Self-Study Report

Submitted to National Assessment & Accreditation Council

(NAAC)

BEANT COLLEGE OF ENGINEERING & TECHNOLOGY, GURDASPUR   (PUNJAB)

Bcetgsp.ac.in

INDEX

Executive Summary

Beant College of Engineering and Technology, Gurdaspur was established by the Punjab Government in 1994 and registered under Society Registration Act of 1860. The affairs of the college are administered through its Board of Governors (BOG), a body which is constituted as per AICTE norms.

The institute is having approximately 70 acres of land. The institute started with the approval of five B. Tech. courses viz. Chemical Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, and Production Engineering. During its glorious journey, the institute has strived towards excellence by addition of two UG courses (Bio Technology and Information Technology), one regular PG course (Thermal Engineering), three Diploma courses (Computer Science and Engineering, Electronics and Communication Engineering and Mechanical Engineering) and 10+2 level school and one M.Sc. course (Applied Physics). Apart from it, the institute is also a well recognized Regional Centre of Punjab Technical University, offering part time M. Tech in (Chemical Engineering, Computer Science and Engineering, Electronics and Communication Engineering and Production Engineering). All courses are approved by respective controlling authorities.

The institute is located at remote border of Punjab, and thus addressing the needs of educationally backward belt of the state. The institute is surrounded by lush green environment. The campus is beautifully maintained to refresh the mind of students as well as teachers. The entire campus is smoking and pollution free and having eco-friendly environment. The college has enrolment over 2500 students pursuing various courses.

The institute is having its 21st year of dedicated service to the people of Punjab and other states in the field of Technical Education. Three departments viz. Mechanical Engineering, Computer Science and Engineering, and Electronics and Communication Engineering were accredited by National Board of Accreditation (NBA) in 2009.

The institute is governed by the Board of Governors with Dr. R.S. Khandpur, former Director General, Pushpa Gujral Science City, Kapurthala, as Chairman along with other members as per AICTE norms. The institute is headed and managed by Prof. (Dr.) Ravi Kumar, an eminent scientist with his extensive experience in research and teaching over 25 years.

The institute has been recognized as an exemplary institute of learning and granted Academic Autonomy by UGC New Delhi, in 2014.

Excellence in academics, the institute is dedicated to quality education for students belonging to all sections of society. The institute follows the admission and scholarship policy of the Government of Punjab. The Institute has excellent teaching and learning process and the faculty members possess necessary domain of knowledge blended with adequate experience. The quality of the faculty members of the institute is recognized at state level and the institute

was awarded as best faculty institute in Punjab by CMAI and National Punjab Education Awards 2013.

The institute offers quality education, synergy is reached by harnessing application oriented teaching along with strict discipline, thus grooming students to suit global requirement. The Institute has been ranked AA+ grade by a magazine 'Careers 360' in 2012.

Abiding by the dictum "Think, Feel and Act" in its mission, the institute understands that technology is changing fast, thus technical education should be dynamic. To meet the change in technological needs, the institute encourages its faculty to attend and organize seminars, conferences, workshops, and faculty development programs, which helps in attaining continuous growth through academic and professional development. With the aim to strengthen the institute to produce engineers suiting to global requirement and to improve learning outcomes, the institute was recognized and selected under Technical Education Quality Program, Phase 1.1 by Ministry of Human Resource and Development (MHRD) and has been granted ₹ 10 Crore.

The research being an important aspect is promoted by conducting research projects and guiding students to do innovation. The Institute encourages the faculty to publish research in peer reviewed journal and participate in industrial interaction. The institute's R &D unit helps in promoting research culture among faculty and students. They are encouraged for development of research and innovative projects, and supported for submitting their projects to sponsoring agencies, and attracting funds from statutory agencies.

The institute has a very good infrastructure facilities and fulfill AICTE norms. The institute provides central library, and also having digital access of e-journals and e-books for regular update in academic and research fields.

The institute has an adequate number of class rooms with projectors, well equipped laboratories, computers and licensed software. For encouraging research, the institute is also having Central Research Laboratory with all major equipment and computational facilities.

The institute strives to improve the socio-economic status of economically weak section. The student's alumni are sponsoring free education to needy students.

The institute has fair and expeditious grievance redressal mechanisms. The accounts are properly audited and follow up actions are systemized. In nutshell the rapid growth of the institute is duly acknowledged by the efforts of all stakeholders.

In the following pages criteria-wise documentation has been made after the institute profile. The seven criteria as per the NAAC format are presented. The criteria explains the core functions and activities of the institute, which have direct bearing on teaching-learning research, community development and holistic development.

SWOC ANALYSIS

STRENGTH	WEAKNESS
• Government managed institute. • Academic and financial autonomous institute. • Three UG (B. Tech in CSE, ECE and ME) programs got NBA accreditation in 2009. • Selected under TEQIP 1.1 and awarded ₹ 10 Crore fund from MHRD. • Young qualified (more than 25% with PhD degree) faculty. • Motivation to faculty in pursuing research leading to PhD. • Continuous academic and financial monitoring by various agencies. • Excellent reputation for high quality programs, faculty and research. • Commitment of students, faculty and staff towards achieving excellence in academics. • Eco-friendly and amicable working environment. • Well maintained infrastructures, laboratories, library and workshop. • A separate cell to groom students industry ready through training on soft skill. special technical training, industry visit and assistance in placement.	• Locational drawback particularly in placement. • Inadequate grant-in-aid. • Lack of engineering industries in nearby areas. • Educationally backward area. • R & D and consultancy work in collaboration with the industries and national agencies as resource of funding need to be improved.
OPPORTUNITY	**CHALLENGE**
• Scope for achieving deemed to be university status. • Scope for setting up Mechanical Engineering department as centre of excellence. • Scope for promotion of self employment by setting up skill development training centre. • Integrate research into academics • Increase international, national and national recognition. • Involve more faculty members in	• Increasing privatization, high cost of professional education and less employment opportunities are affecting admission in few branches of engineering. • Inculcating research passion amongst faculty and students, and to build strong alliances with the national organizations for academic and R&D activities in thrust area of engineering and technology. • Training rural based Punjabi and

research through incentives so as to explore new horizons in research. • Increase external funding to increase revenue through indirect cost recovery. • Strengthen IIIC for better placement and industrial consultancy. • Enter into collaborative projects with industries and other institutes for better exposure to students. • Scope for new faculty and PG students to pursue PhD under the supervision of institute faculty.	Hindi medium students in English language and developing communication skills of them is a challenging job.

SELF-STUDY REPORT

1. Profile of the College

1. Name and Address of the College:

Name: Beant College of Engineering and Technology, Gurdaspur
Address: Baryar, Gurdaspur, Punjab, India
City: Gurdaspur ; Pin: 143521; State: Punjab
Website: www.bcetgsp.ac.in

2. For communication

Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Dr. Ravi Kumar	01874-221464	0887291 6665	0174-221463	principalbcetgurdaspur @yahoo.com
Vice Principal	n.a.				
Steering Committee Coordinator	Dr. R. K. Awasthi	-	0981491 2218	-	awasthi.rka@gmail.com

3. Status of the Autonomous College by management

   i. Government   √

   ii. Private

   iii. Constituent College of the University

4. Name of University to which the College is Affiliated : | Punjab Technical University, Jalandhar |

5. a. Date of establishment, prior to the grant of 'Autonomy': 22-12-1994

  b. Date of grant of 'Autonomy' to the College by UGC: 19/6/2014

6. Type of Institution:

  a. By Gender
    i.   For Men
    ii.   For Women
    iii. Co-education   √

b. *By Shift*
  i.   Regular   √
  ii. Day
  iii. Evening

c. *Source of funding*
  i.   Government   √
  i.   Grant-in-aid
  ii. Self-financing
  iii. Any other   (Please specify)

7. *It is a recognized minority institution?*

   Yes

   No   √

   If yes specify the minority status (Religious/linguistic/ any other) and provide documentary evidence.

8. *a. Details of UGC recognition:*

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks(If any)
i. 2 (f)	01/01/2000	Information available on UGC website
ii. 12 (B)	NA	

   (Enclose the Certificate of recognition u/s 2 (f) and 12 (B) of the UGC Act)

   b. Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

Under Section/clause	Day, Month and Year (dd-mm-yyyy)	Validity	Programme/ institution	Remarks
F. No. North- West/1-2454978403/2015/EOA	30-04-2015	2015-16	All courses	

   (Enclose the Certificate of recognition/approval)

9. *Has the college recognized*

   a. By UGC as a College with Potential for Excellence (CPE)?

      Yes   No   √

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

   b. For its contributions / performance by any other governmental agency?

Yes | √ | No

If yes, Name of the agency

    1. Accredited by NBA New Delhi   F.No. NBA/ACCR-941/2007 Dt. 14-7-2009
    2. NPIU New Delhi NMC/MHRD/TEQIP-II/11/1675 dated 25-11-2011

10. *Location of the campus and area :*

Location*	Urban
Campus area in Sq. mts. or acres	69.4 Acres
Built up area in sq. mts	11816

(* Urban, Semi-urban, Rural, Tribal, Hilly Area, Any others specify)

11. *Does the College have the following facilities on the campus (Tick the available facility)? In case the College has an agreement with other agencies in using such facilities provide information on the facilities covered under the agreement.*

- Auditorium/seminar complex : yes

- Sports facilities : yes
  play ground : yes
  swimming pool: no
  gymnasium: yes

- Hostel

  Boys' hostels : yes
  Girls' hostels : yes

- Residential facilities : yes
  for teaching staff : yes
  for non teaching staff : yes

- Cafeteria : yes

- Health centre – yes

  * First aid facility :   yes
  * Inpatient facility: no
  * Outpatient facility: yes
  * Ambulance facility: yes
  * Emergency care facility : yes

  Health centre staff –
  *   Qualified doctor   Full time : yes   Part-time: no
  *   Qualified Nurse   Full time : yes   Part-time: no

  *   Other facilities

- o   Bank : yes
- o   ATM : yes
- o   post office : no
- o   book shops : yes

- Transport facilities   : yes
  - * for students : yes
  - *   for staff : yes

- Power house : yes
- Waste management facility : under progress

12.   *Details of programmes offered by the institution : (Give data for current academic year)*

SI. No.	Programme Level	Name of the Programme/ Course	Duration	Entry Qualification	Medium of instruction	Sanctioned/ approved Student intake	No. of students admitted
1.	UG	B.Tech.	4 Years	10+2	English	480 + 24*	432
2.	PG	M. Tech.	2 Years	B. Tech	English	18 + 100 **	18+46**
3.	Any Other (Please specify)	M.Sc.	2 Years	B.Sc.	English	30	7

* fee waiver scheme,   ** Part Time M. Tech.

13.   *Does the institution offer self-financed Programmes?*

Yes ☐   No ☑

If yes, how many? ☐

14.   *Whether new programmes have been introduced during the last five years?*

Yes	√	No	

If yes

Number	1

15.   *List the departments: (Do not list facilities like library, Physical Education as departments unless these are teaching departments and offer programmes to students)*

Particulars	**Number**	**Number of Students**
Science		
Under Graduate	-	--
Post Graduate	1	7
Research centre(s)	-	--

Arts			
	Under Graduate	-	--
	Post Graduate	-	--
	Research centre(s)	-	--
Commerce			
	Under Graduate	-	--
	Post Graduate	-	--
	Research centre(s)	-	--
Any Other (please specify) Engineering			
	Under Graduate	6	2086
	Post Graduate	5	198
	Research centre(s)	-	--

16. *Are there any UG and/or PG programmes offered by the College, which are not covered under Autonomous status of UGC? Give details.*

   No

17. *Number of Programmes offered under (Programme means a degree course like BA, MA, BSc, MSc, B.Com etc.)*

   a. annual system

   b. semester system | 7 |

   c. trimester system

18. *Number of Programmes with*

   a. Choice Based Credit System

   b. Inter/Multidisciplinary Approach

   c. Any other (specify) | 7 |

19. *Unit Cost of Education*
   (Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

   (a) including the salary component | Rs. 83365 |

   (b) excluding the salary component | Rs. 21586 |

20. *Does the College have a department of Teacher Education offering NCTE recognized degree programmes in Education?*

   Yes [ ]   No [√]

   If yes,

   a. *How many years of standing does the department have?*
   ……… years

   b. *NCTE recognition details (if applicable) Notification No.:*

9

....

Date: …………………………… (dd/mm/yyyy)

 c. Is the department opting for assessment and accreditation separately?

  Yes   [ ]   No   [ ]

18. Does the College have a teaching department of Physical Education offering NCTE recognized degree programmes in Physical Education?

Yes   [ ]   No   [√]

If yes,

 a. How many years of standing does the department have?

  ……… years

 b. NCTE recognition details (if applicable) Notification No.:

  ....

  Date: …………………………… (dd/mm/yyyy)

 c. Is the department opting for assessment and accreditation separately?

  Yes   [ ]   No   [ ]

22. Whether the College is offering professional programme?

  Yes   [√]   No   [ ]

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

Approval Letter No. of AICTE F.No. North- West/1-2454978403/2015/EOA Dated: 30-04-2015

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

College is regularly monitored by the Performance Auditor appointed by NPIU, MHRD (GOI), New Delhi and PTU, Jalandhar (copy attached)

24. *Number of teaching and non-teaching positions in the College*

Positions	Teaching faculty						Non-teaching staff		Technical staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University / State Government	10		34		75				70	91
Recruited	3	-	28	1	37	28	44	13	69	2
Yet to recruit	7		5		10					
Sanctioned by the Management/society or other authorized bodies *Recruited Yet to recruit*										
*M - Male *F - Female										

25. *Qualifications of the teaching staff*

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.							
Ph.D.	3	-	17	1	3	1	25
M.Phil.					1	-	1
PG			11		6	3	20
Temporary teachers							
Ph.D.					2	1	3
M.Phil.					1	3	4
PG					24	20	44
Part-time teachers							
Ph.D.							
M.Phil.							
PG							

26. *Number of Visiting Faculty/ Guest Faculty engaged by the College.*

Nil

27. *Students enrolled in the College during the current academic year, with the following details:*

Students	UG		PG		Integrated Masters		M.Phil.		Ph.D.		Integrated Ph.D.		D.Litt./ D.Sc.		Certificate		Diploma		PG Diploma	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
From the state where the College is located	313	89	39	24	NA															
From other states of India	23	4	1	0	NA															
NRI students	0	0	0	0	NA															
Foreign students	0	0			NA															
Total	336	93	40	24	NA															

* M - Male   * F - Female

28. *Dropout rate in UG and PG (average for the last two batches)*

UG   1%   PG   <4%

29. *Number of working days during the last academic year.*   264

30. *Number of teaching days during the last academic year*   218

31. *Is the College registered as a study centre for offering distance education programmes for any University?*   Yes √   No ☐

If yes, provide the

a. Name of the University   PTU

b. Is it recognized by the Distance Education Council?
Yes √   No ☐

c. Indicate the number of programmes offered.   PGDC. MBA

32. *Provide Teacher-student ratio for each of the programme/course offered*

Program course	Teacher-student ratio
B. Tech.	1:15
M. Tech. (Regular)	1:12
M. Sc. (Applied Physics)	1:12

33. *Is the College applying for?*
Accreditation :   Cycle 1 √   Cycle 2 ☐   Cycle 3 ☐   Cycle 4 ☐
Re-Assessment: ☐

12

34. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)

Cycle 1: …………………… (dd/mm/yyyy) Accreditation outcome/results Cycle 2: …………………… (dd/mm/yyyy) Accreditation outcome/results Cycle 3: …………………… (dd/mm/yyyy) Accreditation outcome/results * Kindly enclose copy of accreditation certificate(s) and peer team report(s)

Cycle 1 refers to first accreditation; Cycle 2 and beyond refers to reaccreditation

35. *a. Date of establishment of Internal Quality Assurance Cell (IQAC)*

27-1-2015 ……………………(dd/mm/yyyy)

b. Dates of submission of Annual Quality Assurance Reports (AQARs).

(i) AQAR for year …………… on ………(dd/mm/yyyy)

(ii) AQAR for year …………… on ……… (dd/mm/yyyy)

(iii) AQAR for year …………… on ……… (dd/mm/yyyy)

(iv) AQAR for year …………… on……… (dd/mm/yyyy)

36. *Any other relevant data, the College would like to include. (Not exceeding one page)*

➢ The institute is established managed and promoted by the Government of Punjab.

➢ The institute's faculty and staff recruitment, pay package, promotional policies etc. are well defined and are in accordance with AICTE/ Punjab Government norms.

➢ The institute is having its own BOG, and the meetings are held quarterly.

➢ The institute is recognized as one of the premier institute in Punjab and North India.

➢ In 2009, the three department of the institute was accorded NBA ACCREDITED STATUS.

➢ The institute's academic audit was earlier conducted by the affiliated University.

➢ The institute is also having approved regional center of the university.

➢ Institute is one amongst the selected institutes for World Bank Assistance under Technical Education Quality Improvement Program (TEQIP-II) from Punjab starting wef 2011- 2016.

➢ In order to encourage technical education amongst the SC/ST girls, the institute has executed for the construction of girls hostel. The total cost of the project is ₹ 2 crore, and the construction is under progress. The institute is grateful to AICTE for sponsoring the project.

➢ The institute provides free books to SC /ST students. Recently, the institute procured the books costing about ₹16 Lacs for meeting the objective, through a grant received from the Government of Punjab.

➢ The institute received grants from AICTE for **07** research projects (worth ₹65 Lacs) in recent years.

- The institute received grants from AICTE for **16** MODROBS/ TAPTEC projects (worth 1.17 crores)
- Advisory Scheme: The teachers help to solve the academics and non-academic issues and problems of students.
- Guest lectures /expert lectures are being organized by eminent academician and Industry people.
- Regularly organizes Convocation, Athletic, Cultural events, Alumni meets etc.
- The institute has organized around 32 STTP/Seminar/Conference in the last 05 years.
- Faculty members are being sponsored by the college to attend and present paper in international conference at international level.
- Faculties are deputed for full time Ph. D under QIP and other schemes.
- College makes every efforts to train students for better placement.
- Live Webcast Courses/Live EDUSAT courses /QEEE lecture courses are attended.
- The institute is having student branches of all the major professional bodies.
- In 2009 the institute was recognized for their services to Indian Red cross society and award of honor was presented by the then Governor of Punjab
- In 2012, the institute was recognized as "Best Engineering College amongst in the state of Punjab" by a National Level Magazine, Careers-360.
- In 2013, the institute has been recognized as "Best Faculty Institution in Punjab" and awarded CMAI National Punjab Education Award

BEANT COLLEGE OF ENGINEERING & TECHNOLOGY
(Established by Govt. Of Punjab)
POST BOX NO. 13. GURDASPUR-143 521

Ref. No. BCET/1358

Dated: 28/04/2015

Declaration by the Head of the Institution

I certify that the data included in this Self-study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

Signature of the Head of the institution

with seal:

Principal
Beant College of Engg. & Tech.
Gurdaspur

Place:

Date:

15

CRITERION I: CURRICULAR ASPECTS

1.1 Curriculum Design and Development

1.1.1 How are the institutional vision / mission reflected in the academic programmes of the College?

Beant College of Engineering and Technology, Gurdaspur located in a rural setting in Punjab has since its inception in 1995 aimed at providing access to technical education in various fields to thousands of students from across the country. The curriculum is designed and implemented taking cognizance of the educational policies of the State and Central Government, and the global needs, while serving the cause of national development and regional requirements. The syllabus is dynamic and is constantly revamped to keep pace with the rapid developments in various fields of study, scientific and technological advancements, and to meet the demands of academia, industry and society. The culture of academic freedom and flexibility provides immense scope for introducing innovations in the curriculum to achieve the institutional vision and mission of striving for academic excellence.

1.1.2 Describe the mechanism used in the design and development of the curriculum? Give details on the process. (Need Assessment, Feedback, etc)

The Board of studies (BOS) has been constituted in every department for the Curriculum design. These BOS makes the changes in the curriculum as and when required. The curriculum designed by the BOS of various departments is finally approved in the Academic Council of the college.

1.1.3 How does the College involve industry, research bodies, and civil society in the curriculum design and development process? How did the College benefit through the involvement of the stakeholders?

The BOS of every department has members from industry, research institutions of national repute and alumni of the college. The curriculum is designed by considering all the aspects of technical education i.e. requirement of industries, R & D and impact on society etc. The academic council of the college also have experts from industry, society and other institutes who give their valuable inputs in the design of curriculum.

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

Employability

The curriculum is designed in such a way to have an equitable proportion of hands-on practical training for skill acquisition and sound theoretical knowledge serves to equip the students to face real-time situations and societal needs. The curriculum attempts to address the needs of various stakeholders such as industries, research bodies, academic institutions, Government agencies, banking sector, etc.

Innovation

The college gives a great deal of academic freedom enabling the introduction of new and innovative courses by the BOS of various departments.. The college has a policy to fund the innovative projects of the students in order to motivate the faculty and students for converting their innovative ideas to reality. A Central research lab has been developed by the various departments jointly.

