanpreet Kaur Longia	Applied Science	Dr.Vasundhara Singh	2011	Chemistry
16	073003	Ashwani Kumar	Mechanical Engg.	Dr.S.K.Mangal	2007	Mechanical Engg.
17	073013	Neeraj Singhal	Mechanical Engg.	Dr.R.S.Walia	2007	Mechanical Engg.
18	073015	Rajesh Kumar	Mechanical Engg.	Dr.P.Kalra Dr.Arun K.lall	2007	Mechanical Engg.
19	073019	Tejbir Kaur	Mechanical Engg.	Dr.V.P.Singh Dr.Jagdish Kumar	2007	Mechanical Engg.
20	073025	Anoop Kumar Singh	Mechanical Engg.	Dr.V.P.Singh Dr.Sanjeev Kumar	2007	Mechanical Engg.
21	073026	Arindam Ghoshal	Mechanical Engg.	Dr.A.K.Lall Dr.A.Manna	2007	Mechanical Engg.
22	073029	Rakesh Kumar	Mechanical Engg.	Dr.S.K.Mangal	2007	Mechanical Engg.

23	0930901	Harjinder Singh Pannu	Mechanical Engg.	Dr.D.R.Prajapati Dr.Sanjeev Kumar	2009	Mechanical Engg.
24	0930902	Harry Garg	Mechanical Engg.	Dr.Arun.K.Lall	2009	Mechanical Engg.
25	0930903	K.Z.Molla	Mechanical Engg.	Dr.A.Manna	2009	Mechanical Engg.(Advance Mfg Process)
26	0930906	Balraj Singh Brar	Mechanical Engg.	Dr.V.P.Singh Dr.R.S.Walia	2009	Mechanical Engg.
27	10309001	Aman Kumar	Mechanical Engg.	Dr.P.S.Satsangi Dr.Perminder.J.Singh	2010	Mechanical Engg.
28	10309002	Amit Kumar Tanwar	Mechanical Engg.	Dr.D.R.Prajapati Dr.Perminder.J.Singh	2010	Mechanical Engg.
29	10309003	Mukesh Verma	Mechanical Engg.	Dr.A.Manna	2010	Mechanical Engg.
30	10309004	Majid Mehrabi	Mechanical Engg.	Dr.V.P.Singh	2010	Mechanical Engg.
31	11309001	Amoljeet Singh Gill	Mechanical Engg.	Dr.Sanjeev Kumar	2011	Mechanical Engg.
32	11309002	Bhanupartap Singh	Mechanical Engg.	Dr.Arun.K.Lall	2011	Mechanical Engg.
33	11309003	Karanpreet Bhoparai	Mechanical Engg.	Dr.P.S.Satsangi	2011	Mechanical Engg.
34	11309004	Rajwinder Singh	Mechanical Engg.	Dr.V.P.Singh	2011	Mechanical Engg.
35	11309005	Amit Thakur	Mechanical Engg.	Dr.A.Manna	2011	Mechanical Engg.
36	11309006	Jaspreet Hira	Mechanical Engg.	Dr.A.Manna	2011	Mechanical Engg.
37	11309008	Abhishek Chauhan	Mechanical Engg.	Dr.Sanjeev Verma	2011	Production
38	11309009	Bidyut Kumar Panda	Mechanical Engg.	Dr.Sanjeev Verma	2011	Production
39	09301101	Jagjit Singh Randhawa	Production Engg.	Dr.N.M.Suri	2009	Production Engg.
40	09301102	Ramandeep Singh	Production Engg.	Dr.R.S.Walia	2009	Production Engg.
41	09301103	Sukhwinder Singh Bhullar	Production Engg.	Dr.P.Kalra	2009	Production Engg.
42	10310001	Jaswinder Singh	Production Engg.	Dr.Parveen Kalra/Dr.R.S.Walia	2010	Production Engg.
43	10310002	Rahul O.Vasihya	Production Engg.	Dr.R.S.Walia/ Dr.P.Kalra	2010	Production Engg.
44	10310003	Jitender Kumar	Production Engg.	Dr.N.M.Suri	2011	Production Engg.