Research

The final year students are oriented to research through the projects which is a compulsory course in their curriculum. Apart from this, all the students are required to undergo a full semester 6 months industrial training in their final year where they interact with the industries.

1.1.5 How does College ensure that the curriculum developed address the needs of the society and have relevance to the regional / national developmental needs?

The curriculum is designed and implemented taking cognizance of the educational policies of the State and Central Government, and the global needs, while serving the cause of national development and regional requirements. The syllabus is dynamic and is constantly revamped to keep pace with the rapid developments in various fields of study, scientific and technological advancements, and to meet the demands of academia, industry and society. The BOS of various departments and Academic Council of the college have members from industries, Society and other Regional stakeholders which contribute their inputs while finalizing the curriculum.

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

YES, The College is following all the guidelines as prescribed by AICTE, New Delhi regarding the curriculum e.g. Environmental Science is being offered to all the branches of engineering. The college is also offering the subject of Human values which have national impact.

1.2   Academic Flexibility

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

a. Core / Elective options

> Adequate flexibility is provided to students for the selection of Core subjects and elective subjects in the curriculum designed by BOS.

b. Enrichment courses

> In the curriculum of all the departments some add on courses have been

included which are compulsory for all the students i.e. Fundamental of computer programming and information technology, Human Values, Environmental studies.

c. *Courses offered in modular form :*
   Institutional training after 1st year and six months training in the final year are offered in modular form.

d. *Credit transfer and accumulation facility* :   NO

e. *Lateral and vertical mobility within and across programmes and courses*

   The college admits the students directly in 2nd year in all the discipline through lateral entry scheme. The students are given option to change their branch after 1st year .

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

The college have initiated the exchange program of students through PTU and our students have visited Doupkuk University Korea and this year the students from south Korea will visit our college. We are in process with PTUto develop courses Program as per the requirement of visiting students.

1.2.3   *Does the College offer dual degree and twinning programmes? If yes, give details.*

   NO

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

   NO

1.2.5   *Has the College adopted the Choice Based Credit System (CBCS)? If yes, how many programmes are covered under the system?*

   NO

1.2.6   *What percentage of programmes offered by the College follows:*

   Annual system   0%
   Semester system
       100%
   Trimester system   0%

1.2.7   *What is the policy of the College to promote inter-disciplinary programmes? Name the programmes and what is the outcome?*

The departments are offering some open elective courses for the students of other departments which will lead to the inter disciplinary program for enhancing their overall development.

1.3   Curriculum Enrichment

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

The Board of Studies meets periodically to keep track of the challenges and identifies the necessary changes to make the curriculum socially relevant and job-oriented. It revises the curriculum in order to remove obsolescence and introduce a new direction to the courses such that it retains its knowledge intensive trait and addresses the emerging needs.

In every department the courses are tailored with the objective of providing development and trained manpower to the needs of industries. The existing courses are modified keeping in view the guidelines of regulatory bodies and taking into account the recommendations of the members of the Board of Studies who are experts in the courses concerned.

1.3.2   How many new programmes have been introduced at UG and PG level during the last four years? Mention details.

> 02,   M.Sc. in Applied Physics, M.Sc. in Applied Mathematics.

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

The experts in the BOS and Academic Council analyze the syllabus and any significant modifications suggested are incorporated in the curriculum. The syllabus is periodically revised to cater to the modern employment opportunities of the job market. The syllabi of almost all the programmes of study continue to be revised in a phased manner. Most of the courses are subject to revision to keep pace with developments in those fields.

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

Several value added courses like Human values, Environmental studies are part of the curriculum in all the disciplines. In addition, the soft skill development programmes are arranged for the students during the semester by training and placement office.

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

No

1.4 Feedback System

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

Though there was no formal mechanism to obtain feedback regarding the curriculum from the students, but head of the departments generally take the opinion about the curriculum content from students informally, which is being conveyed to BOS members for possible consideration and incorporation in the syllabus during the BOS meeting .

1.4.2 Does the College elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods adopted to do the same - (conducting webinar, workshop, online forum discussion etc.). Give details of the impact on such feedback.

Since the BOS of all the department and Academic Council of the college have faculty from the institutes of national repute, therefore, the feedback from them is considered in the design of curriculum. One faculty member from IIT Ropar, is associated with the college as Mentor who also provide valuable suggestions for the design of curriculum design.

1.4.3 Specify the mechanism through which alumni, employers, industry experts and community give feedback on curriculum enrichment and the extent to which it is made use of.
The alumni, experts from the industries and societies have been included in the BOS and academic council for the purpose of curriculum enrichment.

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

The quality sustenance and enhancement measures undertaken by the institution during the last five years in curricular aspects include proper implementation of the curricula designed and prescribed by the University. At the institution level, it is being ensured that the students get the best of infrastructure, education and training through modern tools to fulfill which is envisaged by designers of curriculum. The college has been accredited once by NBA and applied for the second time. The college is also a part of TEQIP-II of World Bank, which also evaluates academic reforms regularly through their regular audit.

CRITERION II: TEACHING-LEARNING AND EVALUATION

2.1 **Student Enrolment and Profile**

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

The admissions are done through on-line counseling by Punjab Technical University Jalandhar by publishing the admission notices in the leading newspapers of National level as per the directions of the Government of Punjab from time to time. If any seat remains vacant after the centralized counseling, the admission is done at the college level after giving the advertisement in National Newspapers/ college website and following the guidelines issued by the university.

2.1.2 *Explain in detail the process of admission put in place for UG, PG and Ph.D. programmes by the College. Explain the criteria for admission (Ex. (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common test conducted by state agencies and national agencies (v) others followed by the College?*

Admissions at UG level are done based on the merits of entrance test JEE /AIEEE and counseling. The admissions at PG level are done by PTU Jalandhar on merit basis.

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

Not applicable as the entire admission process is done by PTU Jalandhar through Centralized counseling.

2.1.4 *What are the strategies adopted to increase / improve access to students belonging to the following categories*

* SC/ST

* OBC

* Women

* Different categories of persons with disabilities

* Economically weaker sections

* Outstanding achievers in sports and extracurricular activities

Institute adopts PTU, Jalandhar notifications /Punjab Govt. notifications issued from time to time to increase/improve to the students belonging to the above categories. Even Punjab Govt./Center Govt. gives scholarships to above said

categories students.The students who exhibit extra-ordinary achievements in the fields of sports, Technical competitions, co-curricular activities, social service, NSS etc. are given special concession/incentives in the marks of general fitness.

2.1.5   *Furnish the number of students admitted in the College in the last four academic years.*

Categories	Year 1		Year 2		Year 3		Year 4	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	76	40	94	56	89	51	65	50
ST	3	0	2	0	1	0	0	1
OBC	21	11	14	8	14	12	18	6
General	285	77	243	145	274	140	286	165
Others	-	-	-	-	-	-	-	-

2.1.6 *Has the College conducted any analysis of demand ratio for the various programmes offered by the College? If so, indicate significant trends explaining the reasons for increase / decrease.*

Programmes	Number of applications	Number of students admitted	Demand Ratio	
UG				
ME-	591	57	0.096	
CSE-	591	97	0.164	
IT-	591	74	0.125	
BT-	591	16	0.027	
CHE-	591	30	0.051	
ECE-	591	87	0.147	
PG				
M.Tech (Thermal)	18	18	1.000	

M.SC.(Physics)	10	7	0.700	
Diploma				
Any other				
(please Specify)				

2.1.7   *Was there an instance of the College discontinuing a programme during last four years? If yes, indicate the reasons.*

No

2.2 Catering to Student Diversity

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

One-day induction programme is conducted on the first day of the start of the session for freshers. In addition to this, College has introduced the concept of advisors/mentors. An advisor is appointed for every class. The students discuss their problems and weaknesses, whether personal or educational with their advisors. The advisors provide personal and professional guidance to the students and acts as a conduit between a student and department. Similarly, an antiragging committee at college level, department level and hostel level has been formed. The names and phone numbers of committee members are displayed on all prominent places of the college and hostel. CCTV camaras have been installed at all prominent places of college. All these measures have been taken to inculcate the sense of confidence to the freshers.

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

No

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

On the basis of result analysis, the Remedial classes are arranged in the subjects for which the pass percentage is less than a specified limit as defined by the competent

authority from time to time. These Remedial classes for weak students are being conducted on Saturdays and Sundays. Apart from this Expert Talks, Guest Lectures are also conducted to bridge the knowledge gap of the students.

2.2.4 Has the College conducted a study on the incremental academic growth of different categories of students; - student from disadvantaged sections of society, economically disadvantaged, physically challenged and slow learners etc.? If yes, give details on how the study has helped the College to improve the performance of these students.

The special attention to the disadvantaged section is given through additional assignments at lower level of regular classes to bring them at par with others.

At the end of every semester, the Result analysis is done by all the departments subject wise. The groups of weak students are given special classes to tackle their deficiencies in learning.

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

The Institution identifies advanced learners on the basis of (a) their merit in the previous examination (b) their participation and response in the class and the interaction with the teachers(c) their performance in the various tests and assignments (d) analyzing their weaknesses (e) seed grant is provided to the students for carring out research and development activities in the form of innovative projects. The groups of advanced learners are given additional problems to tone-up their skills. They are also encouraged for other academic activities.

2.2.6 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?

The Institution provides all the required facilities to differently-abled students. Their classes are held at easily accessible places. Teachers pay special attention to these students.

2.3 Teaching-Learning Process

2.3.1 How does the College plan and organize the teaching, learning and evaluation schedules? (Academic calendar, teaching plan and evaluation blue print, etc.)

Academic calendar is prepared by Dean Academic after discussion with Heads of different departments. In pursuit of the provisions of the academic calendar, the teachers prepare their teaching plans. Evaluation schedule is finalized by Controller of Examination in consultation with Dean Academic. The Controller of Examination (COE) circulates the evaluation schedule & guidelines which are being followed by all examiners and Head examiners. Every effort is made to stick to the academic calendar as well as teaching plans. We conduct three periodical tests and take the two best of

three to evaluate the students for their continuous evaluation along with the other activities.

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

Course outlines and course schedule are made by faculty member individually and are informed by the concerned subject teacher prior to the commencement of the academic session to all the students in their classes.

2.3.3 What are the courses, which predominantly follow the lecture method? Apart from classroom interactions, what are the other methods of learning experiences provided to students?

The majority of the courses follow the lecture method. Besides the traditional lecture method, the teachers employ various methods of teaching aids using ICT besides the methods like Group discussion method, Experimental method, Tutorial method, Computer-assisted learning, Project based learning, Seminars and Assignments.

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

In order to make learning student-centric, active involvement of the students in the learning process is ensured. They are given practical exposure by organizing industrial trainings to boost knowledge of management skills. They are taught life skills, and lifelong learning by imparting them value & moral based education by conducting Presentations, Group discussions, Seminars, Quizes & Expert interaction etc. They are encouraged to participate in competitive/technical programs organized by outside agencies/ institutes. Since industrial training is compulsory for all branches of engineering at undergraduate level, it gives all the students the real time exposure, which they are expected to face after the graduation. The project based learning is a group activity in which the students learn to work in a group. To promote independent learning institute has provided the facilities like central library, department library, computer center and internet connectivity.

2.3.5 What is the College policy on inviting experts / people of eminence to provide lectures / seminars for students?

Special Lectures/Seminars by experts from academia and industry at regular intervals are being conducted by different departments. Generally a department conducts minimum two such activity in an academic semester for the students.

2.3.6 What are the latest technologies and facilities used by the faculty for effective teaching? Ex: Virtual laboratories, e-learning, open educational resources, mobile education, etc.

The institute has smart class rooms equipped with internet connectivity and computer facility. EDUSET facility is available in the institute for effective teaching. E-journals are available in central library for students and faculty. Also we organized QEEE classes run by IIT Chennai, at least one course for each department.

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

One Mentor/Advisor is appointed for each class at the beginning of the programme. The students are free to discuss their problems and weaknesses, whether personal or educational with their Advisors.

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

The Faculty is covering most of their curriculum using Projectors which have been provided in classrooms. Efforts are being made by the faculty to correlate the activities conducted in the theory class with those of practical laboratory class. Many faculty members are using active learning method. The faculty is also sent to reputed institutes/organization for further training to improve their knowledge and for effective teaching.

2.3.9 How does the College create a culture of instilling and nurturing creativity and scientific temper among the learners, to promote critical thinking, creativity and scientific temper among the students.

The students are encouraged to keep their knowledge and skills updated by

(a) Visiting the library regularly and consulting relevant material
(b) Attending workshops, seminars, conferences and lectures by experts
(c) One Semester compulsory Industrial Training
(d) Academia-industry interaction
(e) Visit to Industry
(f) Participation in ISTE activities as ISTE student chapter is available in the college for students
(g) Different societies like The SAE, ISTE, IEI, SME etc conduct different activities in the college
(h) Seed grant is provided to the students for carrying out research and development activities in the form of innovative projects.

2.3.10   *Does the College consider student projects a mandatory part of the learning programme? If so, for how many programmes is it made mandatory?*

Yes, student projects are a mandatory part of the learning programme of all the courses.

* Number of projects executed within the College

All the projects are executed within the college

* Names of external institutions associated with the College for student project work

The expertise of some local industries is taken in finalization of some projects.

* Role of the faculty in facilitating such projects

The faculty members guide and coordinate the projects of students

2.3.11   *What efforts are made to facilitate the faculty in learning / handling computer-aided teaching/ learning materials? What are the facilities available in the College for such efforts?*

The campus of the institution is Wi-Fi and the faculty and students have free access to it. Computers have been made available to the faculty. The faculty offices are provided internet connectivity. The institute has smart class rooms equiped with internet connectivity and computer facility.

2.3.12   *Does the College have a mechanism for evaluation of teachers by the students / alumni? If yes, how is the evaluation used in achieving qualitative improvement in the teaching-learning process?*

The institution has introduced evaluation of the teachers by students on the basis of a Proforma specially designed for the purpose known as Feedbak Proforma. This Proforma is got filled by the students at the end of the each semester. This Feedbak Proforma subjectwise is given to the concerned faculty for analysis and report. Based on the report, suggestions are given by HOD to the concerned faculty. The alumini gives their feedback during Alumani meet about the general academics and other aspects of the institution.

2.3.13   *Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If yes elaborate on the challenges encountered and the institutional approaches to overcome these.*

The official time of the college is 8:00 a.m. to 5:00 p.m. and generally the curriculum is easily completed within the planned time frame and calendar. However, there is the provision of extra classes on Saturdays/Sundays or after class hours if situation

demands.

2.3.14   How are library resources used to augment the teaching-learning process?

The college library remains open from 09:00 a.m. – 05:00 p.m on all working days. Reading room in library is open for all from 09:00 a.m. To 12:00 mid night every day. The students are issued books on fortnightly basis and semester basis. Book Bank facility is available. The students can assess the e-Journals/Books of Library at any time within the campus.

2.3.15   How does the institution continuously monitor, evaluate and report on the quality of teaching, teaching methods used, classroom environments and the effect on student performance.

Head of the institution alongwith all HOD's and Dean (Academics) conduct regular meeting where Academic calendar, students performance, syllabus covered semester results are analysed. The same process is followed at the department level. The feedback given by the students is analyzed. The suggestions from all concerened are analyzed at the department level for improvement. On the basis of the analysis of the end semester results, the remedial classes are also conducted. The COE maintains, monitors and guides all regarding the examination and evaluation process after every semester and the necessary improvements, if required, are incorporated for future examinations.

2.4 Teacher Quality

2.4.1 What is the faculty strength of the College? How many positions are filled against the sanctioned strength? How many of them are from outside the state?

(i) Total faculty strength of the college 119 posts.

(ii) No. of posts filled against the sanctioned strength 97 posts.

(iii) Faculty from outside the state 10 nos.

2.4.2 How are the members of the faculty selected?

The faculty members are selected through open advertisement published in the different leading newspapers. The applicants, who are called for interview fulfill completely the essential qualifications as the posts advertised and no candidate who does not fulfill the essential qualifications is called for interview. The panel of experts   in various subjects as approved by the BOG to be revised every year. External experts shall be appointed from the said panel. The recommendations of the committee got approved from the Chairman, Board of

Governors.

2.4.3 Furnish details of the faculty

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	
Permanent teachers							
D.Sc./D.Litt.							
Ph.D.	3		17	1	3	1	25
M.Phil.					1		1
PG			11		6	3	20
Temporary teachers							
Ph.D.					2	1	3
M.Phil.					1	3	4
PG					24	20	44
Part-time teachers							
Ph.D.							
M.Phil.							
PG							

2.4.4   What percentage of the teachers have completed UGC-CSIR-NET, UGC-NET, and SLET exams? In that what percentage of teachers are with PG as highest qualification?

Being an engineering college, UGC-CSIR-NET is not applicable for engineering departments

Percentage of faculty in Applied Science Department NET qualified or others exam qualified as mentioned above   =   10% (NET)

Percentage of faculty with PG as highest qualification = 72%

Percentage of faculty with Ph.D. as highest qualification = 28%

2.4.5 Does the College encourage diversity in its faculty recruitment? Provide the following departments-wise details.

Department	% of faculty who are product of the same College	% of faculty from other Colleges within the State	% of faculty from other State	% of faculty from abroad
CSE	Nil	90.48	9.52	Nil
ECE	Nil	100	Nil	Nil
ME	18.18	72.73	9.09	Nil
CHEM	14.28	71.44	14.28	Nil
BIO TECH	21.43	78.57	Nil	Nil
IT	57.14	42.86	Nil	Nil

2.4.6 Does the College have the required number of qualified and competent teachers to handle all the courses for all departments?

Yes, the College have the required number of qualified and competent teachers to handle all the courses for all departments.

If not, how do you cope with the requirements? How many faculty members were appointed during the last four years?

Appointed 43 faculty members during the last four years.

2.4.7 How many visiting Professors are on the rolls of the College?
No designated visiting faculty member; but we invite professors from institutes of national repute to deliver lectures.

2.4.8 What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, nomination to national/ international conferences/Seminars, in-service training, organizing national/international conferences etc.)

The following facilities are being given to the faculty; the rules are well defined, transparent and are being followed in letter and spirit:
- Faculty is sponsored for qualification enhancement with pay under Q.I.P. at national level institutes like IITs
- Faculty is granted EOL (Extra ordinary leave) for qualification improvement or some prestigious assignment
- The faculty members who are pursuins part time Ph.D. are being given university related fee and some contingency grant under TEQIP.

- Faculty is being sponsored to attend the Conference abroad once in a three year
- Faculty is being sponsored for FDP/Seminar/Conference within the country
- Faculty is being sponsored for short term management training at IIMs Faulty is encouraged to apply for research grant of national agencies
- Faculty members are provided requisite facilities for organizing seminars, conferences, workshops

2.4.9 Give the number of faculty who received awards / recognitions for excellence in teaching at the state, national and international level during the last four years.

03

2.4.10   Provide the number of faculty who have undergone staff development programmes during the last four years. (Add any other programme if necessary)

Academic Staff Development Programmes	Number of faculty
Refresher courses	13
HRD programmes	07
Orientation programmes	01
Staff training conducted by the College	12
Staff training conducted by University/ other CollegesSummer / winter schools, workshops, etc.	40
Any other (please Specify)	16

2.4.11   What percentage of the faculty have
  * been invited as resource persons in Workshops / Seminars /   Conferences organized by external professional agencies
       Applied Science: 10%, BT: 0%, CHE: 14%, CSE:21%, IT:0%, ME:35%
  * participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies
       Applied Science: 25%, BT: 30%, CHE: 85%, CSE:26.31%, IT:0%, ME:60%
  * presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies
       Applied Science: 25%, BT: 0%, CHE: 85%, CSE:26.31%, IT:0%, ME:21%
  * Teaching experience in other universities / national institutions and others
       Applied Science: 10%, BT: 0%, CHE: 10%, CSE:31.57%, IT:0%, ME:48%
  * industrial engagement
       Applied Science: 0%, BT: 0%, CHE: 0%, CSE:10.52%, IT:0%, ME:0%
  * international experience in teaching
       Applied Science: 10%, BT: 0%, CHE: 0%, CSE:0%, IT:0%, ME:0%

2.4.12   *How often does the College organize academic development programmes for its faculty, leading to enrichment of teaching-learning process?*

* Curricular Development

* Teaching-learning methods

* Examination reforms

* Content / knowledge management

* Any other (please specify)

The regular meetings of Academic Council and BOS are being held for discussing curriculum development and examination reforms. College organizes academic development programmes from time to time as perposed by various departments and as per the decisions of Academic Council/BOS/principal.

2.4.13   What are the teaching innovations made during the last five years? How are innovations rewarded?

The Faculty is covering most of their curriculum using PPT and projectors, which have been provided in classrooms. Efforts are being made by the faculty to correlate the activities conducted in the theory class with those of practical laboratory class. Many faculty members are using active learning method. The faculty is also sent to reputed institutes/organization for further training to improve their knowledge and for effective teaching.

2.4.14 Does the College have a mechanism to encourage

* Mobility of faculty between institutions for teaching?

* Faculty exchange programmes with national and international bodies?

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

Yes, The College provides the opportunities to the faculty to serve on deputation with other organizations.

2.5 Evaluation Process and Reforms

2.5.1 How does the College ensure that all the stakeholders are aware of the evaluation processes that are operative?

The evaluation methods are communicated to all the stakeholders at the very beginning of the session/semester by circulating various rules and guidelines of the college regarding the evaluation methods, which involves students in assessment apart

from faculty and expert. The procedure is also mentioned in the academic manual. The UG manual and PG manuals are also on our college website present all the time.

2.5.2 What are the major evaluation reforms initiated by the College and to what extent have they been implemented in the College? Cite a few examples which have positively impacted the evaluation management system?

After being granted the autonomy by UGC, the college conducts the end semester examination on its own. The end semester examination Date-sheet is prepared as per the suggestions of faculty and student representatives. After the examination, the provisional result is being uploaded on the college website. The students can see their result on the college website under the results section. The schedule of display of answer sheets is being displayed by the department. Then, answer sheets are shown to the students as per schedule and if any discrepancy is pointed by the student, the appropriate remedial action, if required is taken by the concerned teacher on the spot. Then final result gazette notification is made by the examination branch, after the incorporation of necessary correction. Similar transparency is being maintained for internal assessment examination, which includes the combined credit of class tests, assignments/quiz and attendance.

The university maintains the record of the students and DMCs are issued by the university only. The major changes made by the institute are that now MCQs also form part of the mid-semester and end-semester examinations.

After getting autonomy, MCQs have been made part of the internal assessment. It is ensured that the mid-semester examination results are displayed within one week. Students can check the answer sheets in a very transparent manner. The general fitness marks are awarded based on the performance of the students in NSS, NCC, sports, communication skills and extra-curricular activities.

2.5.3 What measures have been taken by the institution for continuous evaluation of students and ensuring their progress and improved performance?

For continuous evaluation, the college conducts three mid-semester tests in addition to end-semester examination. Assignments are regularly given to students. Faculty and staff is properly trained and motivated to ensure effective implementation of the evaluation reforms of the university and of the institute.

After getting autonomy, MCQs have been made part of the formative and summative assessments, thereby helping students prepare for various outside examinations such as GATE or IES exams.

2.5.4 *What percentage of marks is earmarked for continuous internal assessment? Indicate the mechanisms strategized to ensure rigour of the internal assessment process?*

Theory Subjects

Formative assessment : 40% (This includes, mid-semester tests, assignments,

attendance etc.

Summative assessment : 60% (End semester examination)

Practical Subjects

Formative assessment : 60% (This includes, mid-semester viva, practical performance and assignments, attendance etc.)

Summative assessment : 40% (This includes, end-semester viva, practical performance)

2.5.5 Does the College adhere to the declared examination schedules? If not, what measures have been taken to address the delay?

Yes, the college strictly follows the declared examination schedule.

2.5.6 What is the average time taken by the College for declaration of examination results? Indicate the mode / media adopted by the College for the publication of examination results e.g., website, SMS, email, etc.

The endeavour is to declare the result within one month of the examination. Results are uploaded on the college website and also being displayed on the notice boards of the departments.

2.5.7 Does the college have an integrated examination platform for the following processes?

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

∗ Examination process –Examination material management, logistics.

∗ Post examination process – attendance capture, OMR based exam result, auto processing, generic result processing and certification.

The college has a separate Examination wing headed by Controller of Examinations (COE). For the smooth conduct of examination process, incharge Secrecy and Conduct committee and incharge Evaluation and Result help the COE office. COE office appoints examination superintendents, invigilators and flying squads for smooth conduct of examination. COE along with all these committees successfully handles Pre-exam process, Exam process and Post-exam process.

2.5.8 Has the College introduced any reforms in its Ph.D. evaluation process?

No Ph.D. Programme offered at college level

2.5.9 What efforts are made by the College to streamline the operations at the Office of the Controller of Examinations?

Mention any significant efforts which have improved process and functioning of the examination division/section?

The IT department of the college has developed ERP solution for the examination system. This has greatly improved the functioning of the office of dean academics and controller of examination.

2.5.10   What is the mechanism for redressal of grievances with reference to evaluation?

After the examination, the evaluated answer sheets are shown to the students. If the student is not satisfied with the evaluation, the evaluator redresses grievance of the student on the spot.

2.6. **Student Performance and Learning Outcomes**

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

The learning outcomes of all the programmes are clearly stated. It is being displayed on the college website, on prominent places in the departments. The faculty is made aware of it in the departmental meetings by the respective Heads and Deans. The students are made aware of it at the start of the session by the concerned department.

2.6.2 How does the institution monitor and ensure the achievement of learning outcomes?
The following procedure has been adopted by the college to monitor the learning outcome:

✓   Depending on the course content, every course has been defined with a course outcome

✓   Based on all the course outcome of a branch, programme outcome for that particular branch has been defined

✓   Based on the programme outcome, programme education objective of that programme has been defined

✓   At the department level, a certain percentage attainment has been defined based on the admission criteria and input of the students and the attainment is measured through direct and indirect measurements
✓   Using direct and indirect method of attainment, attainment level of the programme is assessed
✓   The methods of direct measurement of attainment level of all courses include (a) marks obtained in each subject, (b) assignment marks, (c) any other method
✓   Indirect method of measurement is through survey and includes End semester survey, end programme survey, alumni survey

✓ Based on all this data department is able to ensures the extent of achievement of learning outcome

2.6.3 How does the institution collect and analyse data on student learning outcomes and use it for overcoming barriers of learning?

Presently the data is collected both manually as well as online. IT department of the college has developed inhouse ERP software. The same will be implemented soon. Thereafter all the data will be collected through inhouse developed ERP software.

2.6.4 Give Programme-wise details of the pass percentage and completion rate of students.

Programme	Pass Percentage	Completion Rate (within maximum time stipulated by university)
B.Tech. (2010 batch, all branches)	86%	100%
M.Tech.	94%	100%
Diploma	—	—
Any Other	NA	

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

3.1   Promotion of Research

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

The institute monitors the research progress through the research and development (R & D) committee under Chairmanship of Dean (R & D) and Heads of various departments are members of the committee.

- The section regularly reviews the progress of research activities at the college level.
- The section proposes the budgetary expenditure for the growth of research activities.
- The section encourages and co-ordinate faculty and student, to submit the research proposals to various sponsoring agency.
- To encourage research amongst faculty, the institute has a policy that the faculty pursuing part time Ph.D. should be reimbursed university related fee and contingency money.
- To enhance PG and research education, the institute grants scholarship in PG programs under TEQIP-II.
- Facility to seed money for research is being initiated.

After its implementation, the numbers of faculty members enrolled for Ph.D. have increased substantially and the PG students have become serious in their study.

3.1.2   What is the policy of the college to promote research culture in the college?

- Faculty is entitled and availing extra ordinary leave (EOL) for enhancing qualification and research.
- Faculty is entitled and availing the leave with pay under Q.I.P. for Ph.D. research.
- Faculty pursuing part time Ph.D. is reimbursed university related fees.
- Faculty is sponsored to present papers at national and international conferences.
- Faculty is sponsored to attend faculty development programs (FDPs)/training
- Faculty is encouraged and sponsored for organizing seminars/workshops/FDPs
- Facility of seed money for research within the limited budgetary provision.
- The required infrastructural facilities are given to all the faculty members who are doing research on a project funded by national agencies.

3.1.3   List details of prioritised research areas and the areas of expertise available with the college.

The following are the major prioritised research areas in which expertise available in the college.

- Production engineering
- Thermal engineering
- Machine design engineering
- Computer aided design and manufacturing (CAD/CAM)
- Supply chain management
- Material science(Nano Technology and composite materials)
- Condensed matter physics
- Composites
- Petroleum engineering
- Bio technology
- Digital system design
- Wireless communication
- Digital signal processing (DSP)
- Network security
- Optical communication
- Adhoc networks
- Cloud computing
- Image process
- DBMS
- Bio-informatics
- Soft computing

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

- Advancing funds for sanctioned projects: College advances the funds for sanctioned projects on case to case basis
- Provision for financial support: College has provision for financial support to faculty and students undertaking research work as per the requirement of research/project work. The College provides all the infrastructural facilities required for research and also encourage the collaboration with other institutes and industries.
- Autonomy to the principal investigator/ coordinator for utilizing overhead charges: The principal investigator/ coordinator is given complete autonomy for utilizing overhead charges as per the project guidelines.
- Timely release of grants: College ensure the timely release of grants.
- Monitoring of project: The College encourages the faculty and students to pursue research of national importance. The project duly submitted by the faculty are properly monitored by R & D committee by periodic reviews, till its closure.
- Submission of utilization certificates to the funding authorities: The college provides the necessary support for the submission of utilization certificates to the funding authorities.

- Project Completion report is being evaluated by R & D committee before submitting to the funding agency.

3.1.5   How is interdisciplinary research promoted?
- *Between/among different departments of the college*
- *Collaboration with national/ international institutes/ industries*

The departmental research committees (DRC) of the different departments explore the avenues for interdisciplinary research. The collaboration with research institutes of national level is being encouraged. The college has started weekly collegiums where, every week, the college invites one expert (internal or external) to present their research, which is being attended by all faculties, and useful in promoting interdisciplinary research.

3.1.6   Enumerate the efforts of the college in attracting researchers of eminence to visit the campus and interact with teachers and students?

The eminent researchers of India are regularly invited to interact with the faculty and students as resource person during weekly faculty collegiums, conferences, workshops, and faculty development programs for giving expert lecture/special lecture on upcoming topics.

3.1.7   What percentages of faculty have utilized sabbatical leave for research activities? How has the provision contributed to the research quality and culture of the college?

About 10% of the faculty have utilized study/sabbatical leave for pursuing Ph.Ds. and post doctorate research from India and abroad. The faculty members have earned good research grants to their credits from different national agencies such as AICTE which has led to development of research facilities and research culture in the college.

3.1.8   Provide detail of national and international conferences organized by the college highlighting the names of eminent scientists/scholars who participated in these events.

Some of the recent workshops and conferences which have been recently organised are detailed below:

- First National Conference on "Recent Trends in Mechanical Engineering" organised by Mechanical Engineering department on February 21-22, 2014. Dr. I. K. Bhatt, Director, MNIT, Jaipur, Dr. T. P. Singh, Symbiosis International University Pune, Dr. B.S. Pabla, Professor and Head, NITTTR, Chandigarh, Dr. J. K. Sharma, Director ACEAR, Ambala, Dr. Harmesh Kansal, Professor and Head, UIET, PU, Chandigarh and Dr. J.S. Hundal, Principal, GZSPTU Campus, Bhatinda were the key speakers in the conference.
- First National Conference on "Recent Advancements in Mathematics" organised by the department of Applied Science & Humanities on February 1-2, 2014. Professor R. Upadhayay, ISM Dhanbad, Prof. J. Dhar, IIITM, Gwalior,

Prof. R. Bawa, Pbi. University, Patiala, Prof. B. Dubey, BITS, Pilani and Prof. R. N. Tripathi, HBTI, Kanpur participated in the conference.

- One day workshop cum exhibition on "Nuclear Technology: Addressing Needs of People" organised jointly by BCET, Gurdaspur and Media Relations and Public Awareness Section, BARC Mumbai on September 11, 2014. Sh. K.A.P. Sinha, Joint Secretary, DAE, New Delhi, Dr. Baljinder Singh, Professor (Nuclear Medicine), PGIMER, Chandigarh, Dr. R. K. Singh, Dr. S.V. Thakre and Dr. S. K. Gupta BARC Mumbai were the key speakers in the workshop.

- One day symposium /CME on "Current Innovations in Imaging Instrumentations and Radiopharmaceuticals (CIIIR): Diagnostic and Therapeutic Applications" was organised on September 28, 2013. Dr. S.S. Gill, Vice Chancellor, Baba Farid University of Health Sciences, Faridkot, Prof. Baljinder Singh, PGIMER Chandigarh, Dr. P. S. Soni, Dean, Indian College of Nuclear Medicine, Dr. A. Mishra, Scientist –G, Head, Division of Cyclotron and Radiopharmacy, INMAS, DRDO, New Delhi, Prof. R. Bhandari, Dr. S.S. Sachdeva, BRIT, BARC, Mumbai, Prof. S. Gambir, Head, Nuclear Medicine, SGPGIMS, Lucknow were the key speakers in the symposium.

- 2nd National Conference on "Recent Trends in Mechanical Engineering" organised by Mechanical Engineering Department on March 20-21, 2015. Prof. Buta Singh, Dean, Academics, Punjab Technical University, Jalandhar, Prof. Harpreet Singh, IIT, Ropar and Prof. Subhash Chandra, Head, Mechanical Engineering, NIT, Jalandhar were the key speakers in the conference.

- An Invited talk by Prof. (Dr.) Christopher C Berndt, Swinburne University of Technology was organized on 2-4-2015.

3.1.9   Details on the college initiative in transferring/advocating the relative findings of research of the college and elsewhere to the students and the community (lab to land).

Part-time post graduate courses in engineering are offered by the college on weekends to in-service people for which the services of the expert faculty of the college are utilized so that latest knowledge based on the latest research can be applied in the field problems. The research findings communicated through published papers of national/international conferences and journal which are easily accessible to the industry users. Further industry personal who participates in conferences organized at college interacts with the faculties. Apart from it, the UG students interact with the industry for six months, where their skill is utilized in finding industrial solutions. Moreover, institution newsletter is published carrying news of research programs, which is sent to all nearby industries and all alumnus. Also the annual report of the college activities is being circulated to all the institutes and universities in the region and india.

3.1.10 Give details on the facility actively involved in research (guiding student research, leading research projects, engaged in individual or collaborative research activity etc)

Almost all faculty members are involved in research, guiding students for their M.Tech. and Ph.D. research work. Few of the faculty members have got research projects funded by various national funding agencies such as AICTE. Faculty members publishes their research work in the peer reviewed journals of national and international repute and conferences.

College has established a central lab with sophisticated instruments to promote the research activities in the college.

3.2 Resources mobilization for research

3.2.1 What percentage of the total budget is earmarked for research? Give details of expenditure, financial allocation and actual utilization for last four years.

From college's resources, some funds are kept for purchase of research equipment as proposed by different departments according to their requirement. The expenditure incurred by faculty for presenting research papers in conferences (national and international both) is reimbursed by the college. In the case of faculty, who enhance their educational qualification through part time courses while in services, their university course fee is reimbursed by the college. Computing facilities, computers, software etc. are provided to facilitate the research work. Also from TEQIP-II funding the equipments have been procured for research enhancement.

3.2.2 What are the financial provisions made in the college budget for supporting students' research projects?

In addition to it, the budgetary provision of ₹ 10 lacs has been earmarked for carrying innovative research for students. Every department has a budget which is fixed as per the requirements of the departments. The students submit the proposal of their research work and the selected projects are fully funded by the college in the form of purchase equipment and other requirements. In addition, the students are encouraged to submit their innovative proposal to various external agencies also.

3.2.3 Is there a provision in the institution to provide seed money to faculty for research? If so, what percentage of the faculty has received seed money in the last four years?

Yes, the institute has a budgetary provision to facilitate the faculty and students for research work. As per the requirements of different departments, a fixed sum is allocated in the budget for the purchase of the research equipments, and other consumable items. In addition faculty also encouraged to get financial assistance from affiliated university. As and when faculty require any financial assistance up to some extent, it is provided.

3.2.4 Are there any special efforts made by college to encourage faculty to file for patents? If so, provide details of patents field and enumerate the sanctioned patents.

Yes, college provide all the necessary support to encourage the faculty to file for patents.

The following patent was filed:

Faculty /student	Title of patent	Patent/application no	Remarks
1.Susant Sharma and Shasank Srivastava	Mechanical device used for solar refrigeration	1015/DEL/2011	National

3.2.5   Provide the following details of ongoing research projects:

	Year wise	Number	Name of the project	Name of the funding agency/ Industry	Total grant received
A. College funded					
Minor projects	2014	1		College	30000/-
Major projects	-	-	-	-	-
Along with Industry	-	-	-	-	-
B. Other agencies - national and international (specify): All sponsored projects have been completed, so currently no ongoing projects are existing in the college.					
Minor projects	-	-	-	-	-
Major projects	-	-	-	-	-
C. Industry sponsored	-	-	-	-	-

3.2.6   How many departments of the college have been recognized for their research activities by national / international agencies (UGC-SAP, CAS, DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthrough due to such recognition.

The college has received a grant of ₹ 10 crore under TEQIP-II from MHRD. The department of Mechanical Engineering has received ₹ 57.5 Lacs as Research Project Fund for pursuing research from AICTE. The funds have been utilised for the purchase of the state-of-the-art equipment for different laboratories. The faculty have been recognized for their research in various national/international forums.

3.2.7   List details of completed research projects undertaken by the college faculty in the last four years and mention the details of grants received for such projects (funded by Industry/National/International agencies).

Year	Name of project/ Subject	Name of funding Agency	Grant received ₹
2010-11	RPS	AICTE, New Delhi	39 L
2011-12	RPS	AICTE, New Delhi	18.5 L

3.3 Research Facilities

3.3.1 What efforts are made by the college to keep pace with the infrastructure requirements to facilitate Research? How and what strategies are evolved to meet the needs of researchers?

The college has well equipped state of art laboratories. The new equipments are purchased from time to time as per the budgetary provision and requirements of the department. The latest updated equipments is procured for research in new emerging fields.

The infrastructure of the college has been further augmented due to the 10 crore grant received under TEQIP-II. The obsolete equipment of different laboratories where also replaced from the AICTE grant under MODROB scheme. Many of the new equipments has been purchased out of AICTE/DST grant under Research projects scheme. Recently the college has developed a Central Research Laboratory to augment research.

3.3.2 Does the college have an information resource centre to cater to the needs of researchers? If yes, provide details on the facility.

The college has subscribed a large number of online journals and books. The facilities like electronic resource management package for e-journals and in-house/remote access to e-publications are available in the college.

3.3.3 Does the college provide residential facilities (with computer and internet facilities) for research scholars and faculty?

Yes, the college do have residential facilities.

3.3.4 Does the college have a specialized research centre/workstation to address challenges of research programmes? If yes, give details.

Yes. The college is a notified Research centre of Punjab Technical University, Kapurthala. A number of research scholars across the area are pursuing their research either in Centre Research Laboratory or existing laboratories of departments. All the departments have a specified computational facility with the access of all relevant soft wares, which address the challenges of research programme. Now the facilities are being further augmented based on the need of the department specific research programme from TEQIP-II grant.

3.3.5   Does the college have research facilities (centre, etc) of regional, national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from laboratories.

As, discussed earlier, the college is a notified research centre of Punjab Technical University. Different departments have created some specified research labs and procured specified equipments/software/hardware in the existing labs to augment the research facilities. These research facilities are being used by researchers of nearby institutions. The faculty guides the research students for carrying out their research projects.

3.4   Research Publications awards

3.4.1   Highlight the major research achievements of the college through the following:

- Major papers presented in regional, national and international conferences

The faculty members have presented more than 500 research papers in regional, national, international conferences. The details are given in the profile of the different departments in this report.

- Publication per faculty

The faculty members involved in guiding Ph.D./M.Tech. Students publish two papers on the average annually in different journals/conferences.

- Faculty serving on the editorial boards of national and international journals.

Many of the faculty of the range of the Professors/Associate Professors are on the editorial boards of the National and International Journals.

- Faculty members on the organisation committee of the international conferences, Recognized by reputed organization/societies.

The faculty members have been nominated as member of organising committee of international conferences, recognized by reputed organisations from time to time.

3.4.2   Does the college research journal(s)? If yes, indicate the composition of the editorial board, publication polces and whether it is listed in international database?

No

3.4.3   Give details of publication by the faculty:

The details are presented in the profile of individual departments.

3.4.4   Indicate the average number of successful M.Phil. And Ph.D. scholars guided per faculty.

The faculty of the applied science department have guided external M.Phil thesis, whereas engineering faculty as an average are guiding 02 M. Tech. Students. About one fourth of the faculty is also engaged in guiding Ph.D. scholars.

3.4.5   What is the stated policy of the college to check Malpractices and Misconduct in Research?

Plagiarism check is compulsory before the submission of thesis for M. Tech. If the student is found using unfair means, his/her case is dealt as per the guidelines of PG manual. The candidate is required to submit declaration of his own work. The college has made is mandatory for all the research scholars doing Ph.D. to publish at least two research paper in journals out of which one paper should be published in a journal having some impact factor to become eligible for the submission of Ph.D. thesis. It is also ensured that one of the thesis evaluator is from foreign country.