45	11308001	Gurpreet Singh Phull	Production Engg.	Dr.R.S.Walia	2011	Production Engg.
46	11308002	Arvind Kumar	Production Engg.	Dr.P.Kalra	2011	Production Engg.
47	11308003	Shamsher Singh Bargujer	Production Engg.	Dr.N.M.Suri/Dr.R.M .Balokar	2011	Production Engg.
48	073005	Deepak Bhutani	Production Engg.	Dr.R.S.Walia/Dr.Na gendra Mohan	2007	Production Engg .
49	083001	Nidhi Gautam	Computer Sci. & Engg.	Dr.Sanjeev Sofat Prof.Renu Vig	2008	Computer Science & Engg.
50	0930501	Manavjeet Kaur	Computer Sci. & Engg.	Dr.Sanjeev Sofat	2009	Computer Science & Engg.
51	10305001	Kailash Kumar	Computer Sci. & Engg.	Dr.Sanjeev Sofat	2010	Computer Science & Engg.
52	073008	Jaimala Ghambhir	Electrical Engg.	Dr.Tilak Thakur	2007	Electrical Engg.
53	073017	Rashmi Vikal	Electrical Engg.	Dr.Shiv Narayan	2007	Electrical Engg.
54	10306001	Preeti Gupta	Electrical Engg.	Dr.Shiv Narayan	2010	Electrical Engg.
55	11306001	Abhishek Ghandhar	Electrical Engg.	Dr.Balwinder Singh	2011	Power System
56	11306002	Ashu Valecha	Electrical Engg.	Dr.Shiv Narayan	2011	Control System
57	11306003	Bhawana Tandon	Electrical Engg.	Dr.Shiv Narayan	2011	Electrical Engg.
58	11306004	Puneet Chawla	Electrical Engg.	Dr.Balwinder Singh	2011	Electrical Engg.
59	11306005	Reminder Kaur	Electrical Engg.	Dr.Tarlochan Kaur	2011	Electrical Engg.
60	11306006	Sulata Bhandari	Electrical Engg.	Dr.Tilak Thakur	2011	Electrical Engg.
61	11306007	Surbhi Bakshi	Electrical Engg.	Dr.Tilak Thakur	2011	Electrical Engg.
62	11306008	Kamal Kant Sharma	Electrical Engg.	Dr.Balwinder Singh	2011	Power System/Power Electronics/Co ntrol System.
63	11306009	Shimi.S.L.	Electrical Engg.	Dr.Tilak Thakur Dr.Jagdish Kumar	2011	Electrical Engg.
64	0830601	Inderpreet Kaur	E&EC Engg.	Dr.Neena Gupta	2008	E&EC Engg.
65	0830602	Shilpa Jindal	E&EC Engg.	Dr.Neena Gupta	2008	E&EC Engg.
66	0830603	Sukhwinder	E&EC Engg.	Dr. Neelam Rup	2008	E&EC Engg.