3.4.6   Does the college promote inter disciplinary research? If yes, How many inter departmental/inter disciplinary research projects have been undertaken and mention the number of departments involved in such an endeavour.

Yes. Currently many students from engineering are pursuing their research in collaboration with applied science.

3.4.7   Mention the research award instituted by the college.

The current practice in the college is to honour only best research paper presented in the conference.

3.4.8   State the incentives given to the faculty for receiving state, national and international recognitions for research contributions.

The faculty is given all the financial support for attending national and international conferences, seminars and workshops. The faculty members acquiring higher degree such as Ph.D., M.Tech. are given the increments as per rules. Further there recognition for research contribution is considered during their promotion under Career Advancement Scheme.

3.5   Consultancy

3.5.1   What is the stated policy of the college for structured consultancy? List a few important consultancy services undertaken by the college.

The principal and members of the academic staff are permitted to engage themselves in consultancy practice to such extent as will not interfere with the discharge of their duties and within such limits as the management may lay down from time to time. Further, guidelines according to college bye-laws are followed, which deals with the rate of remuneration to be paid to the faculty and other office bearers undertaking consultancy jobs.

Attempts are also being made to involve the industry institute interaction cell in such work. The college have under taken technical skill enhancement of the students of nearby engineering colleges, development of online registration for birth/death certificates for local administration, and also some material testing jobs.

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

Yes, the college has industry institute interaction cell (IIIC), where the regular meetings with the industry and academia are conducted. The cell is making efforts to address industrial technical problems which will be solved through UG/PG students.

3.5.3   What is the mode of publicizing the expertise of the college for consultancy services? Mention the departments from whom consultancy was sought.

(a)   Brochure
(b)   College website
(c)   During IIIC meetings
(d)   Through different departments

3.5.4   How does the college encourage the faculty to utilise the expertise for consultancy services?

- Weightage is given to the consultancy services provided by faculty members in their annual confidential report and promotion.
- 70% of remuneration earned from consultancy services is given to the faculty members as per rule.
- The equipments which are having high potential for consultancy services are being prepared to be purchased.

3.5.5   List the board area of consultancy services provided by the college and the revenue generated during the last four years.

Broad areas of consultancy services provided by the college are as under:

a)   Material testing
b)   Technical skill enhancement
c)   ERP based software

As there are not many industries located in the vicinity of the college we could generate the revenue through consultancy very less as given below:

Sr. No.	Year	Amount (₹)
1	2009-2010	23990
2	2010-2011	201950

3	2011-2012	249943
4	2012-2013	311300

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 How does the college sensitize the faculty and students on Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience.

The college organizes programmes regarding social issue. Days marking social issues like Environment day, clean campus day, Swachha Bharat Abhiyan, Rasrtiya Ekta Divas, National Voter Day etc. are celebrated wherein students and faculty members take part. Tree plantation drive, cleanliness drive under environmental awareness programme and blood donation camps are being organized regularly by NSS/NCC volunteers. Donation camps are organized and funds collected and sent to victims of natural calamities, or for the betterment of handicaps such as those who are blind. These programs made them aware about their social responsibility about self, surroundings, society and country as a whole.

Such drives have not only created awareness but also develops the spirit of social services among the students. Tree plantation drive carried by the volunteers created an awareness of ecological balance among the students.

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

The college neighborhood network is promoted through NSS. The college adopted Bariyar village and it is looked after by NSS volunteers. They organise awareness camps, de-addiction rallies & literacy promotion campaigns.

Students are also making sustained efforts to aware the surrounding population of college about the drug menace.

3.6.3 How does the college promote the participation of students and faculty in extension including participation in NSS, NCC, YRC and other National/International agencies?

The institution encourages students to actively participate in NSS/NCC. The college has been allotted 6 units of NSS and 73 students for NCC. The college has a program officers for NSS and NCC. The NCC is managed by faculty member of rank of Lieutenant. Regular programmes for NSS and regular parade for NCC are essential features apart from their academics. Different technical societies have been formed, where students participate for debate, group discussion on contemporary technical and non-technical issues. Every year these societies organize technical event where students of different institutions participate and compete. For cultural activities, different

societies have been formed and annual cultural festival is being organized. Students also participate in activities organized by other institutions from time to time.

3.6.4 *Give details on social surveys, research or extension work (if any) undertaken by the College to ensure social justice and empower the under-provided and most vulnerable sections society?*

All the underprivileged are given admission in the college as per norms. Apart from it, the college also promotes social welfare causes through its NSS wing. The college has contributed ₹ 10000 to the victims of Jammu & Kashmir flood relief fund. The college also contributing Indian Association for Blind Fund to promote welfare. The NSS wing of college has made literary survey of 26 villages of District Gurdaspur.

3.6.5 *Give detail of awards / recognition received by the college for extension activities / community development work.*

Award of Honour by Indian Red Cross Society, and presented by Hon'ble Governor of Punjab for organising annual blood donation camp.

3.6.6 *Reflecting on objectives and expected outcomes of the extension activities organized by the college, comment on how they complement students' academic learning experience and specify the values and skills inculcated?*

Besides their academic curricula, involvement of the students in extra-curricular activities train them to groom overall personality which is useful for their corporate life.

3.6.7 *How does the College ensure the involvement of the community in its outreach activities and contribute to the community development? Detail the initiatives of the College which have encouraged community participation in its activities.*

The college students have encouraged community food services (Langar Sewa) on social/religious occasions. College students as NSS volunteers have taken a big lead in making the surrounding population aware about the drug menace. NSS volunteers have made the people aware about the role and advantage of IT in daily life, environment protection through tree plantation and combating drug menace through play and slogans.

3.6.8 *Does the college have a mechanism to track the student' involvement in various social movements / activities which promote citizenship roles?*

The college maintains a record of student' activities and the student' efforts are evaluated in the General Fitness criteria of curriculum.

3.6.9 *Give detail on the constructive relationship (if any) with other institutions in the nearby locality in working on various outreach and extension activities.*

The college is regularly interacting with the Sukhajindera College of Engineering & Technology, Gurdaspur and many others, for imparting technical knowledge and

knowhow to the different sections of the society who undergo different types of vocational training.

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

(a) Award of Honor by Indian Red Cross Society, and presented by Hon'ble Governor of Punjab for organizing annual blood donation camp.

(b) Best Faculty Award

3.7   Collaboration

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

The college has collaboration with educational institutions of national repute. This has contributed in faculty exchange as resource person for seminars/workshops, collaborated Ph.D. research projects and joint research publications; and curriculum development. The association with industries has resulted in students' industrial training and better placement. In recent IIIC activities are expected to enhance industrial consultancy and as a result build up confidence among industry and academic.

3.7.2 *Mention specific examples of, how these linkages promote?*
- Curriculum development
The expert from industries who are members of BOS give their valuable suggestions about curriculum revision. The experts from reputed institutes are contributing their expert opinion on the revision of syllabus which is globally accepted and may help in achieving our vision.
- Internship, On-the-job training
The students join their internship training with major industries of the country. Joint evaluation of the candidates and continuous monitoring are helpful in enhancing their learning skill.
- Faculty exchange and development
The college has faculty exchange and development programs with NITTTR Chandigarh, NIT Jalandhar, Guru Nanak Dev Engineering College, Ludhiana, Central Institute of Plastics Engineering and Technology, Amritsar. Faculty members are doing joint research leading to M.Tech/Ph.D. degree and joint publications.
- Research, publication
Some faculty and PG student are involved in research projects which are planned with collaborations with industry and other institutions. The research findings are published in reputed journals/conferences jointly.
- Student placement

The continuous industries linkage have resulted in better placement of student in industries like Apollo Tyres Gurgaon, Emson Gears Ltd Ludhiana etc.

3.7.3 *Does the college have MoUs nationally / internationally and with institutions of national importance /other universities / industries /corporate house etc.? If yes, explain how the MoUs have contributed in enhancing the quality and output of teaching-learning, research and development activities of the college?*

At present, the institute is having MoU with NIT, jalandhar.
The MoU has contributed in curriculum development, inviting resource person for seminar and use of resources for research.

3.7.4 *Have the college interactions resulted in the established / creation of highly specialized laboratories/ facilities?*

The college has a separate Industry Institute Interaction Cell which continuously interacts with the dignitaries of industry of the region. The necessary infrastructure is being arranged by the college from different resources. Industry representatives are also invited to evaluate students' innovative projects which are displayed in Tech Fest. This is an event, which is organised every year in the college campus. The feedback obtained from external members is helpful in establishing incubation and innovation spirit amongst students. Further the industry personals are also involved in IQAC Cell, whose active involvement and expert advice are useful in the establishment of highly specialised laboratories.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1   Physical Facilities

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

The college has state of art labs in all the disciplines with the modern equipments. The class rooms are equipped with the LCD projectors. All the labs have log books to maintain the report of utilization of various infrastructural facilities.

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

Yes, college regularly create and enhance the infrastructural facilities in the academic department and library/ administrative blocks. Every year the budget to all the sections/department is allocated for the same and utilization of the same is monitored by the principlal periodically.

4.1.3   Does the College provide all departments with facilities like office room, common room, separate rest rooms for women students and staff?

All the departments are having independent offices. Every faculty/staff members are provided offices with adequate infrastructure. The separate rest rooms for women and staff is available in each section.

4.1.4   How does the College ensure that the infrastructure facilities meet the requirements of students/staff with disabilities?

Suitable arrangements/additions/changes are made whenever the need arises, to meet the requirements of the differently-abled students/staff. The institution makes sure that the students with disabilities do not find any difficulty in pursuing their studies.

4.1.5   How does the College cater to the residential requirements of students? Mention

The College has four boys Hostels and two Girls Hostel. The various facilities available in the hostels are as under :

- Adequate furniture and fixtures in every room.
- Common Room with T.V. Set.
- Telephone
- Guest Room
- Facilities for Indoor Games
- Hostel mess works on Cooperative Mess System.

- Wi-Fi facilities are available in all the hostels.

Internet facility is provided in the hostels through 100 Mbps leased line of NKN. The following hostels are operational presently:-

Hostel	Capacity
Hostel No-1	255
Hostel No-2	222
Hostel No-3	200
Hostel No-4	200
Hostel No-5 (Girls Hostel) A & B	130

4.1.6 *How does the College cope with the health related support services for its students, faculty and non-teaching staff on the campus and beyond?*

The college has fully operational dispensary with qualified staff. A medical officer with M.B.B.S. qualification has been appointed who is residing in the campus and available round the clock to faculty, student and staff of the college. A nurse is also available in the dispensary and resident in the campus. There is also one pharmacist and medical attendant working in the dispensary.

4.1.7 *What special facilities are made available on the campus to promote interest in sports and cultural events?*

Our college has excellent infrastructure in sports. This includes the gymnasium station and play grounds for almost all the games. Probably, it is the only Engineering college having flood light tennis court of international standard and every year. We organize in department support for various games. We conduct Punjab Technical University (PTU) Tennis tournaments. The college has a full time DPE. The athletic meet are organized annually in the college.
The college has organizes the cultural function every year under the name "Sui Generis". In this cultural event, the students from all the branches participate.
The college has many societies of students like Music and dramatics club (MAD), Punjabi Sabhyacharak club, Fine arts clubs and SAI club. These societies organize the events round the year for the students.

4.2   Library as a Learning Resource

4.2.1 *Does the library have an Advisory Committee? Specify the composition of such a*

committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

Yes, Library has a library committee. Initiatives are made by this committee to automate the library, to get new e-resources for library, to finalize the procurement of journals and books for the various department of the college.

4.2.2   Provide details of the following:

- Total area of the library (in Sq. Mts.) :   1280 Sq. meter
- Total seating capacity :   110

- *Working hours (on working days, on holidays, before examination days, during examination days, during vacation)*
  Main Library (All working days)   :   9:00 AM to 5:00 PM
  Reading hall (All days)   :   9:00 AM to 12:00 PM

- *Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)*
  YES
- *Access to the premises through prominent display of clearly laid out floor plan; adequate signage; fire alarm; access to differently abled users and mode of access to collection)*
  YES

4.2.3   Give details on the library holdings   *Total No.*

  a)   Print   28,253
          (Books, back volumes and thesis)
  b)   Non Print (Microfiche, AV)   760
  c)   Electronic (e-books, e-Journals)
                                                                    - IEEE
                                                                    - ASME
                                                                    - Science Direct
                                                                    - DELNET

  d)   Special collection
          (eg. Text book, Reference books   25616
          standards,   320
          patents)   ----

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

          OPAC   : OFFLINE

Electronic Resource Management package for e-journals   ----
Federated searching tools to search articles in multiple databases   ----
Library Website   http://bcetgsp.ac.in/library.php

In-house/remote access to e-publications :   In-house, IP based

4.2.5   To what extent is the ICT deployed in the library?

Library automation	Under Process
Total number of computers for public access	10
Total numbers of printers for public access	01
Internet band width speed	100 MBPS
Institutional Repository	----
Content management system for e-learning	YES
Participation in Resource sharing networks/consortia (like Inflibnet)	----

4.2.6   Provide details (per month) with regard to.

Average number of walk-ins	106
Average number of books issued/returned	1684
Ratio of library books to students enrolled	14:1
Average number of books added during last three years	2104
Average number of login to OPAC	OFFLINE
Average number of login to e-resources	7175 per month
Average number of e-resources downloaded/printed	796 per month
Number of information literacy trainings organized	03

4.2.7   Give details of the specialized services provided by the library

Manuscripts	------
Reference	YES
Reprography	YES
ILL (Inter Library Loan Service)	YES
Information Deployment and Notification	YES
OPAC	OFFLINE
Internet Access	
Downloads	YES
Printouts	YES
Reading list/ Bibliography compilation	YES
In-house/remote access to e-resources	YES
User Orientation	
	YES
Assistance in searching Databases	YES
INFLIBNET/IUC facilities	DELNET/INDEST

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

Rs. 10 Lacs

4.2.9   Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services.

YES

4.2.10   List the infrastructural development of the library over the last four years.

Year	Items	QTY	Amount
2012-13	Book Stacks	05	1.0 Lacs
2013-14	Chairs	72	~ 9.0 Lacs
	Tables	28	
	Book Rack	21	

4.2.11   Did the library organize workshop/s for students, teachers,   non-teaching staff of the College to facilitate better Library usage?

YES, Every year when new students are coming, we organize interaction program for library. We organize exhibition of various publishers for the selection of new books.

4.3   IT Infrastructure

4.3.1   Does the College have a comprehensive IT policy addressing standards on IT Service Management, Information Security, Network Security, Risk Management and Software Asset Management?

Yes, IP addressing scheme to various hosts is specified. Network and Information security is maintained by UTM Firewall and Antivirus.

4.3.2   Give details of the College's computing facilities (hardware and software).

 # Number of systems with configuration

HP Server   - 04 (Xeon Server, 16GB RAM, 3 * 300 GB HDD)
HP Server ML350 G4/G5   - 03 (XEON Processor, 2GB RAM, 3×72 GB SCSI HDD)
Laptop   - 10 (16GB RAM, 750GB HDD)

Intel Core i5	- 100 (8 GB RAM, 500 GB HDD, 64 Bit Window 7
Intel core i3	- 80 (Elite 8300 MT Tower, 2 GB RAM, 500 GB HDD, 18" LED , 32 Bit Window 7)
Pentium 4/Core 2 Duo -	400 (HP dx 7000 series, Intel core 2 duo @ 2.53 GHz, RAM 1GB, HDD 160 GB, Monitor 17" TFT) (HP dx 6100 series, P-IV @ 3.0 GHz, RAM 512 MB, HDD 80 GB, Monitor 15" SVGA Color)

Total Systems	- 580	
Computer-student ratio	- 1 : 5	
Dedicated computing facility -	No. of Computers with teacher	- 140
	No. of Computers with Staff	- 40

LAN facility

All the college buildings have separate edge switches connected to central core switch through fibre optic cables. Almost all rooms have been provided with atleast one LAN port. There is one UTM Firewall (Cyberoam CR200iNG-XP) for the management of Internet Services. Hostels are provided with Wi-Fi facility through Wi-Fi LAN Controller and managed Access Points.

WiFi facility

Yes, provided to all hostels and instructional area.

Propriety software / Open source softwares
Pre installed Windows OS in computers.
Ubuntu/CentOS

Number of nodes/ computers with internet facility
About 300

Any other
Nil

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

   ✓ 20 more computers system will be purchased for CSE Deptt. in forthcoming year 2015-16
   ✓ To provide LAN/WAN facilities to new library block.
   ✓ To extend LAN /WAN connectivity to residential area.
   ✓ To extend LAN/WAN facilities in Polytechnic wing

4.3.3 *Give details on access to online teaching and learning resources and other*

knowledge, and information provided to the staff and students for quality teaching, learning and research.

1. *E-Journal*
   (IEEE for CSE/IT/ECE, ASME for ME/Prod. & Science Direct for Chemical Engg./Biotechnology)
2. Internet
3. QEEE Lectures

4.3.4   *Give details on the ICT enabled classrooms/learning spaces available within the College and how they are utilized for enhancing the quality of teaching and learning.*

At least one class room in each department is ICT enabled.

4.3.5   *How are the faculty facilitated to prepare computer aided teaching-learning materials? What are the facilities available in the College or affiliating University for such initiatives?*

- E-Journal
- Internet

4.3.6   *How are the computers and their accessories maintained? (AMC, etc.)*

Most of the computers are under warranty, rest are not covered under AMC, however maintenance is done on call charges basis.

4.3.7   *Does the College avail of the National Knowledge Network connectivity directly or through the affiliating University? If so, what are the services availed of?*

College has direct NKN Connectivity of 100 Mbps.

4.3.8   *Provide details on the provision made in the annual budget for update, deployment and maintenance of the computers in the College?*

Rs. 4,70,000/-

4.4   Maintenance of Campus Facilities

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

The college has a fully functional maintenance section under the direct control of Dean (Planning and Development). The maintenance section has full time staff including

maintenance engineer, maintenance supervisor, electricians etc. All the infrastructure development and maintenance is done through this cell only.

4.4.2 Does the College appoint staff for maintenance and repair? If not, how are the infrastructure facilities, services and equipment maintained? Give details.

The college has full time maintenance staff for the maintenance of various services and infrastructure in the college. Every department has qualified technical staff which is capable of maintaining the equipments in their respective labs. In case of major faults in the equipments, the same is get repaired from outside (by service engineers of the companies).

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 **Student Mentoring and Support**

5.1.1 *Does the College have an independent system for student support and mentoring? If yes, what are its structural and functional characteristics?*

The faculty members act as mentors. One mentor is allotted for each class. The students discuss with the mentor their issues on academics, extracurricular activities, hostels and personal life. The mentors suggest them the possible solutions or forward their issues to the concerned official for the necessary remedial action.

5.1.2 *What provisions exist for academic mentoring apart from class room work?*

Faculty members act as mentors.One mentor is allotted for each class.

5.1.3 *Does the College provide personal enhancement and development schemes for students? If yes, describe techniques employed e.g., career counselling, soft skill development, etc.*

Yes. The College has established a separate Training and Placement Cell with a Training and Placement officer as in-charge. It invites reputed companies for campus placements by sending the profile of the college. The institution also effectively uses its alumnus working with the companies in attracting the companies for campus placements. The T & P Cell is making all possible efforts to further improve the employability skills of students through its activities. The Training and Placement Cell caters to the needs of the students from the third year onwards. It provides the necessary training in developing the soft skills, so as to equip them to excel in competing in the job market and face the interview committee with confidence. The students are facilitated with an in-campus coaching in personality development, aptitude and communication skills. The Training & Placement cell organizes on campus, off campus recruiting drives and job fairs for the employment of fresh graduates into national and multinational companies.

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

Yes, the institution publishes its updated prospectus and other student information material annually. The information that is disseminated to students through these publications is about the institute, academic programs, laboratories of different departments, library, computer center, scholarships schemes placement, guidance and counseling cell, transportation and hostel facility as well as criterion for admission. All this information is available on

college website and students are encouraged to visit the college website regularly. College also publish newsletters and annual report.

5.1.5 *Specify the type and number of scholarships / freeships given to students (UG/PG/M.Phil/Ph.D./Diploma/others in tabular form) by the College Management during the last four years. Indicate whether the financial aid was available on time.*

The following Merit cum Means Scholarships given to students:

SC Scholarship of Punjab Govt
SC/OBC Scholarships of state governments
Minority Scholarship by GOI
GATE Scholarships by GOI

These scholarships are given as per the govt. Rules and efforts are made by the college to ensure that these financial grants are made available in time.

5.1.6 *What percentage of students receives financial assistance from state government, central government and other national agencies? (e.g., Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellowship etc.)*

About 35% of students get financial assistance from state government, central government and other national agencies

5.1.7 *Does the College have an International Student Cell to cater to the needs of foreign students? If so, what measures have been taken to attract foreign students?*

Yes, college have established recently an international cell for the student exchange program.