		Singh		Parkash.		
67	0930701	Divya	E&EC Engg.	Dr.Neena Gupta	2009	E&EC Engg.
68	0930703	Rita Mahajan	E&EC Engg.	Dr.Deepak Bagai	2009	E&EC Engg.
69	10307005	Nagendra Sah	E&EC Engg.	Dr.Neelam Rup Parkash	2010	E&EC Engg.
70	10307001	Gurpadam Singh	E&EC Engg.	Dr. Neelam Rup Parkash	2010	E&EC Engg.
71	10307004	Kadam Vashist	E&EC Engg.	Dr. Neena Gupta	2010	E&EC Engg.
72	10307003	Jyoti Kedia	E&EC Engg.	Dr.Neena Gupta	2010	E&EC Engg.
73	10307002	Jasbir Kaur	E&EC Engg.	Dr.Neelam Rup Parkash	2010	E&EC Engg.
74	0930201	Vandana Kansal	Aeronautical Engg.	Dr.Tejjinder Kaur Jindal	2009	Non-Conventional Energy Sources.
75	11301102	Tamanna	Metallurgy Engg.	Dr.Uma Batra	2011	Metallurgy Engg.
76	11301103	Ravinder Pal Singh	Metallurgy Engg.	Dr.Uma Batra	2011	Metallurgy Engg.
77	073027	Arman Singh	Civil Engg.	Dr.A.M.Kalra	2007	Civil Engg.
78	083003	Sarita Singla	Civil Engg.	Dr.N.P.Devgan	2008	Civil Engg.
79	0830301	Kewel Krishan Gupta	Civil Engg.	Dr.A.M.Kalra	2008	Civil Engg.
80	0930301	Anil Kumar Sharma	Civil Engg.	Dr.Umesh Sharma	2009	Highway Engg.
81	0930303	Karuna Sharma	Civil Engg.	Dr.Umash Sharma	2009	Civil Engg.
82	10302001	Mahesh Kumar	Civil Engg.	Dr.Tripta Goyal	2010	Civil Engg.
83	10302002	Sunil Bhardwaj	Civil Engg.	Dr.S.K.Singh	2010	Civil Engg.
84	11303002	Natraj Singh	Civil Engg.	Dr.N.P.Devgan	2011	Structures
85	11303001	Maninder Kaur	Civil Engg.	Dr.Siby John	2011	Environmental Engg.
86	11303004	Uma Malik	Civil Engg.	Dr.A.M.Kalra	2011	Irrigation and Hydraulics Engg.
87	11303005	Nirpinder Jain	Civil Engg.	_____	2011	Highway Engg.
88	11303006	Hitender Kumar	Civil Engg.	Dr.Pardeep kumar	2011	Highway Engg.
89	11303007	Harpreet Singh	Civil Engg.	Dr.S.K.Singh	2011	Geo-Technical/Geo-Environmental Engg.

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15. Honors/Awards to the Faculty: National and International

The research paper presented by Dr L. N. Sharma “Luminescence Dating of Glacial Deposits: A Case Study of Hamtah Glacier”, was awarded as the best paper at GEOMATRIX-2012, an International Conference held at Indian Institute of Technology- Bombay, Mumbai during 26-29 February 2012.

16. Internal Sources Generated

S.No	Department	Type of Activity Carried out	Gross Amount (Rs.)
1	Applied Science	Testing & Consultancy	Rs. 77,000
2	Civil Engineering	Testing & Consultancy	Rs. 109,92,282
3	Director Office	Consultancy	Rs. 6,99,414
4	Materials and Metallurgical Engineering	Consultancy	Rs. 2000
5	Mechanical Engineering	Consultancy	Rs. 1,20,000
6	E & EC	Consultancy	Rs. 65,276
7	Dean Academic Affairs & Computer Science Engineering	Consultancy	Rs. 4,77,000

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	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	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.	NSS	Helping the students for NTSE	Students of class IX of Govt. schools is being helped to prepare for NTSE	Education Deptt. State Institute of Education, Chandigarh Administration

19. Teachers and Officers newly recruited: NIL

20. Teaching & Non-Teaching Staff Ratio

Group Name	Present Post filled
A	129
C	194
D	117
Ratio	1:2:4

21. Improvement in Library Services

Computerization of Library	Availability of Dissertation Taken Online/Title	Availability of books by Accession No.
Done	Nil	Books – 1-91462 Bookbank (General) 1-13689 Hindi/Punjabi Books 1-1005

22. New Books/Journals Subscribed and Their Value

S. No.	New Books Subscribed	Year 2011 – 2012	
	Hard Copy/E-Book	No. of Copies	Author/Cost
1	Hard Copy	767	830184
2	E-Book	65	589940

S.No.	New Journals Subscribed	
	Hard Copy Year 2011 – 2012	Online Year 2011 -2012
1	90 (cost 24,88,064/-)	2829 (cost 30,38,284/-)

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

--	--	--	--	--	--

Darken corresponding bubbles

A	A	C	0	0	0
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				
	V				

Course Name _____

My Section Number is

--	--

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.