5.1.8 *What types of support services are available for*

* *overseas students*

* *physically challenged / differently abled students*

Classes for these students are arranged at convenient places. They are given special care and attention. All concerned are issued necessary directions to listen to the needs and grievances.

* *SC/ST, OBC and economically weaker sections*

These students are given fee consession/scholarships as per the rules framed by the competent authorities from time to time.

* *students to participate in various competitions/ conferences in India and abroad*

The students willing to participate in various competitions/conferences in India and abroad are provided the necessary infrastructure and financial support.

* *health centre, health insurance etc.*

In the college, Dispensary is provided for the need of the students. One doctor, Nurse, attendentand pharmacists are present on duty for the students.

Health insurance cover upto 2.0 Lac for all the students of the college.

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

College has a well furnished Communicative English Lab where regular sessions are conducted for soft skill development of students.

Computer centre has all the computational facilities for the students. The necessary guidance is regularly given to improve the computer literacy of students.

* *Performance enhancement for slow learners / students who are at risk of failure and dropouts*

Special remedial classes are arranged for the slow learners.

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

The students' educational visits/tours to reputed organizations/institutes/industries are regularly organized.

* *publication of student magazines*

The student magazine is published annually.

5.1.9   *Does the College provide guidance / coaching classes for Civil Services, Defense Services, NET/SLET and any other competitive examinations? If yes, what is the outcome?*

Though no formal coaching is done, but each department ensures that students are given time during the class. After getting autonomy, MCQs have been made part of the formative and summative assessments, thereby helping students to prepare for various outside examinations such as GATE or IES exams.

5.1.10   *Mention the policies of the College for enhancing student participation in sports*

and extracurricular activities through strategies such as

* additional academic support, flexibility in examinations

* special dietary requirements, sports uniform and materials

* any other

To promote participation of students in extracurricular and co- curricular activities different societies and clubs are formed in the college and all other necessary logistic, financial and infrastructural support for students' participation in extracurricular activities is provided time to time. Students are also provided with all the required infrastructure for preparing for these activities. The position holders in different activities are awarded with the momentos, scholarships and other appreciations. The due weightage is also given to the students in the marks allotted for General fitness. All the above mentioned activities regarding students is managed by Dean , Students welfare.

5.1.11   Does the College have an institutionalized mechanism for placement of its students? What services are provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

Yes. The College has established a separate Training and Placement Cell with a Training and Placement officer as in-charge. It invites reputed companies for campus placements by sending the profile of the college. The institution also effectively uses its pass-out students alumnus working with the companies in attracting the companies for campus placements. The T & P Cell is making all possible efforts to further improve the employability skills of students through its activities. The Training and Placement Cell caters to the needs of the students from the third year onward s. It provides the necessary training in developing the soft skills, so as to equip them to excel in competing in the job market and face the interview committee with confidence. The students are facilitated with an in-campus coaching in personality development, aptitude and communication skills. The Training & Placement cell organizes on campus, off campus recruiting drives and job fairs for the employment of fresh graduates into national and multinational companies. The college has tied up with TIMES Institute to help students for interviews and placement skills. The college EDP cell provides help to develop entrepreneurship skills of the students.

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

Name of Company	Year of visit	No. of students selected
Escorts Ltd, Faridabad	2011	37

HCL(BPO Division), Noida		63
Poineer Industries Ltd, Pathankot		
Poineer Industries Ltd, Pathankot		
Escorts Ltd, Faridabad		
HCL(BPO Division), Noida		
Poineer Industries Ltd, Pathankot		
Infowiz Chandigarh		
HCL Info systems		
HCL		
Code Studio IT Solution Noida	2012	44
Solitaire Infosys Inc.Mohali		
CS Soft Solutions, Indl. Area Mohali		
Unit Nexus Pvt. Ltd., Chandigarh		
Kochar Infotech, Amritsar		
Sanmar Groups		
Grundfos		
Indian Army (Gentleman Cadet (GC) Officers Trg. Academy		
HCL Comnet		
HCL Technologies Ltd., Noida		
CS Technologies Chandigarh		
HCL Technologies Ltd., Noida		
Unit Nexus Pvt. Ltd., Chandigarh	2013	18
Airsoft Infosys, Chandigarh		
International Tractors Ltd., Hoshiarpur		
International Tractors Ltd., Hoshiarpur		
Henkel Adhesive Technologies India Pvt. Ltd.,		
Buckman Laboratories P.Ltd.,	2014	24

M/s eNest technologies Pvt. Ltd., Ludhiana		
M/s. Emson Gears Ltd., Ludhiana		
HCL, Noida		
Accenture, Hydrabad		
M/s CINIF Technologies Ltd., Chandigarh		

5.1.13 *Does the College have a registered Alumni association? If yes, what are its activities and contributions to the development of the College?*

Yes, the college has alumni association registered.

The activities and contributions are as follows:

1. Alumni meetings are conducted periodically. Alumni members resolved to contribute to college development.

2. Alumni provide feedback of industry and also help in establishing new curriculum courses.

3. Alumni also help in placement and industrial training of students.

5.1.14 *Does the College have a student grievance redressal cell? Give details of the nature of grievances reported and how they were redressed.*

The institution has two separate Grievance Redressal Cells (for students as well as for staff) to deal with their problems. Dean student welfare redress the student grievance. Apart from this, within the department, the class in-charges and heads of the department look after the students' grievance. In case of any problem or grievances, the students are provided the names and contact numbers of the members of the staff. The members of the cell ensure speedy redressal.

5.1.15 *Does the College have a cell and mechanism to resolve issues of sexual harassment?*

Dean student welfare along with the wardens of girls hostels redress and take the help of the committees which are formed time to time to tackle sexual harassment issues of the girl students. This cell/committees is also ably assisted by faculty/staff members of different departments.

5.1.16 *Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?*

There are following anti-ragging committees in the college: (a) Institute anti-ragging committee (b) Anti-ragging squad (c) Hostel anti-ragging committee. These committees maintain a strong vigil in the college campus and hostels. Due to the dedicated efforts of these committees, no major instance of ragging has been reported in the college.

5.1.17 *How does the College elicit the cooperation from all stakeholders to ensure overall development of the students considering the curricular and co - curricular activities, research, community orientation, etc. ?*

At the department level, there are formal and informal interaction with students and their parents. Similarly, the views of the students are also collected through feedback. The views of the faculty are also being taken at the department and institute level.

The different committees of Faculty and students exist for organizing different type of activities. It is ensured that under the guidance of faculty, the students participate in the maximum number of activities. The sportsman spirit is inculcated amongst the students by conducting a large number of curricular and co - curricular activities.

5.1.18 *What special schemes/mechanisms are in place to motivate students for participation in extracurricular activities such as sports, cultural events, etc?*

College provides all the necessary logistic, financial and infrastructural support for students' participation in extracurricular activities. Students are provided with all the required infrastructure for preparing for these activities. The position holders in different activities are awarded with medals/momentos and certificates. The due weightage is given to the students in the marks allotted for General fitness.

5.1.19 *How does the College ensure participation of women in 'intra' and 'inter' institutional sports competitions and cultural activities? Provides details of sports and cultural activities in which such efforts were made?*

The institution strongly believes in sense of equality in letter and spirit. The faculty helps the female students in participating in extra-curricular activities and in sports etc.

In the case of cultural activities, the women teams regularly participate in college/university level competitions in folk dances, classical dances, western dances, skits, drama, mono-acting, singing and rangoli.

4.2.3   Student Progression

5.2.1 *Provide details of programme-wise success rate of the College for the last four years. How does the College compare itself with the performance of other autonomous Colleges / universities (if available)*

Pass percentage of the college for the last four years

Programme	Year 1 (2010-14)	Year 2 (2009-13)	Year 3 (2008-12)	Year 4 (2007-11)
CSE	94	71	91	94
ECE	92	87	97	94
ME	86	80	75	83
CHEM	89	74	63	60
BIO Tech	76	63	88	93
IT	89	60	86	89
M.Tech Thermal	88	89	90	89

v

iding the percentage of students progressing to higher education or employment (for the last four batches) highlight the observed trends.

Student progression	2007-2011	2008-2012	2009-2013	2010-2014
UG to PG	47	75	78	79
PG to M.Phil.	--	--	--	--
PG to Ph.D.	--	--	--	--
Employed •Campus selection •Other than campus recruitment	82 16	64 88	70 46	65 32

5.2.3   *What is the Programme-wise completion rate/dropout rate within the time span as stipulated by the College/University?*

Programme	Completion Rate (within maximum time stipulated by university)
B.Tech.	07 (current batch)
M.Tech.	Nil(current batch)

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

NIL, but some students qualified GATE.

5.2.5   *Provide details regarding the number of Ph.D/D.Sc./D.Litt. theses submitted, accepted, resubmitted and rejected in the last four years.*

NIL, We are not entitled to register students at college level. We are only registering students through PTU, Jalandhar.

5.3   **Student Participation and Activities**

5.3.1 *List the range of sports and games, cultural and extracurricular activities available to students. Provide details of participation and program calendar.*

In College, facilities are available for sports and games like football, hockey, basketball, handball, tennis, cricket, badminton, volleyball. Indoor gymnasium and facilities for indoor games such as weight lifting, power lifting and chess are also available. The cultural and technical events of different types are conducted regularly as per the program calendar prepared under the supervision of Dean (Students and Welfare) & is available on college website.

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

The following are the major achievements of students in co-curricular, extracurricular activities and cultural activities:

* Winners of various sports events and tournaments at college level,zonal level and University levels

* Winners of various technical competitions held within the institution and outside institutions

Winners of various cultural competitions held within the institution and outside institutions.

5.3.3 *How often does the College collect feedback from students for improving the support services? How is the feedback used?*

The feedback is collected from the students once in every semester. All feedback form is being given to subject incharges to get their view and comments. After that HOD, or a committee constituted by HOD go through the student and teacher's comments. Accordingly the necessary instruction is being passed by HODs. The feedback given by the students is used in improving the facilities and removing the limitations.

5.3.4 Does the College have a mechanism to seek and use data and feedback from its graduates and employers, to improve the growth and development of the College?

The graduates are formally called to participate in the Annual Alumni Meet, where they share their experiences and give feedback regarding the performance of college. The employers are contacted from time to time to get their feedback.

5.3.5 How does the College involve and encourage students to

publish materials like catalogues, wall magazines, College magazine, and other material? List the major publications/ materials brought out by the students during the previous academic session.

The annual college magazine BCETians, newsletters, souvenir is published by the college with the participation of students. The college encourages the students to participate in the competitions and workshops.

5.3.6 Does the College have a Student Council or any similar body? Give details on its constitution, major activities and funding.

In the college, there is a Student grievance committee to look after different demands of students, sports council to look after sports activities. The SAE, ISTE,IEI,SME etc are the student bodies which conduct different activities in the college.

5.3.7 Give details of various academic and administrative bodies that have student representatives on them. Provide details of their activities.

Hostel mess committee.
Hostel maintenance committee
Hostel recreation committee
Members of various ragging committees
Sports committees
Cultural committees
Technical committees
Other committees

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 Vision and Mission of the.

Vision

> To Grow and develop the technical professional who can fulfill national and international aspirations.

Mission

> Abiding by the dictum "Think, Feel and ACT"; creating work culture in order to nurture the spirit of innovations and hard work for wholesome learning and knowledge updation.

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

> YES

6.1.3 How is the leadership involved in

- *Eensuring the organization's management system development, implementation and continuous improvement*

  The Chairman & the members of the B.O.G. are highly enlightened, educated and socially awakened personalities. Under their inspiring leadership, the college faculty and staff is committed and dedicated to effective and efficient transaction of teaching-learning processes. The management of the institution is caring and highly responsive towards the needs, requirements and aspirations of the faculty, staff and students.

- *Interaction with stakeholders*

  The policies and the role of the management are clearly communicated to the different stakeholders from time to time. Principal who is the academic and administrative head of the institution adheres to the rules and regulations of the university, and through his farsighted vision, leaves no scope for any misunderstanding or controversy. The staff is made aware of the sense of responsibility towards the institution.

- *Reinforcing culture of excellence*

The college management always encourages and supports to the faculty and staff members. The college has applied for accreditation by NBA. In order to ensure the improvement of effectiveness and efficiency of the institutional processes the management acknowledges their services through letters of appreciation. The principal holds meetings to get the feedback from the staff and works on the suggestions given by the staff members.

- *Identifying needs and championing organizational development (OD)?*

  The B.O.G. meetings are held regularly to assess the review of the progress made by the college and to identify the needs of the college for further growth and development. The principal holds meeting with the staff to review the progress and activities of the institution and conveys the proceedings/adequate information to the B.O.G. for review at their end.

6.1.3   *Were any of the senior leadership positions of the College vacant for more than a year? If so, indicate the reasons.*

  NO

6.1.4   *Does the College ensure that all positions in its various statutory bodies are filled and conduct of meetings at the stipulated intervals?*

  Yes

6.1.5   *Does the College promote a culture of participative management? If yes, indicate the levels of participative management.*

  YES, The college management exhibit principal, Deans, HODs, registrar. The principal held the meetings regularly with Deans, HODs, Registrar and decisions are taken collectively for the various academic and administrative matters. These decisions are communicated to the entire faculty, staff members and are implemented. The financial powers have been defined to all these levels.

6.1.6   *Give details of the academic and administrative leadership provided by the University to the College?*

  The nominees of the University are members of Board of Governors, Academic Council and they guide during the meetings. The university also sponsors faculty development programmes, National Conference in the college from time to time. University also sponsors the faculty for international conferences.

6.1.7   *How does the College groom the leadership at various levels?*

The administration is decentralized to a large extent. The Principal runs the day to day administration of the institution with inputs from the Deans and various Heads of the Departments in respect of Academic, Co-curricular, Training & Placement, Sports, Social Service Industrial Visits and Publication. The Heads of the Departments regularly interact to monitor the activities /progress of faculty/staff. The faculty members have been nominated as members of BOS, Academic council and Management committee of college.

6.1.8   *Has the College evolved any strategy for knowledge management? If yes, give details.*

YES, (a) EDUSAT   (b) QEEE

6.1.9   *How are the following values reflected in various functions of the College?*

- *Contributing to National Development*

  In the form of academic research by publishing papers in journals, Ph.D. thesis, organizing Seminar / Workshops/ FDP. Students participate in NSS, NCC and other social activities regularly, to contribute to national development. Over and above the college generates skilled HR for national development.

- *Fostering global competencies among students*

  The students are motivated to think and design the innovated ideas by providing them the funds for their implementation. The students are allowed to attend the national level competitions where they interact with the students of other reputed institutes and benefitted. Recently , some of our students were sponsored to participate the model competition held at IIT, BHU.

- *Inculcating a value system among students*

  Courses on Human Values and Professional Ethics, Environment Science have been made mandatory for all the students during first year of their graduation.

- *Promoting use of technology*

  Students are being shown online result. ICT enabled class rooms are being used. Faculty and students are being encouraged to use QEEE lectures being delivered by IIT, Madras faculty members.

- *Quest for excellence*

Expert lectures, seminars, workshops on advanced topics are conducted regularly and students and faculty members are encouraged for participation in these activities. The students are motivated for their innovative ideas and funds are provided for the implementation of their innovative projects.

6.1.11 *Give details of the UGC autonomous review committee's recommendations and its compliance.*
ATTACHED

6.2   *Strategy Development and Deployment*

6.2.1   Does the College have a Perspective Plan for development? If so, give the aspects considered in development of policy and strategy.

- *Teaching and learning*
  - ✓ Tracking of performance of individual student
  - ✓ Improving Students' score
  - ✓ 100% academic performance (pass)
  - ✓ Improving teacher's effectiveness in class
  - ✓ Proper scheduling of timing of repeat examination
  - ✓ Improving evaluation of theory and practical knowledge of students
- *Research and development*

  - ✓ Encouraging faculty for publication
  - ✓ Encouraging students for innovative projects
  - ✓ Organizing symposium and conferences on recent topics
  - ✓ Creating a central R & D lab for all departments
  - ✓ Sponsoring faculty to attend international conferences
- *Community engagement*
  - ✓ Organizing training to local administration staff
  - ✓ Alumni Association is set up
  - ✓ Interaction with local public and support to community through NSS/NCC
- *Industry interaction*
  - ✓ Regular visits of faculty members in the industries
  - ✓ Six months industrial training of students in the final year
  - ✓ 4-6 week training of students in the industry
  - ✓ Arranging experts from industries for delivering lectures
  - ✓ By calling industry experts in academic council meetings and BOS meetings
- *Internationalization*
  - ✓ By sponsoring faculty members to attend international conference held at other countries

- ✓ Principal attended Leadership Development Training at Singapore
- ✓ Experts are called from international universities for delivering expert talks

6.2.2 *Enunciate the internal organizational structure of the College for decision making processes and their effectiveness.*

The organizational structure of the institution comprises Board of Gevernors, Principal, Registrar, Deans and Heads of the Departments. The B.O.G. in the light of its policies and plans takes important administrative decisions by holding the meetings with the head of the institution. These decisions are then communicated and implemented by the Deans, Heads and the administrative staff of the institution. Research programs, extension activities, examinations etc are taken care of by the concerned Deans.

6.2.3 *Specify how many planned proposals were initiated/ implemented, during the last four years. Give details.*

Autonomous status by UGC	:	Granted for six years
Accreditation by NBA	:	Applied
TEQIP-II granted	:	Granted
New hostel for SC/ST students	:	under construction
Auditorium	:	Completed

6.2.4 *Does the College have a formally stated quality policy? How is it designed, driven, deployed and reviewed?*
Yes, It has been designed by the IQAC committee of the college. The quality policy is as follows:
" We are committed to maintain our academic and research standards as per with the leading engineering and technical institutions of the country through:
- Innovation in teaching methodologies
- Sustainable applied research
- Institute- Industrial interaction
- Human Values
- Aiming at continuous improvements in all activities"

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

For addressing the grievances of students, faculty members have been associated with every class. These faculty members act as **student advisors** and held regular meetings

with the students to resolve their problems and to guide them on various issues. B.O.G. of the college has two faculty members to represent the problems of faculty and staff members and resolve them at the earliest. The principal hold the regular meetings with Deans, Registrar and HODs. In these meetings the grievances, if any, from the side of students/faculty and staff are resolved.

6.2.6   Does the College have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

The feedback is collected from the students once in a semester. The feedback is analyzed and appropriate actions are taken on its basis to improve the performance of the institution.

6.2.7   In what way the affiliating University helped the College to identify the developmental needs of the College?

The highest level officials of affiliating University are in the panel of Academic Council. Their suggestions on different aspects are implemented by the college.

6.2.8   Does the affiliating university have a functional College Development Council (CDC) or Board of College and University Development (BCUD)? If yes, In what way College is benefitted.

Yes, the College Development Council of university is in regular process of inspection of the college and report of the same is provided to college for necessary action wherever required.

6.2.9   How does the College get feedback from non-teaching, teaching, parents and alumni on its functioning and how it is utilized.

The respective Deans and Heads of departments conduct regular meetings with their teaching and non-teaching staff to know their viewpoints on the various issues. The Alumni give their feedback during annual alumni meet. Parents give their feedback directly to the concerned Heads of department. All these views are communicated to the competent authority for due consideration.

6.2.10   Does the College encourage autonomy to its academic departments and how does it ensure accountability?

Different Departments enjoy full academic autonomy as per the rules framed by Academic Council and Board of Studies (BOS). The Head of Department is accountable for different activities of the department.

6.2.11   Does the College conduct performance auditing of its various departments?

The college is having the internal auditing team consisting of internal as well as external members for performance auditing.

6.3   Faculty Empowerment Strategies

6.3.1   What efforts are made by the College to enhance the professional development of teaching and non teaching staff?

Many faculty members are sponsored for higher studies e.g. Ph.D. under Q.I.P. and study leave to IITs, NITs. Our own faculty members are guiding the various Ph.D. scholars at national levels in various universities. The faculty members are motivated for research publications. The college is providing the financial assistance to the faculty members who are pursuing Ph.D. and M.Tech. by providing them course fee, enrollment fee and other expenses under the TEQIP-II grant. In additions, the college organizes the F.D.P and Symposium, conferences at the institutes. The teachers are sponsored for attending international conferences for presenting their research papers.

6.3.2   What is the outcome of the review of the Performance Appraisal Reports? List the major decisions.

As per the procedure of annual A.C.R. in the college, first of all, the faculty/staff member does self appraisal and submits to Reporting officer,   who   then submit his report to the Reviewing Officer. Based on it, the concerned faculty/staff is advised accordingly. Any disciplinary action, if needed, is taken. In the cases of promotions, the decision is taken on the basis of Performance Appraisal Reports.

6.3.3   What are the welfare schemes available for teaching and non teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?
   - Career Advancement Scheme (CAS) for faculty
   - A.C.P. for staff
   - C.P.F. for faculty/staff
   - L.T.C. for faculty and staff on the Central Govt. pattern
   - Leave entitlement as per Punjab Govt. norms
   - Sponsorship to national/ international F.D.P. and Conferences
   - Study leave and Q.I.P. scheme

100% regular faculty and staff are availing the same.

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

For attracting and retaining eminent faculty, the college has all the major incentives/schemes in place such as Career Advancement Scheme (CAS), Sixth pay Commission scales, CPF, campus accommodation etc.

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

Although, there is no formal gender audit is conducted, however, the college analyzes and maintains the details of males and females annually in the faculty/staff as well as students. The details of males and females currently are as follows:

	Male	Female	Total
Faculty	69	26	95
Staff	104	14	108
Students			
Batch 2011	379	202	581
Batch 2012	358	204	562
Batch 2013	385	128	513
Batch 2014	331	101	432

6.3.6   *Does the College conduct any gender sensitization programs for its staff?*

The College has a Cell headed by a senior faculty on the sexual harassment at workplaces.

6.3.7   *What is the impact of the University's UGC-Academic Staff College Programmes in enhancing competencies of the College faculty?*
Not applicable, as this is a professional college. However, the Punjab Technical University, Jalandhar conducts the Faculty Development Programmes for the faculty of Engineering colleges. Several of our faculty members have attended the same and are benefitted. The college also conducts regularly the F.D.P and Conferences where the faculty of our own college and other colleges interacts with each other.

6.4   Financial Management and Resource Mobilization

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

The college adopts the following procedure to monitor effective use of financial resources:

(a) The budget estimate are taken from all the department HODs/ Section In-charges as per the requirements for the upcoming financial years.

(b) Principal of the college calls the the meetings of all the HODs/ Section In-charges to discuss and finalize the expenditure put up by them for the next financial year.

(c) The college prepares the budget estimate and then the budget is discussed and passed in the Finance meeting held under the chairmanship of the principal Secretary, TE & IT (Punjab).

(d) The expenditure is monitored after the end of each quarter of the financial year.

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

YES, internal audit is conducted by the C.A.. External audit is conducted by the A.G. Office Punjab.

6.4.3   Provide audited income and expenditure statement of academic and administrative activities of the previous four years.

The income and expenditure details of the last 5 years are as follows:

Sr. No.	F.Y.	Total Income (In Lacs)	Total Expenditure (In Lacs)
1.	2009-10	1143.55	1024.33
2.	2010-11	1192.78	1181.14
3.	2011-12	1265.56	1095.84
4.	2012-13	1479.45	1221.35
5.	2013-14	2141.21	1827.83

The above figures are as per the audit report .

6.4.4   Have the accounts been audited regularly? What are the major audit objections and how are they complied with?

YES, The accounts are audited regularly by A.G. office Punjab and the audit objections are taken care by the college and informed the same to auditors.

6.4.5   Narrate the efforts taken by the College for resource mobilization.
The college makes all the efforts for the resource mobilization.

1. Our college has been selected under TEQIP-II under sub section 1.1 for the grant of 10.0 Crore .

2. The various teaching departments of the college submit the projects to various Government agencies for the grants.

3. In addition to the fee collected from the students, the Government provides some

special grants for the various purposes like Girls Hostel for SC/ST students, book bank facilities etc.

6.4.6   *Is there any provision for the College to maintain the 'corpus fund'? If yes, give details.*

Yes, the college maintains a corpus fund and the same is shown in the balance sheet every year.

6.5   Internal Quality Assurance System

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

The academic audit of various departments in the college was done regularly by PTU Jalandhar every year (affiliating University) till the college attained academic autonomy from UGC New Delhi w.e.f. session 2014-15. Now the audit is being done at college level.

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

After attaining the academic autonomous status from UGC New Delhi w.e.f from session 2014-15, the academic activities are governed as per the UGC norms for improving teaching, learning and evaluation. For this we have prepared PG and UG manuals covering all the academic activities. Various departmental and college level committees have been constituted to monitor various academic activities.

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

Yes, there are central bodies within the college to continuously review the teaching, learning and evaluation process. The constituted committees are Internal Quality Assurance Cell (IQAC), College Post Graduate Committee (CPGC) and College Under Graduate Committee (CUGC). The structure, methodologies of operations etc. are given in detail in the PG and UG manuals.

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

The IQAC has recommended applying for NBA and NAAC accreditation for ensuring the academic quality. The application for the same has already been submitted for NBA accreditation and for NAAC it is under process.

6.5.5   *Does the IQAC have external members on its committees? If so, mention any*

significant contribution made by such members.

Yes, there are 3 external members representing local area, industries and one local advocate on the IQAC. They give valuable suggestions from time to time in the meetings.

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

Since the college attained Academic autonomy recently, such studies have been planned in the near future.

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

To review and make policies, there are various committees in the college. The subject area/ syllabus etc. is recommended by respective Board of Studies of various departments regularly. To monitor the departmental academic/research activities, Departmental PG and UG committees have been constituted as per the details given in PG and UG manuals. Recently one central research lab has also been developed under the TEQIP-II Government of India Scheme. The recommendations of these committees are subsequently presented to Academic Council of the College for final approval.

CRITERIA VII: INNOVATION AND BEST PRACTICES

7.1   Environment Consciousness

The institute has taken many measures for Environment Consciousness among students, Faculty and staff . The students are required to park their vehicles on the gate to avoid vehicle pollution in the campus. The special efforts are being taken to ban the polythene bags in the campus. The pamphlets and stickers "SAVE ENERGY SAVE WATER" have been pasted widely in the campus to spread in Environment Consciousness.

7.1.1   *Does the College conduct a Green Audit of its campus?*

Yes the institute takes special measures to make the campus green and to be precise a total of 1800 plants fully grown up are already in the campus and through Van Mahotsav every year more and more greenery is being created and a Green Audit will be taken up shortly.

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

* Energy conservation

There are many initiatives taken by the college to make the campus eco friendly.

* Use of renewable energy

The use of CFL and recently the LED lights are being used extensively to save and conserve energy . The efforts are taken not to waste energy and there are banners and pamphlets requesting one and all to save and conserve energy.

* Water harvesting

The institute has taken has special measures and the Mechanical Block building is run by renewable energy 50KWp SPV Power Plant which caters to the electricity needs of whole block and the electricity also gets stored in the main maintenance plant. Now the efforts are being taken to cover more buildings with the Solar Power Plants and the renewable energy will be used accordingly. A Punjab Govt. undertaking PUNJAB ENERGY DEVELOPMENT AGENCY is helping for a Sustainable Energy Future in the college campus.

* Check dam construction

At present there are not many initiatives for water harvesting but in the near future steps would be taken for the same.

* Efforts for Carbon neutrality

There is not much carbon in the college campus as the carbon emitting sources, industry etc is not around the college and the college is a carbon sink because with green plantation, it is a carbon neutral institute.

* Plantation

The college is a lush green campus because of the large number of tree plantations taken up since 1995 and a total of 1800 hundred well grown up plants and trees dot the campus. Every year Van Mahavotsav is celebrated and more and more plantation is being added.

* Hazardous waste management

A sewage treatment plant will be set-up in the institute in the near future the Technical Specification of the plant with a capacity 250 KL/day will be set-up with Air Diffuser, Activated Carbon filter and a sludge handling system

* e-waste management

The total quantity e-waste sent for processing during the year for each category for electrical and electronic equipment is being process and will be sent to the Registered company for the same as the companies have been listed by Punjab Pollution Control Board.

* any other

7.2   **Innovations**

7.2.1   *Provide details of innovations introduced during the last four years which have created a positive impact on the functioning of the College.*

The College has taken up the following initiatives to promote best practices in innovation and to ensure that they are internalized:-

i. Setting up of a Feedback Evaluation Unit to carry out proper and timely analysis of feedback obtained from different stakeholders so that the information can be used in institutional decision-making.

ii. Planning of Curricular Calendar Maps to achieve greater integration of instruction and make lesson planning more effective.

iii. Support for an Asynchronous Learning Network to create a more equitable learning environment.

iv. Providing audio-visual equipment to create a richer classroom environment.

v. Introduction of teacher-led students projects to create an interest in research among students.

vi. Encouragement to faculty research by supporting presentation of papers at seminar and conferences.

vii. Make Community Service compulsory for all students to provide a value – orientation to the education it provides. viii. Providing financial support to students from economically disadvantaged sections to facilitate their completion of studies.

ix. Students representation in College committees to give important stakeholder component a share in decision-making. To ensure that the best practices are internalized, the College makes adequate budgetary provisions, for their support and has committees to oversee implementation.

x. Providing seed grant to the students for innovative project work.

7.3 Best Practices

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

Format for Presentation of Best Practices 1

1. Title of the Practice
To enhance research potential in students and faculty members.

2. Objectives of the Practice
The aim of this particular practice is to provide necessary infrastructure, human resources and motivation to nurture the research competencies among the students and faculty members.

3. The Context
The college offers 6 UG and 1 PG degree programme in various engineering departments. It is the responsibility of faculty members to inculcate effective learning methodology in their students to understand various engineering concepts. To accomplish this, they need to be creative and innovative in their approach to teaching / learning activities and should possess holistic idea about the subjects what they taught, which requires some level of research competencies in the teaching faculty members.

4. The Practice
The Research and development cell has been established. The institution inspires the faculty

members to publish the research papers, attending national/ International conferences and to carry out consultancy work. The faculty members are encouraged by providing the financial support to those who publish and present the research articles in national/ International journals and conferences. They were also sponsored to attend the national/ International conferences in India/Abroad. Every Wednesday 04:00 P.M. To 05:00 P.M. has been fixed as Colloquium hour. Experts from industry/academia are called to deliver expert talk. Faculty members share their research experience during this hour. Provision for Seed grant for students is provided.

5. **Evidence of Success**

Faculty members are approved PhD Supervisors of Affiliated University. The teaching faculty and management of the college are highly conscious of quality research and enhancement of technology education. The congeal research ambiance has been created through strengthening infrastructure facilities, motivating faculty and students and guiding them to acquire grants from the funding agencies to launch new research projects and assignments, taking up minor and major projects, guiding research scholars and publishing research papers and books.

6. **Problems Encountered and Resources Required**

The faculty members are finding it difficult to find the time to carry out independent research due to their academic commitment.
Creating interest in the students for research as a part of their syllabus.
Forming linkage with the industry for research related work.

Best Practices 2

1. **Title of the Practice**
Skill enhancement for improving student employability / for higher education.

2. **Objectives of the Practice**
To provide industry and R&D oriented training, and other skill sets to students to make them globally competitive and employable in multinational industries or to pursue the higher studies in engineering.

3. **The Context**
The employability is one of the biggest challenges for engineering education and institutions for graduating students. The primary reason for this is the lack of skill sets as per the need of industry, it may be due to complete disconnect between industry and academic institutions. The curriculum was also not designed as per the need of industry. So there is an eminent need to provide the skill sets (both technical as well as non technical skills) so that the students can meet the challenge.

4. **The Practice**
The college has taken corrective measure to meet the need for improving employability of students through Training Placement Cell as well initiated various skill oriented programs in the campus so that students can easily be placed or can opt of higher studies.

5. **Evidence of Success**
The initiatives and measures taken by the college helps students to upgrade their technical and non-technical skills improving the employability of students/ promotes to pursue the higher studies.

83

6.   Problems Encountered and Resources Required

Some of the students are not fulfilling the eligibility criteria of industry. It is required to develop the necessary skill, so that they can overcome the deficiency and can get placed in other industry.

Evaluative Report of the Mechanical Engineering Departments

1. Name of the Department   :   **MECHANICAL ENGINEERING**
    Year of establishment   :   **1995**

2. Names of Programmes / Courses offered :   **B.Tech.,**
                                                   M.Tech. Thermal (Regular)
                                                   M.Tech. Mechanical (Part-Time)

3. Interdisciplinary courses and departments involved:
         Maths Physics, Chemistry, English : Applied Science

4. Examination system   **:**   Semester system

5. Participation of the department in the courses offered by other departments
    Elements of Mechanical Engineering   : All Departments
    Computer Graphic Lab.   : All Departments
    Engineering Drawing   : All Departments
    Strength of Material   : Chemical Enginering

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Designation	Sanctioned	Filled	Remarks
Professors	02	02	Promoted Through CAS
Associate Professors	05	11	Promoted Through CAS
Asst. Professors	15	10	

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of year of experience	No. of Ph.D. students guided for the last 4 years
Dr. Om PalSingh	Ph.D.	Professor	Industrial/Production Engg.	27	02
Dr. R.K.Awasthi	Ph.D.	Professor	Design/Tribology	23	NIL
Dr. DilbagSingh	Ph.D.	Associate Professor	Machining	25	NIL
Dr. RanjitSingh	Ph.D.	Associate Professor	Heat Transfer and Solar	19	01

Dr. HarishPungotra	Ph.D.	Associate Professor	CAD/CAM	20	NIL
Dr. AnilKumar	Ph.D.	Associate Professor	TOM/EDM	25	NIL
Dr. JagdevSingh	Ph.D.	Associate Professor	Refrigeration and Air Conditioning	27	02
Dr. NaveenBeri	Ph.D.	Associate Professor	EDM/TQM	18	NIL
Dr. NirmalSingh	Ph.D.	Associate Professor	Manufacturing	20	NIL
Dr. BrijBhushan	Ph.D.	Associate Professor	Thermal	27	NIL
Sh. SunilKumar	M.Tech.	Associate Professor	Machining	17	---
Sh. SanjeevKumar	M.Tech.	Associate Professor	Machining	15	---
Dr. Nripjit	Ph.D.	Associate Professor	Manufacturing/Composite Materials	24	NIL
Dr. DarshanKumar	Ph.D.	Assistant Professor (On Leave)	Industrial Engg.	25	NIL
Dr. SarabjitSingh	Ph.D.	Assistant Professor	Material Manufacturing	16	NIL
Dr.SimranpreetSingh	Ph.D.	Assistant Professor	Production Engg.	15	NIL
Sh. PreetKamal Singh	M.Tech.	Assistant Professor	Production Engg.	07	---
Sh. JagjitSingh Maan	M.Tech.	Assistant Professor	Tribology	05	---
Sh. Tarun Mahajan	M.Tech.	Assistant Professor	Heat Transfer/ Solar	11	---
Sh. Sandeep Gandotra	M.Tech.	Assistant Professor	CAD/CAM	11	---
Sh. ArunNanda	M.Tech.	Assistant Professor	Manufacturing	05	---

Sh. SurinderSingh Gill	M.Tech.	Assistant Professor (On Leave)	Production Engg.	22	---
Sh. Rohit Saini	M.Tech.	Assistant Professor	Tribology	07	---

8. Percentage of classes taken by temporary faculty : 30%

9. Programme-wise Student Teacher Ratio : 1:16

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Senior Lab. Technician	02	02
Lab. Technician	02	02
Lab. Attendant	02	02
Clerk	01	01
Peon	01	01

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise: **NIL**

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

Sr. No.	Name of Faculty	Project Title	Sponsored by	Duration	Year	Amount
1	Dr. R.K. Awasthi (PI)	Study of elasto-hydrodynamic journal bearing system under static and dynamic loading	AICTE	3 Yrs.	2008	Rs. 12.00 Lac
2.	Dr. Anil Kumar (PI) Dr. Naveen Beri (Co-PI)	Experimental Investigation on Electric Discharge Machining of Difficult to Machine Materials for Surface Quality Improvement	AICTE	3 Yrs.	2008	Rs. 10.00 Lac
3.	Dr. Naveen Beri (PI)	Investigation and Analysis of Electric Discharge Machined Surfaces	AICTE	3 Yrs.	2009	Rs. 8.50 Lac.

	Dr. Anil Kumar (Co-PI)					
4.	Dr. Nirmal Singh(PI)	Experimental Investigation Modeling and Simulation of Cryogenic and Non-cryogenic Treated Turning Tools.	AICTE	3 Yrs.	2009	Rs. 3.00 Lac
5.	Dr. Nirmal Singh(PI)	Finite Element Modeling and Simulation of Machining Process Using Cryogenic and Non-cryogenic Tools.	AICTE	4 Yrs.	2010	Rs. 4.00 Lac
6.	Dr. Naveen Beri (PI) Dr. Anil Kumar (Co-PI)	Performance Evaluation of Powder Metallurgy Processed Electrodes in Electric Discharge machining for Surface Modification/Treatment	AICTE	2 Yrs.	2010	Rs. 8.50 Lac.
7.	Dr. Harish Pungotra (PI) Dr. Naveen Beri (Co-PI)	Development of enabling technologies for interactive design in virtual reality environment	AICTE	2Yrs.	2011	Rs. 18.50 Lac.

13. Research facility / centre with
- o state recognition : **NIL**
- o national recognition : **NIL**
- o international recognition : **NIL**

14. Publications:

Journals Papers

1. Beri, N., Maheshwari, S., Sharma, C., and Kumar, A. "Some studies on the effect of electric discharge machining on the performance of powder metallurgy processed electrode using the Taguchi method", International Journal of Manufacturing Technology and Industrial Engineering, Vol. 1 (2), 151-156, 2010.

2. Beri, N., Maheshwari, S., Sharma, C., and Kumar, A. "Optimization of electrical discharge machining process with CuW powder metallurgy electrode using grey relation theory", International Journal of Machining and Machinability of Materials, Vol. 9 (1/2), 103–115, 2011.

3. Kumar, V., Beri N., Kumar, A., and Singh, P."Some studies on electric dischargemachining of Hastelloy using powder metallurgy electrode", International Journal of Advanced Engineering Technology, Vol. 1 (2), pp. 16-27, 2010.

4. Singh, P., Kumar, A., Beri N., and Kumar, V. "Some experimental investigation on aluminum powder mixed EDM on machining performance of Hastelloy steel", International Journal of Advanced Engineering Technology,Vol. 1 (2), pp. 28-45, 2010.

5. Sharma, S., Kumar, A., Beri N., and Kumar, D. "Effect of aluminum powder addition in dielectric during electric discharge machining of Hastelloy on machining performance using reverse polarity", International Journal of Advanced Engineering Technology, Vol. 1 (3), pp. 13-24, 2010.

6. Kumar, D., Beri N., Kumar, A., and Sharma, S. "Some studies on electric discharge machining of Hastelloy using copper - chromium powder metallurgy electrode using reverse polarity", International Journal of Advanced Engineering Technology, Vol. 1 (3), pp. 74-84, 2010.

7. Kumar, D., Beri N.,and Kumar, A. "Study of overcut during electric discharge machining of Hastelloy steel with different electrodes using the Taguchi method", International Journal of Advanced Engineering Technology, Vol. 2 (1), pp. 306-312, 2010.

8. Sharma, S., Kumar, A., Beri N. and Kumar, D. "Study of tool wear rate during powder mixed EDM of Hastelloy steel", International Journal of Advanced Engineering Technology,Vol. 2 (1), pp. 133-139, 2010.

9. Singh, P., Kumar, A., Beri N., and Kumar, V. "Influence of electrical parameters in powder mixed elecric discharge machining (PMEDM) of Hastelloy", Journal of Engineering Research and Studies, Vol. 2 (1), pp. 93-105 , 2010.

10. Bhushan, B., and Singh, R.,"A review on methodology of artificial roughness used in duct of solar air heaters Energy" Vol. 35, 202-212, 2010.

11. Bhushan, B., and Singh, R., "Performance analysis of solar air heater duct having protrusions as roughness geometry", International journal of advances in thermal sciences and engineering, Vol. 1, 113-119, 2010.

12. M, Tarun., Singh, R., and Bhushan, B., "Performance Investigation of Artificially Roughened Duct Used in Solar Air Heater", International J of Mechanical Engineering, Vol. 3, 21-28, 2010.

13. S, Aman., Singh, R., and Bhushan, B., "Effect of roughness element pitch on heat transfer and friction characteristics of artificially roughened solar air heater duct", International J of Advanced Engineering Technology, Vol. 1, 339-346, 2010.

14. S, Sanjay., Singh, R., and Bhushan, B.,"CFD based investigation on effect of roughness element pitch on performance of artificially roughened duct used in solar air heaters", International J of Advanced Engineering Technology, Vol. 2, 234-241, 2010.

15. Pungotra, H., Knopf G.K., and Canas R., "Merging multiple B-spline surface patches in a virtual reality environment", Computer Aided Design, Vol. 42(10), 847-859, 2010.

16. Singh, S., Singh,H., Singh,R., and Singh, J., "Cryoprocessing of cutting tool materials—a review", International Journal of Advanced Manufacturing Technology (Springer), Vol. 48, pp175–192, 2010.

17. Kumar, D., Singh, O.P., and Singh, J. "Integrated supply chain: A survey of Indian textile organizations", International Journal of Services & Operations Management, Inderscience Group, Vol. 9, No. 4,pp 411-428,2011.

18. Kumar, D., Singh, J., and Singh,O.P., "Analysis of distribution system of supply chain and relationships between manufacturer and customers for Indian textile industry", Int. J. Business Performance and Supply Chain Modelling, Vol. 3, No. 1,pp 66-85, 2011.