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 student: 2258

Total expenditure for the year 2011-12 = 3410.87 lacs

per student cost = $3410.87 \div 2258 = \text{Rs. } 1.51 \text{ Lacs}$

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

Engineering department Chandigarh Administration is looking after the planning, execution and maintenance works related to buildings, roads, Public health and electrical installations in the campus. In the financial year 2011-12, the following works were taken up by the engineering department

1. Construction of PCC flooring in front of Information & Technology block (old E&Ec block).
2. Renovation of faculty rooms of Mechanical Engineering Department.
3. Repair/ replacement of defective /burnt out cable and main switches. (Replacement of burnt out cable from Sub Station to PG Structure and main switches in the Substation of PEC).
4. Providing rewiring in H. No. 236.
5. Providing False Ceiling in Metrology Lab in Production Deptt.
6. Providing and fixing of furniture in Class Room T-19 of Aero Engineering Deptt.
7. Replacement of old tube fittings with new fittings in Roto Dynamic Lab.
8. Providing rewiring of light plugs & additional plugs in Central Library.
9. Rewiring of electrical points due to shifting of Switchboard for LCD Projector Screen in Lecture Halls, Drawing Halls and Tutorial rooms.
10. Rewiring of electrical points and provision of New Tube fittings and Ceiling Fans in Baja Workshop.
11. Providing wall fans/ fresh air fans with light points and rewiring of electrical points in small committee room & Microprocessor Lab of Electrical Engg. Deptt. in PEC
12. Rewiring of electrical points in H. No. 901 & 902 (Type-V) and replacement of existing CTS wiring with recessed conduit wiring system in H. No. 903 to 906 (Type –III).
13. Providing pucca security patrolling path by the side of rear boundary wall adjoining Janta Colony and Nayagaon areas for improvement of security arrangement.
14. Replacement of existing CTS wiring with recessed conduit copper wiring and Augmentation of switch gear in H. No 809 and 154

28. Technology upgradation

S.No.	Lab development	New equipments/software purchased	Status	
			Working	Non-working
1	Set New experiment in chemistry	FTIR Spectrophotometer	Working	-
		Gaussion 09 (Software)	Working	-
		UV-Vis Spectrophotometer	Working	-
2	Setup of Advanced MicroEDM etc.	Manufacturing Lab. under process by Prof. A Manna & Prof. P S Satsangi	Purchase of CNG Lathe	

Computer Center

Software purchases	Microsoft Campus agreement
Equipments	Cyberoam UTM, storage Area Network 12 TB, Wireless Access points -17 Nos., LAN Switches – 2 Nos.
Band width	16 Mbps and 12 Mbps from NKN

Library

	High	Medium	Low
Level of Library Automation	High		
	Hard copy		Online
Journals magazines purchased	90 (in year 2012)		2836 (in year 2012)

Auditorium

New equipments purchased		
Split AC (LG-1.5 Lane) with automatic voltage stabilizers. (Transferred from O/I AC/WC)	10 Nos	A R SIN CHA A1 Q 11/4198 dated 04.08.2011

Class room development: LCD projectors installed in some of the lecture halls

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

Internet access

Bandwidth available	:	16 MBPS an 12 MBPS though 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, Estineet, Cyberoam, Sonic point etc.
Battery backup (hrs.)	:	8 Hours
Size of mail box	:	Faculty 100 MB Students : 2 GB

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

PEC is the 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

YEAR	TUITION FEE	HALF FREE SHIP	MERIT SCHOLARSHIPS	FEE WAIVER FOR WOMEN STUDENTS	BE-1 ST YEAR PHYSICALLY HANDICAPPED STUDENTS	FEE WAIVER FOR EWS	EXCESS FEE WAIVER	MERIT CUM MEANS	PURELY MEANS	GRAND TOTAL
1st 2011	RS. 32,500/ - PER SEM	65 32,500 * 65 = 21,12,500	9 32,500 * 9 * 2 = 5,85,000	12 32,500 * 12 * 2 = 7,80,000	7 32,500 * 7 * 2 = 4,55,000	11 32,500 * 11 * 2 = 7,15,000	8 32,500 * 8 * 2 = 5,20,000	--	--	51,67,500
2nd 2010	RS. 32,500/ - PER SEM	34 32,500 * 34 = 11,05,000	12 32,500 * 12*2 = 7,80,000	12 32,500 * 12 * 2 = 7,80,000	2 32,500 * 2 * 2 = 1,30,000	14 32,500 * 14 * 2 = 9,10,000	1 32,500 * 1 * 2 = 65,000	--	--	37,70,000
3rd 2009	RS. 25,000/ - PER SEM	40 25,000 * 40 = 10,00,000	22 25,000 * 22 * 2= 11,00,000	--	--	--	--	7 25,000 * 7 * 2 = 3,50,000	1 25,000 * 1 * 2 = 50,000	25,00,000
4th 2008	RS. 25,000/ - PER SEM	39 25,000 * 39 = 9,75,000	21 25,000 * 21 * 2 = 10,50,000	--	--	--	--	5 25,000 * 5 * 2 = 2,50,000	---	22,75,000
GRAND TOTAL	---	51,92,500	35,15,000	15,60,000	5,85,000	14,30,000	65,000	6,00,000	50,000	1,37,12,500

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

S. 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 surisunil@aol.com Kulwant S Grewal President kalwant@ieee.org kgrewal@telcordia.com	Toppers of all branches on the basis of CUMULATIVE RESULTS OF 6 th semester

2	PECOSA	GOEL FELLOWS HIP	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 st , 2 nd , and 3 rd year based on 2 nd , 4 th and 6 th semester results
3	PECOSA	PECOSA SYDNEY SCHOLARSHIPS	Award	Two	Rs. 5000/- each	Gian Banga Australia Gian37@optusnet.com.au Rakesh Mahajan Rakesh.Mahajan@mincom.com	Overall 1 st and 2 nd position holders for Aeronautical and Civil based on cumulative results of 2 nd semester on rotation basis
4	PECOSA	NS ATTRI SCHOLARSHIPS In memory of Shamsher S Attri	Scholarship	Six	Rs.2500/- each	Narinder S Attri-USA narinderattri@aol.com	Toppers of Mechanical and Electrical branches of 1 st , 2 nd , and 3 rd year based on 2 nd , 4 th and 6 th semester results. In case there is a common candidate between PECOSA/PALS and NS ATTRI Scholarships then 2 nd position holders shall be eligible
5	PECOSA	-DO-	Scholarship	Two	Rs. 2500/- each	-do-	Overall 1 st and 2 nd position holders amongst all branches based on 1 st 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 st 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, braraa@mantecconsultants.com ari_brara@yahoo.com	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 senior medical officer along with other supporting staff-pharmacist, nursing orderly and ward boy to attend the students and staff. In case of emergency patients are referred to Government Multi Specialty Hospital-16 or Post Graduate Institute.

34. Performance in sports activities

Sr. No.	Name of the Student	Position won/medals at National level
1	Tarun bahuguna	Third position in Sabre Fencing team event in the All India Inter University Fencing Competition held from 8-11 March, 2012 at Anna University of Technology, Coimbatore (Tamil Nadu).
2	Munish thakur	
3	Sukrit ranjan	
4	Gaurav manchanda	
5	Harleen kaur	Participated in the All India Inter University Fencing Competition held from 8-11 March, 2012 at Anna University of Technology, Coimbatore (Tamil Nadu).
6	Pathik Baruwal	Second Position in Inter Engineering Deemed University Basketball
7	Nitesh Raj Pal	
8	Ronit Yadav	
9	Yogeshwar Negi	
10	Ankush	
11	Ritesh Surana	
12	Abhishek Garg	
13	Lakshay Shekhar	
14	Ajay Saini	
15	Tarun	
16	Shaurya	
17	Amandeep	Second position in Inter Engineering Deemed University Lawn Tennis
18	Madhav Aggarwal	
19	Vaibhav Gupta	
20	Rohan Mehra	Third position in Inter Engineering Deemed University Table Tennis
21	Mohak Goyal	
22	Amit Chak	
23	Himanshu	
24	Sharanga Doley	