19. Gill, S.S., and Singh, J., "An adaptive neuro-fuzzy inference system modeling for material removal rate in stationary ultrasonic drilling of sillimanite ceramic", Expert Systems with Applications (Elsevier), 37(8), 5590-5598, 2010.

20. Kumar, D., Singh, O.P., and Singh, J. "Design & analysis of different stages of supply chain: models and methods", International Journal of Indian Culture and Business Management, Inderscience, Vol. 4, No. 2, pp.160-180, 2011.

21. Gill, S.S., Singh, J., Singh, H., and Singh, R., "Investigation on wear behaviour of cryogenically treated TiAlN coated tungsten carbide inserts in turning", International Journal of Machine Tools & Manufacture(Elsevier), Vol. 51, pp 25–33.

22. Singh, D., Rao, P.V., "Flank wear prediction of ceramic tools in hard turning, International Journal of Advanced Manufacturing Technology", Vol. 50, Numbers 5-8, 479-493,2010.

23. Kumar, A., Marwaha, S., Marwaha, A., Kalsi, N.S., "Magnetic field analysis of induction motor for optimal cooling duct design, Simulation Modelling Practice and Theory", Vol.18, 157–164, 2010.

24. Kalsi, N.S., Sehgal, R., Sharma, V.S., "Cryogenic Treatment of Tool Materials: A review, IJ Materials and Manufacturing Processes", Vol.25, 1077–1100, 2010.

25. Singh, O.P., and Chand, S., "JIT practices in supply chains: a review and modeling for supplier base reduction in electronics industry", International Journal of logistics Systems and Management", Vol. 6, No. 1, pp. 113-130, 2010.

26. Kumar, D., Singh, O.P., and Singh, J., "An analytical framework for critical literature review of supply chain design", International Journal of Information and Systems Sciences, Vol. 6, No. 3, pp. 293-317, 2010.

27. Kumar, D., Singh, O.P., and Singh, J., "Design and analysis of different stages of supply chain: models and methods", International Journal of Indian Culture and Business Management, Vol. 4, No. 2, pp. 160-180,2011.

28. Kaur, S., Sohpal, V.K., and Singh, Preetkanwal., "Clustering Algorithm Approach for Prokaryotic and Eukaryotic Gene Prediction'', Journal of Computational Intelligence in Bioinformatics, Vol. 4, pp. 273-282.

29. Gill, S. S., Singh, J., "Effect of deep cryogenic treatment on machinability of titanium alloy (Ti-6246) in electric discharge drilling, Materials and Manufacturing Processes", Vol. 25 (6), 378-385, 2010.

30. Gill, S. S., Singh, H., Singh, R., and Singh, J. "Cryoprocessing of cutting tool materials – a review", International Journal of Advanced Manufacturing Technology, Vol. 48 (1-4), 175-192, 2010.

31. Singh, J., and Gill, S.S.,"Modelling for tensile strength of friction welded aluminium pipes by ANFIS", International Journal of Intelligent Engineering Informatics, Vol. 1 (1), 3-20, 2010.

32. Kumar, A., Maheshwari, S., Sharma, C., and Beri, N. "Machining Efficiency Evaluation of Cryogenically Treated Copper Electrode in Additive Mixed EDM. Materials and Manufacturing Processes", Vol. 27 (10), pages 1051-1058, 2012.

33. Singh, P., Beri, N., Kumar A. "Determination Of Best Parameter Setting For Overcut During Electrical Discharge Machining Of H-13 Tool Steel Using Taguchi Method", International Journal of Advanced Engineering Technology, Vol.III/Issue IV, pp.101-103, 2012.

34. Beri, N., Pungotra H., Kumar A., and Mittal, G. "Efficiency Optimization during Electric Discharge Machining of H-13 Steel Based on Grey Relation Analysis", International Journal of Scientific & Engineering Research, Vol. 4, Issue 8, 2013.

35. Bhushan, B., and Singh, R. " Nusselt number and friction factor correlations for solar air heater duct having artificially roughened absorber plate. Solar Energy", 85, 1109-1118, 2011.

36. S, Sanjay., Singh, R., and Bhushan, B.,"Effect of longway length of roughness element on performance of artificially roughened solar air heater duct", International J of Advanced Engineering Technology, 2, 130-136, 2011.

37. Pungotra, H., "Virtual Reality in Concept Design", AMAE International Journal on Manufacturing and Material Science, 2(1), 35-39, 2012.

38. Pungotra, H., Knopf, G. K., and Canas, R. "B-spline Surface Based Concept Design Module for Applications in Virtual Reality Environment", Computer-Aided Design and Applications, 10(2), 247-263,2012.

39. Pungotra, H., Knopf, G. K. and Canas, R. "An Alternative Methodology to Represent B-spline Surface for Applications in Virtual Reality Environment", Accepted for publication in Computer-Aided Design and Applications, 10(4), 711-726, 2012.

40. Singh, S., Singh,S., Saini,B., and Singh, H. " Experimental Study of The Effect of Roller Burnishing On Surface Characteristics of En-31" i-manager's Journal on Mechanical Engineering, Vol.1 No.4, pp 41-47, 2011.

41. Kumar, D., Singh, O.P., and Singh, J. "Design & analysis of different stages of supply chain: models and methods", International Journal of Indian Culture and Business Management, Inderscience, Vol. 4, No. 2, pp.160-180, 2011.

42. Gill, SS., Singh, J., Singh, H., and Singh, R., "Metallurgical and mechanical characteristics of cryogenically treated tungsten carbide (WC-Co)", International Journal of Advanced Manufacturing Technology (Springer), Vol 58, pp119-131, 2012.

43. Kumar, D., Singh, O.P., and Singh, J. "Analysis of supplier related issues in supply chain practices", International Journal of Services & Operations Management, (Inderscience),Vol. 9, No. 3, pp284-307, 2011.

44. Kumar, V., Singh, J., Singh, Y., and Sood, S. "Design& development of genetic algorithms for Economic load dispatch of thermal generating Units", International Journal of Computer Engineering and Technology, Vol. 3, Issue 1, pp. 59-75, 2012.

45. Gill, SS., Singh, J., Singh, R., and Singh, H."Effect of Cryogenic Treatment on AISI M2 High Speed Steel: Metallurgical and Mechanical Characterization", Journal of Materials Engineering and Performance, Vol. DOI: 10.1007/s11665-011-0032-z 2012.

46. Kumar, D., Singh, J., and Singh, O.P. "A decision support system for supplier selection for Indian textile industry using analytical hierarchy process based on fuzzy simulation", International Journal of Business Performance and Supply Chain Management, Inderscience Group, Vol.3 No.4, pp. 364-382, 2011.

47. Kumar, D., Singh, J., and Singh, O.P."Analysis of supplier related issues with implementation of fuzzy logic for Indian textile organisations",Int. J. Logistics Systems and Management, Vol. 10, No. 3,pp 313-339, 2011.

48. Singh, J., Singh, D., and Kalsi, N.S."Experimental analysis of cryogenic treatment on coated tungsten carbide inserts in turning", International Journal of Advanced Engineering Technology, Vol.III / Issue I, 290-294, 2012,.

49. Kumar, A., Singh, D., and Kalsi, N.S."Effect of gases on the performance of cryogenically treated tungsten carbide inserts in turning", International Journal of Manufacturing Science and Engineering, 2011.

50. Singh, D., and Rao, P.V."Investigations on the application of solid lubricant in hard turning of AISI 52100 steel with ceramic inserts", International Journal of Materials Science and Engineering, Vol.37-41, 2011,.

51. Beri, N., Maheshwari, S., Sharma, C., and Kumar, A. "Multi-objective parametric optimisation during electrical discharge machining of Inconel 718 with different electrodes", International Journal of Materials Engineering Innovation, Vol.2 (3/4), 236–248, 2011.

52. Jit,N., Tyagi, A.K., and Singh,N."Properties of SiC based composites by keeping particle size at 0.220 _m in A384.1", International Journal of Manufacturing Technology and Industrial engineering, 2011.

53. Kalsi N.S., and Sharma V.S. "A statistical analysis of rotary friction welding of steel with varying carbon in workpieces", International Journal of Advanced Manufacturing Technology, Vol.57, 957–967, 2011.

54. Kalsi, N.S., Sehgal, R.,and Sharma, V.S. "Comparative study to analyze the effect of tempering during cryogenic treatment of tungsten carbide tools in turning", Advanced Materials Research, Vol. 410, 267-270, 2011.

55. Kumar, D., Singh, O.P., and Singh, J. "Integrated supply chain: A survey of Indian textile organizations", International Journal of Services and Operations Management, Vol. 9, No. 4, pp411-428, 2011.

56. Kumar, D., Singh, J., Singh, O,P., and Seema, "A decision support system for analysis of effects of timely fulfillment of customer demand in supply chain management practices", International Journal of Advanced Manufacturing Technology, Springer Group, Vol. 10.1007/s00170-011-3724-5, 2011.

57. Gill, S.S., Singh, H., Singh, R.; and Singh, J. "Flank wear and machining performance of cryogenically treatment tungsten carbide inserts, Materials and Manufacturing Processes", Vol.26 (11), 1430–1441, 2011.

58. Gill, S.S., and Kaplas, M.,"Efficacy of powder-based three-dimensional printing (3DP) technologies for rapid casting of light alloys", International Journal of Advanced Manufacturing Technology, Vol.52 (1-4), 53-64, 2011.

59. Gill, S. S., Singh, J., Singh, R., and Singh, H. "Metallurgical principles of cryogenically treated tool steels - a review on the current state of science", International Journal of Advanced Manufacturing Technology, Vol.54 (1-4), 59-82, 2011.

60. Singh, P., Beri, N., andKumar A. "Determination Of Best Parameter Setting For Overcut During Electrical Discharge Machining Of H-13 Tool Steel Using Taguchi Method", International Journal of Advanced Engineering Technology,Vol. III,Issue IV, pp.101-103, 2012.

61. Beri, N., Pungotra, H., Kumar, A., and Mittal, G. "Efficiency Optimization during Electric Discharge Machining of H-13 Steel Based on Grey Relation Analysis", International Journal of Scientific & Engineering Research, Vol. 4, Issue 8, 2013.

62. Bhushan, B., and Singh, R.."Thermal and Thermohydraulic Performance of Roughened Solar Air Heater having Protruded Absorber Plate, Solar Energy", Vol.86, 3388-3396, 2012.

63. Singh, V., Pungotra, H., Singh, S., and Gill, S.S. "Prioritization of Failure Modes in Process FMEA using Fuzzy Logic", International Journal of Enhanced Research in Science Technology & Engineering, Vol.2(2), 1-10, 2013,.

64. Kumar, A., Beri, N., Pungotra, H.,Jit,N.,and Singh, P., "Machining parameters evaluations on dimensional accuracy in abrasive electric discharge machining (AEDM) process using Taguchi Methodology", International Journal of Scientific & Engineering Research, Vol. 4, Issue 8, 2013.

65. Tripathi, H., Pungotra, H., Gandotra, S., Beri, N., and Kumar,A."Experimental Investigation into Ball Burnishing Process of Brass Using Taguchi Approach", International Journal of Scientific & Engineering Research, Vol. 4, Issue 8, 2013.

66. Kumar, D., Singh, J., and Singh, O.P.,Seema."A decision support system for analysis of effects of timely fulfillment of customer demand in supply chain management practices", International Journal of Advanced Manufacturing Technology, Springer Vol 61 pp 809-826, 2012.

67. Gill, S.S., Singh, R., Singh, J., and Singh, H. "Adaptive neuro-fuzzy inference system modeling of cryogenically treated AISI M2 HSS turning tool for estimation of flank wear" Expert Systems with Applications (Elsevier Science) Vol.39, pp 4171–4180, 2013,.

68. Uppal, R., Singh, D., and Kumar,S.,"Experimental investigations to study the effect of carbide insert shapes on machining of AISI 4140", International Journal of Surface Engineering & Materials Technology, Vol. 3 No. 1, pp. 51-55,2013,.

69. Pal,H., Sarabjeet., and Jit,N. "Studies on Al384.1-MgO based metal matrix composites and optimization of tensile strength using Taguchi Technique", Journal of Engineering Research and Studies, Vol.E-ISSN0976-7916, JERS/Vol. III/ Issue I /61-64, 2012.

70. Kalsi, N.S., Sehgal, R., and Sharma, V.S. "Grey-Based Taguchi Analysis for Optimization of Multi-Objective Machining Process in Turning", International Journal of Strategic Decision Sciences, Vol. 4(2), 79-95 , 2013.

71. Gupta, A.K., Singh, O.P., and Garg, R.K. "Evolution and Development of Bullwhip Effect and its Contribution towards Supply Chain Management: A Literature Review", International Journal of Management & Information Technology, Vol. 1, No 3, pp. 89-98, 2013.

72. Kumar, D., Singh, J.,Singh ,O.P. and Seema, "A fuzzy logic based decision support system for evaluation of suppliers in supply chain management practices", Mathematical and Computer Modelling, Vol. 57(11-12), pp. 2945–2960, 2013.

73. Singh, G., Singh, Preetkawal., Singh., Daljeet., and Singh, Gurvishal. "Investigating The Effects Of Wear Rates on MSEN-8 by Thermal Spray Coating'', International Journal Of Mechanical Engineering and Robotics Research, Vol. 2, No. 2, pp. 135-140, 2013.

74. Gill, S.S., Singh, J., Singh., R., and Singh, H. "Effect of cryogenic treatment on AISI M2 high speed steel: metallurgical and mechanical characterization", Journal of Materials Engineering and Performance, Vol. 21 (7), 1320-1326, 2012.

75. Gill, S. S. "Optimization of cryogenic treatment to minimize the flank wear of AISI M2 high speed steel tools by taguchi technique", Journal of Engineering Research and Studies, Vol. III (II), , 28-33, 2012.

76. Gill, S.S. "Wear mechanism and machining performance of cryogenically treated AISI M2 high speed steel tools", Journal of Engineering Research and Studies, Vol. III (II), 45-49, 2012.

77. Kumar, R., Singh, J., and Gill, S.S. "Simulation of temperature of R744/ R290 refrigerant at evaporator outlet in autocascade refrigeration system", International Journal of Engineering Science and Technology, Vol. 3 (4), 2765-2774, 2012.

78. Uppal, R., Singh,D., and Kumar, S. "experimental investigations to study the effect of carbide insert shapes on machining of AISI 4140", International Journal of Surface Engineering and Materials Technology, Accepted for publication.

79. Kalsi, N.S., Sehgal, R., and Sharma,V.S. "Grey-Based Taguchi Analysis for Optimization of Multi-Objective Machining Process in Turning", International Journal of Strategic Decision Sciences, Vol. 4(2), 79-95 , 2013.

80. Sharma, R., and Singh, O.P. "Effect of FSW Process Parameters on Mechanical Properties of Polypropylene: An Experimental Study ", International Journal of Innovative Research In Science, Engineering and Technology, Vol. 2, Issue 12, 2013.

81. Gupta, A.K., Singh, O.P., and Garg, R.K. "A Strategic Level Model for Supply Chain of an Automotive Industry: Formulation and Solution Approach", International Journal of Engineering and Management Research, Vol. 4, Issue-1, 2013.

82. Singh, S., Singh, G., Kumar, S., Singh, S., and Singh, A. "Experimental investigation of mechanical property (tensile strength) optical investigation (sem & edax) of austenitic

stainless steel grade (AISI 304l& AISI 310) with gas metal arc welding (GMAW)" Vol. 2, Issue No.7, 2013.

83. Beri, N., Pungotra, H., Kumar, A., and Mittal, G. "Efficiency Optimization during Electric Discharge Machining of H-13 Steel Based on Grey Relation Analysis", International Journal of Scientific & Engineering Research, Vol. 4, 2013.

84. Kumar, A., Beri, N., Pungotra, H. Jit, N., and Singh P. "Machining parameters evaluations on dimensional accuracy in abrasive electric discharge machining (AEDM) process using Taguchi Methodology", International Journal of Scientific & Engineering Research, Vol. 4, 2013.

85. Tripathi, H., Pungotra, H., Gandotra, S., Beri, N., and Kumar, A. "Experimental Investigation into Ball Burnishing Process of Brass Using Taguchi Approach", International Journal of Scientific & Engineering Research, Vol. 4, 2013.

86. Beri, N., Maheshwari, S., Sharma, C., and Kumar, A. "Surface Quality Modification using Powder Metallurgy Processed CuW Electrode during Electric Discharge Machining of Inconel 718 Procedia Materials Science, Vol. 5, 2014.

87. Kalsi, N.S., Sehgal, R., and Sharma, V.K. "Effect of tempering after cryogenic treatment of tungsten carbide–cobalt bounded inserts, Bulletin of Material Science, Vol.37(2), 327-335, 2014.

88. Kalsi, N.S., Sehgal, R., Sharma, V.K. "Influence of Multi-Tempering After Cryogenic Treatment of Tungsten Carbide-Cobalt Inserts in Turning, Advanced Science", Engineering and Medicine, Vol. 6, 1-10, 2014.

89. Kalsi, N.S., Sehgal, R., Sharma, V.K. "Effect of Shielding Gases on Micro Hardness of FE 410 (AISI 1024) Steel Welded Joint in GMAW Process", International Journal on Emerging Technologies, Vol. 5(1), 8-13, 2014.

90. Jit, N. "State of the art of CO2 Laser Beam Machining, International Journal of Emerging Technology and Advanced Engineering", Volume4, Issue 4, pp. 171, 2014.

91. Kumar, N., Tripathi, H., and Gandotra, S. "Optimization of Cylindrical Grinding Process Parameters on C40E Steel using Taguchi Technique", International Journal of Engineering Research and Applications Vol. 5 (1), 2015.

Conference Papers

1. Beri, N.; Maheshwari, S.; Sharma, C.; Kumar, A. "Some Studies on the effect of electric discharge machining on the performance of powder metallurgy processed electrode using the Taguchi method" Proceedings of 4th international conference on 'Advances in Mechanical Engineering (ICAME)' 23-25 Sept. 2010, SVNIT Surat, Gujrat, India, pp. 369 – 371.

2. Kumar, A.; Maheshwari, S.; Sharma, C.; Beri N. "Realizing Potential of Graphite Powder in Enhancing Machining Rate in AEDM of Nickel Based Super Alloy 718" Proceedings of Int. Conf. on 'Advances in Mechanical Engineering', Dec, 2010,Trivandrum, Kerala, India, pp. 51-53.

3. Beri, N.; Maheshwari, S.; Sharma, C.; Kumar, A. "Study of the effect of machining parameters on the surface hardness of AISI D2 steel during electric discharge machining with powder metallurgy processed electrodes" Proceedings of 2nd International Conference on 'Production and Industrial Engineering (CPIE-2010), 03-05 Dec. 2010, NIT Jalandhar, Punjab, India. (pp. 672 – 675).

4. Kumar, A.; Maheshwari, S.; Sharma, C.; Beri N. "Effect of Aluminium Powder Characteristics in Additive Electric Discharge Machining of Nickel Based Super Alloy Inconel 718" Proceedings of 2nd International Conference on 'Production and Industrial Engineering (CPIE-2010), 03-05 Dec. 2010, NIT Jalandhar, Punjab, India. (pp. 667 – 671).

5. Pungotra, H.; Knopf G. K.; Canas R. "Representation of objects in virtual reality environment using B-spline blending matrices" Proceedings of the 21st IASTED Int. Conference on 'Modeling and Simulation (MS 2010)' , Banff, Alberta, Canada, 281-288.

6. Singh G.; Singh J. "To study the effect of air flow rate on by-pass factor of cooling Coil based on vapour compression cycle" Proceedings of National Conference on 'Advances in Mechanical Engineering (NCAME-2011)', 20th - 21st May 2011, UIET, Panjab University, Chandigarh, pp 271-275.

7. Kumar, R.; Singh, J.;Gill, S.S.; "Simulation of temperature of refrigerant mixture at evaporator outlet using FIS modeling" 2nd International Conference on 'Production and Industrial Engineering CPIE-2010', organized by Dept. of Industrial and Production Engineering during 3- 5 Dec. 2010, NIT Jalandhar pp 1269-1274.

8. Jit,N.; Tyagi, A.K.; Singh, J.; and Singh, N. "Ageing effect on physical properties of(A384.1)1-x[(MgO)p]x, particulate composites by keeping particle size at 0.220μm" Fourth International Conference on 'Advances In Mechanical Engineering', Sep 23-25, NIT, Surat, pp 90-94.

9. Singh, D.; Rao, P.V. "Experimental Investigations to Study the Effect of Solid Lubricant MoS2 on the Performance of Hard Turning, ASME " Proceedings (IMECE), 'International Mechanical Engineering Congress and Exposition', v 3, Parts A and B, 2010, pp 935-945,.