25	Mahesh Chandok	
26	Amrinder Singh	Third position in Inter Engineering Deemed University Volleyball
27	Ajay Singh Verma	
28	Ravi Kumar Jha	
29	Ajit Kumar	
30	Sangeet Kumar	
31	Sumer Singh	
32	Sunil Kumar	
33	Sanchit Arora	
34	Rahul Aggarwal	
35	Arjun Gupta	Participated in North Zone Inter-Varsity Badminton
36	Ankit Beniwal	
37	Aman	
38	Sourabh	
39	Shivam	
40	Abhinav Kashyap	Participated in Inter Engineering Deemed University Badminton
41	Ankit Beniwal	
42	Aman	
43	Shivam	
44	Deepit Singh Uppal	
45	Sourabh	Participated in Inter Engineering Deemed University Badminton
46	Swati Jha	
47	Debarpita Sen	
48	Vandana	
49	Chhaya Rajput	Participated in Inter Engineering Deemed University Chess
50	Arpit Kothari	
51	Sundeep Singh	

52	Nitin Wadhwa	Participated in Inter Engineering Deemed University Chess
53	Akash Garg	
54	Tanu Singla	
55	Ankita Kundra	
56	Monica Deswal	
57	Manu Jyoti	
58	Nipun Sodhi	Participated in Inter Engineering Deemed University Cricket
59	Rajat Saini	
60	Ajay	
61	Keshav Jangra	
62	Prakhar Gupta	
63	Nishant Dangi	
64	Parveen	
65	Rohit Heera	
66	Saurabh Chopra	
67	Shivam Gaur	
68	Amandeep Singh	
69	Sahil	
70	Mohit Sharma	
71	Mankiran Singh	
72	Siddharth Singh	
73	Ankit Kumar	
74	Prabhjot Grewal	Participated in North Zone Inter-Varsity Football
75	Gurleen Boparai	
76	Atinder Pal Singh	
77	Parveen	
78	Utsav Ragmi	

79	Ansh Gill	
80	Atam Parkash	
81	Sukrit Ranjan	
82	Gursimrat Singh	
83	Harpreet Singh	
84	Sushil Kumar	
85	Aviral	
86	Devender Ahlawat	
87	Vikram Pandey	
88	Harshmeet Singh	
89	Punit Basnet	
90	Binod Poudel	
91	Deepit Singh Uppal	
92	Sharanga Doley	Participated in North Zone Inter University Table Tennis
93	Himanshu	
94	Mahesh Chandok	
95	Sanal	
96	Amit Chak	
97	Amrinder Singh	Participated in North Zone Intersarsity Volleyball
98	Ajay Singh Verma	
99	Ravi Kumar Jha	
100	Sukhchain Singh	
101	Ajit Kumar	
102	Sangeet Kumar	
103	Sumer Singh	
104	Somvir Singh	
105	Nitin Deswal	

35. Incentives to Outstanding Sportspersons

Sr. No.	Particulars	Incentives
1	Cash Awards:-	
	i) Best Athlete (Boys) of PEC Annual Athletic Meet	Rs.1800/-
	ii) Best Athlete (Girls) of PEC Annual Athletic Meet	Rs.1800/-
	iii) 2 nd Best Athlete (Boys) of PEC Annual Athletic Meet	Rs.1200/-
	iv) 2 nd Best Athlete (Girls) of PEC Annual Athletic Meet	Rs.900/-
	v) Best March Past Squad during PEC Annual Athletic Meet	Rs.165/-
2	Prem Singh Kadian Memorial Awards instituted by PEC Alumnus Sh. Ajay Kadian through PECOSA:	
	i) Fastest Girl standing 1 st in 100 Meter Race during PEC Annual Athletic Meet	Rs.5000/-
	ii) Fastest Boy standing 1 st in 100 Meter Race during PEC Annual Athletic Meet	Rs.5000/-
3	Prizes & Certificates:- First, Second and Third Position holders of various PEC Annual Athletic Meet Events	
4	Sports Kit and Track Suits:- Players of all PEC Teams	
5	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	Medal & Certificate

36. Student Achievements and Awards

S.No.	Type of Activity/Achievement	Any Award Given	
		Award	Level
1	BAJA SAE AUBURN 2012	Best Asian team Design world rank : 24 Suspension world rank : 36	International
2	Great Moon Buggy Race 2012	21 st position	International
3	Annual conference student competition by Society of Manufacturing Engineers	3 rd prize	-do-
4	Technical fest IIT Kanpur a. Event Tremor b. Ocean fourteen	Top 2 positions First prize	National
5	Technical Fest BITS Pilani (event istrike)	1 st prize	-do-
6	Think India conference IISc Banglore	2 nd prize	-do-
7	Nokia India Fest 2012 a. Stage play b. Dance competiton	1 st prize 3 rd prize	-do-

37. Activities of the Guidance and Counseling Unit

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 students those 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 & social problems.
7. Peer help group activities (in which students identify problems of their friends & refer them for counseling)
8. Testing and guidance is undertaken for staff wards also.
9. Psychotherapy is undertaken for faculty members.
10. Motivating students in need to visit counseling office and creating awareness regarding counseling in institute as well as hostels.

38. Placement Services Provided to Students

S.No.	No. of Companies Visited	No. of Students Placed	Range of Package
	82 (2011-12)	BE: 324 ME:100	3.16 LACS 16.08 LACS
	50 (2012 Aug. to Nov.)	BE: 242 ME:55	3.68 LACS 16.03 LACS

The details of package offered during 2011-12 is given as under: -

Highest Package	16.8 Lacs
Average Package	5.22 Lacs
Minimum Package	3.00 Lacs

39. Development Programmes for Non-teaching Staff

Programme Conducted

S.No.	No. of Programmes Conducted for Non-teaching Staff	Area of Programme	Facilities for improvement
1	1	SPIC, PEC University of Technology, Sector-12, Chandigarh	Improvement of Computer Knowledge

Programme Attended

S.No.	Name of the Staff member	Programme Attended	Duration	Institution (where attended)
1	Ms. Seema Vasishta, Senior Librarian	Seminar on “Ethical Tentions for Academics, Researchers & Publishers in the Information Society”	31.01.2012 to 01.02.2012	Punjabi University, Patiala (Pb.)
2	Ms. Seema Vasishta, Senior Librarian	Refresher Course in Information Technology	15.06.2012 to 05.07.2012	Academic Staff College, Panjab University

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, are formed in the institute which are 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 autonomous organizations using the faculty, student and other resources of the institute.

C. Good practices Extension Activities

- a. Participation in competitive event at national and international levels

The students participated in BAJA SAE AUBURN 2012 competition that was held in OPELIKA, ALABAMA, USA from April 19-22, 2012. Organized by SOCIETY OF AUTOMOTIVE ENGINEERS annually. The achievements of the team were: Best Asian Team, Design world rank: 24; Suspension world rank: 36. One of the only 32 teams to qualify each static & dynamic test, better than 70 other experienced teams from various prestigious International universities.

Team PEDDLERS represented PEC in the 19th Annual Great Moon Buggy Race that was held from April 13 - 14, 2012 in Huntsville, Alabama, at the U.S. Space & Rocket Center. The team was required to design and manufacture a Moon Buggy which is a human powered vehicle and is driven by two students over a half-mile simulated lunar terrain course including "craters", rocks, "lava" ridges, inclines and "lunar" soil. The team PEDDLERS bagged 21st position out of total 98 teams that participated in the moon buggy race during final ceremony. The team was highly appreciated for the design by the scientists, experts, academicians and journalists.

- b. 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. The pilot project was completed successfully during the year 2010 and is being continued in year 2011 & 2012.

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. These two self help groups are of 15-20 women each and NSS is promoting the activities of the group successfully since the last six years now.

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.

Two blood donation camps were organized by NSS Unit in the College campus on 17.10.2011 and 05.03.2012 where 791 units of blood were donated, the highest by any educational institution in Chandigarh.

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

Letter of cooperation with Zscaler, USA

A letter of cooperation was signed between PEC University of Technology, Chandigarh and Zscaler, USA on 5th July 2012. The cooperation is intended to promote projects and research activities at PEC University of Technology in the area of cloud security. Zscaler has offered PEC University of Technology, Chandigarh its software for cloud security service for web traffic, with no liability, for use by the institute. This software can be deployed on hardware acquired by PEC. The software can be used for teaching research and project related activities only for the period of cooperation. The cooperation will be reviewed after an initial period of three years.

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

As per the plans of Higher Education Institute mentioned in previous AQAR, Institute has made sincere efforts to improve overall performance of the institute. Some of them are as mentioned below:

Two new M.E. programmes were initiated in the emerging areas i.e. VLSI and Industrial Design. As an initiative towards increasing sponsored research and consultancy projects, the amount of funds from external agencies for research projects increased from 180 lacs to 200 lacs approximately. Also 50 new consultancy projects were undertaken. The faculty members published as many as 200 research papers in various international/national journals and conferences. Five short term courses/workshops were organised by various departments. NSS continued its action plans for helping the underprivileged by providing microfinance to various individuals. In the year 2011-12, as many as ninety six percent of eligible BE students and sixty two percent of eligible M.E. students have been offered jobs through campus interviews. Students participated in various technical and cultural events at national and international level like BAJA SAE AUBURN 2012 Great Moon Buggy race etc. Further actions will be taken to achieve the plan and road map to success.

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 2012, a total of 379 students completed their B.E programme & 195 students completed their M.E. programme in various disciplines. 3 PhD scholars have also completed their degrees. As per the plan of action for year 2011-2012, 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 one is inter disciplinary were initiated. All the classrooms were equipped with LCD projectors, white boards, Wi Fi etc.

Training & Placement

In the year 2012, 291 out of 304 eligible BE students of 2011-12 batch have been offered jobs through campus interviews conducted by 92 companies. 110 ME students also secured jobs through these interviews. During year 2011-12, 6th semester students under went 16 week internship. 160 students were recruited in the companies that visited the campus for semester internship

Research & Development

As an initiative towards faculty development programme, 40 faculty members attended various national/international conferences and short term courses. Also approximately 5 faculty members are doing PhD 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 200 papers were published in international/national journals and conferences by the faculty of various departments. More than 250 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 200 lacs. To further enhance the research output of the faculty, institute also provided funds in 2011-12 for 6 new projects for carrying out research in the form of in-house research projects. Some of the in-house research projects were also completed in the year 2011-12 and rest are ongoing. Four new collaborative research programme were also initiated with agencies links ICICI, TCS including an inter linkage with ZS caler USA to promote research activities.

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 AUBURN 2012, 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 400 students from more than 20 schools visited the institute to see the projects and have know-how about the institute.

Social Activities

As a social activities NSS continued the community schemes like PEC Science and Maths 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. NSS also provided micro-finance to various individuals in slums helping them to start small ventures etc. In the two Blood Donation camps held during the current session 791 units of blood were donated, the highest by any educational institution in Chandigarh.

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 2011 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

1. To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.
2. To develop a system for conscious and consistent improvement in the performance of the institution.
3. To channelize the efforts and measures of the institution towards academic excellence.
4. Appropriate action to be taken for engagement of all the scheduled classes as per the academic calendar
5. Random monitoring of classes to verify the engagement of classes
6. To develop a mechanism for complete transparency of student evaluation
7. Declaration of results within a stipulated period of time
8. Complete transparency of student's attendance
9. Upgradation of classrooms
10. Renovation of faculty rooms
11. Uploading of upto date information on PEC web server
12. Maintenance of record for mass cuts of students
13. Maintenance of record for class rescheduled by the respective instructors
14. Arrangement for feedback responses from students, parents and other stakeholders on quality related university processes
15. To encourage faculty members to publish more number of research papers in refereed journals and national and international conferences.
16. Encourage students to undergo overseas exchange programme.
17. Engage with industry and alumni through annual meets in each department.
18. To monitor the computerization process of institute.
19. Recording and monitoring quality measures of the institution. Acting as a nodal agency of the institution for quality related activities.
20. Preparation of Annual Quality Assurance Report (AQAR) and such other reports as may be decided from time to time.

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Coordinator, IQAC

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Chairperson, IQAC
&
Director, PEC University of Technology