10. Kalsi, N.S.; Sehgal, R.; Gill1, S.S.; Singh S.; and Aggarwal V. "Performance of Friction Welding Process with varying carbon in specimens" Global Conference on 'Production and Industrial Engg.', 03-05 December, 2010, National Institute of Technology, Jalandhar, PB, India.

11. Mahajan, T.; Singh, R.; Bhushan, B. "Performance Analysis of Artificially Roughened Duct Used in Solar Air Heaters", Fifth International Conference of 'Environmental Science and Technology', July 12-16, 2010, Hilton Hotel, Houston, Texas, USA.

12. Kumar, D.; Singh, J.; and Seema. "A Fuzzy Set Theory Based Supplier Selection Model" Proceedings of National Conference on 'Advances in Mechanical Engineering (NCAME-2011)', 20th - 21st May 2011, UIET, Panjab University, Chandigarh, pp 109-113, 2011.

13. Beri, N.; Pungotra, H.; and Kumar, A. "To Study the Effect of Polarity and Current during Electric Discharge Machining of Inconel 718 with CuW Powder Metallurgy Electrode" Proceedings of the National Conference on 'Trends and Advances in Mechanical Engineering', TAME 12, October 19-20, 2012, Faridabad, Haryana, India, 476-481.

14. Kumar, A.; Beri, N.; and Pungotra, H. "Experimental Evaluations on Surface Quality Improvement in Aluminium Powder Mixed AEDM of Nickel Based Super Alloy 718 with Cryogenically Treated Copper Electrode" Proceedings of the National Conference on 'Trends and Advances in Mechanical Engineering, TAME 12', Oct.19-20, 2012, Faridabad, Haryana, India, 482-485.

15. Saini, G.; Jit, N.; and Kumar, A.; "Simulation of Temperature Distributions for Chips During Turning Operation Using 2d-Deform" Proceedings of the National Conference on 'New Approaches of Basic Sciences towards the Development of Engineering and Technology-2013(NABSET 2013)' on 1-2 March, 2013, Guwahati, Assam, India.

16. Kumar, S.; Beri, N.; and Kumar, A.; "To Study the Performance of Rotary Attachment during Electric Discharge Machining of H13 tool steel" Proceedings of the 3rd International Conference on 'Production and Industrial Engineering (CPIE-2013)' on 29 – 31 March, 2013, NIT Jalandhar, Punjab, India.

17. Kumar, A.; Jit, N.; and Singh, P. "Machining parameters evaluations on dimensional accuracy in abrasive electric discharge machining (AEDM) process using Taguchi Methodology" Proceedings of the International Conference on 'Global Innovations in Technology and Sciences (ICGITS -2013)' , 4-6 April, 2013, SAINTGITS College of Enginering, Pathamuttom, Kottayam, Kerala.

18. Beri, N.; Maheshwari, S.; and Sharma, C. "Evaluation of surface quality during electrical discharge machining of Inconel 718 with powder metallurgy electrodes" Proceedings of 20th International Symposium Processing and Fabrication of Advanced Materials (PFAM XX) Hong Kong Polytechnic University, Hong Kong SAR China, 15-17 Dec 2011. Extended paper published with DOI:10.4028/www.scientific.net/AMR.410.245, in Advanced Materials Research Vol. 410 (2012) pp 245-248.

19. Beri, N.; Pungotra, H.; and Kumar, A. " To Study the Effect of Polarity and Current during Electric Discharge Machining of Inconel 718 with CuW Powder Metallurgy Electrode" Proceedings of the National Conference on 'Trends and Advances in Mechanical Engineering', TAME 12, October 19-20, 2012, Faridabad, Haryana, India, 476-481.

20. Kumar, A.; Beri, N.; and Pungotra, H. "Experimental Evaluations on Surface Quality Improvement in Aluminium Powder Mixed AEDM of Nickel Based Super Alloy 718 with Cryogenically Treated Copper Electrode" Proceedings of the National Conference on 'Trends and Advances in Mechanical Engineering, TAME 12' , Oct.19-20, 2012, Faridabad, Haryana, India, 482-485.

21. Kumar S.; Beri N.; and Kumar A. "To Study the Performance of Rotary Attachment during Electric Discharge Machining of H13 tool steel" Proceedings of the 3rd International Conference on 'Production and Industrial Engineering (CPIE-2013)' on 29 – 31 March, 2013, NIT Jalandhar, Punjab, India.

22. Kumar A.; Jit,N.; and Singh, P. "Machining parameters evaluations on dimensional accuracy in abrasive electric discharge machining (AEDM) process using Taguchi Methodology" Proceedings of the International Conference on 'Global Innovations in Technology and Sciences (ICGITS -2013) ' ,4-6 April, 2013, SAINTGITS College of Enginering, Pathamuttom, Kottayam, Kerala.

23. Awasthi, R.K.; Singh, H.; Devgan, S.; Kumar, R.; and Mahajan, A. "CFD Investigation Of Cavitation In Fluid Film Journal Bearing System" 8th International Conference on 'Industrial Tribology (ICIT 12), 7-9, DEC, 2012', at Westin, Pune.

24. Tickoo, V.K.; and Awasthi, R. K. "An Experimental Verification Of Cavitated Based Model Of Fluid Film Journal Bearing System" 8th International Conference on 'Industrial Tribology (ICIT 12)' , 7-9, DEC, 2012, at Westin, Pune.

25. Sharma, R.; and Awasthi, R. K. "An Experimental Study On The Effect Of Aspect Ratio On Journal Bearing Performance" 8th International Conference on 'Industrial Tribology (ICIT 12)' , 7-9, DEC, 2012, at Westin, Pune.

26. Maan, J.S.; and Awasthi, R.K. "An Experimental Study Of An Misaligned Fluid Film Journal Bearing System" 8th International Conference on 'Industrial Tribology (ICIT 12)', 7-9, DEC, 2012, at Westin, Pune.

27. Awasthi, R.K. and Singh, H. "A Numerical Study For Predicting Loose Bearing Fitting Effects On The Static Performance Of Journal Bearing System" 8th International Conference on 'Industrial Tribology (ICIT 12)' , 7-9, DEC, 2012, at Westin, Pune.

28. Pungotra H. 2012, " Virtual Reality in Design: User Training and Evaluation" Proceedings of the National Conference on Trends and Advances in Mechanical Engineering, TAME 12, October 19-20, 2012, Faridabad, Haryana, India, 347 -355.

29. Maan, J.S.; Awasthi, R.K., An experimental study of misaligned journal bearing: 8th International Conference of Industrial Tribology(ICIT-2012), Dec 6-9, 2012, Koregaen Park, Pune.

30. Beri, N.; and Mittal, G. "Machining Efficiency Optimization during Electric Discharge Machining of H-13 Steel Based on Grey Relation Analysis" Proceedings of the International Conference on 'Global Innovations in Technology and Sciences (ICGITS - 2013)' 4-6 April, 2013, SAINTGITS College of Enginering, Pathamuttom, Kottayam, Kerala.

31. Jit, N.; Singh, N.; Tyagi, A.K.; and Singh, J. "Effect of Thermal Treatment on Mechanical Properties of (A384.1)1-x[(Al2O3)p]x Particulate Composites" American Institute of Physics, NY, Conference Proceedings, 2010,USA, 75-78.

32. Jit, N.; Tyagi, A.K.; Singh,N.; and Singh, J. "Effect of ageing on mechanical properties of (A384.1)1-x[(MgO)p]x, particulate composites" National conference held August 2010 at Datta Meghe College of Engineering, , Airoli, Navi Mumbai.

33. Kalsi, N.S.; Sehgal, R.; and Sharma, V.S. "Effect of cooling media on cryogenically treated tungsten carbide cutting tool inserts of different coatings in turning, 2nd International Conference on 'Business, Engineering and Applied Sciences (ICBEAS-2013)' , November, 23 -24 2013.

34. Kalsi, N.S.; Sehgal, R.; and Sharma, V.S. "Application of statistical method to evaluate and optimization of the performance of cryogenically treated tungsten carbide cutting tool inserts in turning", 3rd International Conference on 'Production and Industrial Engineering (CPIE-2013)' 29-31 March, 2013.

35. Gupta,A.K.; Singh, O.P.; and Garg, R.K. "Review of Intricacies Involved in Supplier Selection Criteria and Methods in Supply Chain Management", 3rd International Conference on 'Production and Industrial Engineering CPIE-2013', pp. 377-387.

36. Gupta, A.K.; Singh, O.P.; and Garg, R.K. "ANP Approach for Supplier Selection in an Automobile Organization", 3rd International Conference on 'Production and Industrial Engineering CPIE-2013', pp. 388-395.

37. Gupta, A.K.; Singh, O.P.; and Garg, R.K. "Supplier Selection Criteria and Methods in Supply Chains: A review" International conference on 'Operations Management and Industrial Engineering, ICOMIE-2013', Oct.7-8, 2013, Paris, France.

38. Bhushan, B.; and Singh, R. "Performance Analysis of Solar Air Heater Duct having Dimpled Absorber Plate". International conference on 'Future Energy, Environment & Material (FEEM-2013)', 23-25 Dec. 2013, Hong Kong, China.

39. Tarun, M.; Singh, R.; and Bhushan, B. "Performance Analysis of Solar Air Heater having Expanded Diamond wire Mesh as Roughness Geometry" National conference on 'Recent Trends in Mechanical Engineering' , from 21-22 Feb, 2015, BCET, Gurdaspur.

40. Saini,A.; Pungotra, H.; and Singh, S. "Modelling, Simulation and Optimization of shock Absorber Spring Using Reverse Engineering Technique" Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' ,Feb 21-22, 2015, BCET, Gurdaspur.

41. Gandotra, S.; Pungotra, H.; and Singh, P.; "Review of Different Effective Tools for Concept Designing", Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' , Feb 21-22, 2015, BCET, Gurdaspur .

42. Gandotra, V.; Pungotra, P.; Singh, D.; and Gandotra, S. "Optimization of Process Parameters in Finish Hard Turning of HCHCr C-45 Steel with Coated and Uncoated Wiper Carbide Tool Inserts" Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' Feb 21-22, 2015, BCET, Gurdaspur.

43. Gandotra, S.; Pungotra, H.; and Singh, P.; "Errors associated with milling of part geometries: A Review" Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' Feb 21-22, 2015, BCET, Gurdaspur.

44. Tripathi, H.; Pungotra, H.; and Gandotra, S. "Investigating and Optimization of Burnishing process parameters for enhancing surface hardness of AISI 1045 Steel using Taguchi Technique", Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' Feb 21-22, 2015, BCET, Gurdaspur.

45. Singh, A.; Pungotra, H.; Gill, S.S.; and Gandotra, S. "Effects of Different Cryogenic Treatments on Thrust Force during Drilling of Ti-6Al-4V using Carbide Drills" Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' Feb 21-22, 2015, BCET, Gurdaspur.

46. Khajuria, R.; and Singh, J. "Performance analysis of ejector refrigeration system with environment friendly refrigerant driven by exhaust emission of automobile." Advances in 'Applied Science Research, 2013' , 4(5), pp 232-237.

47. Singh, J.;   Singh, J.; and Singh, C. "Use of Nanofluids in Vapour Compression Refrigeration System: A Review" Published in the proceedings of National Conference on 'Recent Trends In Mechanical Engineering (RTME-2014)' , 21- 22 Febuary, 2015, organized by Dept. of Mechanical Engineering BCET Gurdaspur , pp 242-245.

48. Singh, H.; and Singh, J. "Fuzzy Modeling for Quick Performance Prediction of Liquid Desiccant Regeneration in a Packed Bed" Published in the proceedings of National Conference on 'Recent Trends In Mechanical Engineering (RTME-2014)', 21- 22 Febuary,2015, organized by Dept. of Mechanical Engineering BCET Gurdaspur , pp 230-236.

49. Punia, S.S.; Singh, J.; and Sidhu, R.K. "Comparative Performance Analysis of Earth-Air Tunnels" Published in the proceedings of National Conference on 'Recent Trends In

Mechanical Engineering (RTME-2015)', 21-22 Febuary,2014 organized by Dept. of Mechanical Engineering BCET, Gurdaspur , , pp 213-218.

50. Gill, J.; and Singh, J. "Effect of Forging Pressure on Mechanical Properties of Nylon-6 Joints Produced By Friction Welding" Published in the proceedings of National Conference on 'Recent Trends In Mechanical Engineering (RTME-2015)' , 21- 22 Febuary,2014 organized by Dept. of Mechanical Engineering BCET, Gurdaspur, pp 126-132.

51. Singh, G.; and Singh, J. "Experimental Study of EN9 Steel Using Different Cutting Parameter" Published in the proceedings of National Conference on 'Recent Trends In Mechanical Engineering (RTME-2015)', 21-22 Febuary,2014, organized by Dept. of Mechanical Engineering BCET, Gurdaspur , pp 253-258.

52. Maan, J.S.; Awasthi, R.K., "Effect of Load Variation on the Performance of Fluid Film Journal Bearing System" National Conference on 'Recent trends in Mechanical Engineering (RTME-2014)' , 21-22 Feb,2015, BCET, Gurdaspur, Punjab

53. Chhabra, N.; Kalsi, N.S.; and Singh, D. "Effect of Shielding Gases on Micro Hardness of FE 404 (AISI 1024) Steel Welded Joint in GMAW Process, International Journal on 'Emerging Technologies', 2014, Vol. 5(1).

54. Sandhu, J.S.; Singh, D.; and Kalsi, N.S. "Effects of change in moulding sand contents on surface finish in casting" Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' , Feb 21-22, 2015,BCET Gurdaspur, pp133-135.

55. Uppal, R.; Singh, D.; and Kumar, S. "Experimental investigation to study the effect of the graphite powder and carbide insert shapes on machining of AISI 4140" Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering' , Feb 21-22, 2015, BCET Gurdaspur, pp 142-146.

56. Singh, H.; Singh, D.; and Kalsi, N.S. "To study the effect of different tool chip breakers on the machining performance" Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering', Feb 21-22, 2015, BCET Gurdaspur, pp 188-193.

57. Singh, A.; Singh, D.; and Kalsi, N.S. "Experimental investigation to study the effect of single layer coating on cutting tools Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering, Feb 21-22, 2015, BCET Gurdaspur, pp202-207.

58. Kalsi, N.S.; Sehgal, R.; and Sharma, V.S. "Effect of cooling media on cryogenically treated tungsten carbide cutting tool inserts of different coatings in turning, Proceeding of International Conference on 'Business, Engineering and Science', Nov. 23-24, 2013.

59. Kalsi, N.S.; Sehgal, R.; and Sharma, V.S "Application of statistical method to evaluate and optimization of the performance of cryogenically treated tungsten carbide cutting tool inserts in turning, Proceedings of 3rd International Conference on 'Production and Industrial Engineering CPIE-2013', 29 – 31 March, 2013.

60. Jit, N. et.al. "Application of the Taguchi method for Optimization of Laser Cutting: A Review", in National Conference on 'Recent Trends in Mechanical Engineerig (RTME-2014)' , Feb. 21-22,2015 at BCET, Gurdaspur.

61. Gupta, A.K.; Singh, O.P.; and Garg, R.K. "Review of Intricacies Involved in Supplier Selection Criteria and Methods in Supply Chain Management"3rd International Conference on 'Production and Industrial Engineering CPIE-2013', PP. 377-387.

62. Gupta, A.K.; Singh, O.P.; and Garg, R.K. "ANP Approach for Supplier Selection in an Automobile Organization"3rd International Conference on 'Production and Industrial Engineering CPIE-2013', PP. 388-395.

63. Gupta, A.K.; Singh, O.P.; and Garg, R.K. "Supplier Selection Criteria and Methods in Supply Chains: A review Oct.7-8, 2013" , International conference on 'Operations Management and Industrial Engineering, ICOMIE-2013' , Paris, France, Issue 82 PISSN 2010-376X E ISSN 2010-3778, pp 127-133.

64. Singh, A.; and Singh, O.P. "Comparative Study of Friction Welding with Gas Tungsten Arc Welding of Aluminum", 'RTME-2014 National Conference', 21st Feb 2015.

65. Gupta,A.K.; and Singh, O.P. "A Mixed Integer Linear Programming model for Production Related Activities in Supply Chain of an Automobile Industry", 'RTME-2014 National Conference', Feb 21-22, 2015, BCET Gurdaspur.

66. Mahajan, M.; and Singh, O.P. "Collaborative Partenership among Logistic Service Providers in Supply Chain Management", 'RTME-2015 National Conference' , Feb 21-22, 2014, BCET Gurdaspur.

67. Kumar, V.; and Singh, O.P. "Relevence of Total Quality Management or Business Excellent Strategy Implementation for Enterprise Resource Planning- A Conceptual Study", 'RTME-2014 National Conference', Feb 21-22, 2014, BCET Gurdaspur.

68. Rathore, O.P.; and Singh, O.P. "Vendor Managed Inventory Control in Chemical Industry" 'RTME-2014 National Conference', Feb 21-22, 2015, BCET Gurdaspur.

69. Sharma, R.; and Singh, O.P."Parametric Analysis Tensile Strength on FSW Welded Polypropylene", 'RTME-2014 National Conference', Feb 21-22, 2015, BCET Gurdaspur.

70. Singh, P.; and Singh, O.P. "To Study the Effect of Post Weld Heat Treatment on Microstructural Properties of Stainless Steel", 'RTME-2014 National Conference' , Feb 21-22, 2015, BCET, Gurdaspur.

71. Singh, H.; and Awasthi, R.K. "A Numerical Study For Misalignment Effects On Journal Bearing System", Conference Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering(RTME-14)', Feb. 21-22, 2015, at BCET, Gurdaspur, Page N0. 2-5.

72. Devegan, S.; and Awasthi, R.K. "Effect of Bulk Modulus, Speed And Eccentricity Ratio on Hydrodynamic Fluid Film Pressure of Circular Journal Bearing System Using JFO Model", Conference Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering(RTME-14)', Feb. 21-22, 2015, at BCET, Gurdaspur, Page N0. 6-9.

73. Mahajan, A.; and Awasthi, R.K. "Effect of Clearance on Pressure Distribution and Fluid Film Thickness in Journal Bearing", Conference Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering (RTME-14)', Feb. 21-22, 2015, at BCET, Gurdaspur, Page N0. 10-13.

74. Singh, H.; and Awasthi, R.K. " Study on pressure distribution of worn journal bearing system using JFO cavitated mode", Conference Proceedings of 1st National Conference on 'Recent Trends in Mechanical Engineering(RTME-14)', Feb. 21-22, 2015, at BCET, Gurdaspur, Page N0. 30-34.

75. Singh, A.; Pungotra, H.; Gill, S.S.; and Gandotra, S. "Effect of Different Cryogenic Treatments on Thrust Force during Drilling of Ti-6Al-4V using Carbide Drills, Proceeding of 'National Conference on Recent Trends in Mechanical Engineering', Feb. 21-22, 2015, at BCET, Gurdaspur.

76. Tripathi, H.; Pungotra, H.; and Gandotra, S. "Investigating and Optimization of Burnishing process parameters for enhancing surface hardness of AISI 1045 Steel using Taguchi Technique", Proceeding of National Conference on 'Recent Trends in Mechanical Engineering', Feb. 21-22, 2015, at BCET, Gurdaspur.

77. Gupta, A.; Kumar, A.; and Beri, N. "Experimental Study of Machining Characteristics of D2 Steel in Rotary Electro -Discharge Machining with Copper Electrode, Proceedings of the 'National Conference on Recent Trends in Mechanical Engineering (RTME-2015)' ,21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India, pp 151-153.

78. Bhanot, V.K.; Beri, N.; and Kumar, A.; "Experimental Study of Surface Roughness on Superni 800 (Super Alloy) using Powder Metallurgy Processed Cu-Ti Electrodes, Proceedings of the National Conference on 'Recent Trends in Mechanical Engineering (RTME-2014)' , 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India, pp 153-158.

79. Dharminder.; Beri, N.; Kumar, A.; and Bhanot, V.K.; "Experimental Study of Surface Roughness on Superni-600 (Super Alloy) using Powder Mixed EDM, Proceedings of the 'National Conference on Recent Trends in Mechanical Engineering (RTME-2015)' , 21-22, February 2014, Beant College of Engg. & Tech. Gurdaspur, Punjab India, pp 159-164.

80. Singh, G.; Beri, N.; and Kumar, A.; "Study of Overcut During Abrasive EDM of H-13 Tool Steels Using Silicon Carbide as Abrasive", Proceedings of the National Conference on 'Recent Trends in Mechanical Engineering (RTME-2014)' 21-22, February 2014, Beant College of Engg. & Tech. Gurdaspur, Punjab India, pp 185-187.

81. Beri, N.; Maheshwari, S.; Sharma, C.; and Kumar, A. "Surface Quality Modification using Powder Metallurgy Processed CuW Electrode during Electric Discharge Machining of Inconel 718, Proceedings of the International Conference on 'Advances in Manufacturing and materials Engineering (ICAMME-2014)' 27-29, March 2014, National Institute of Technology Karnataka, Surathkal, Mangalore, Karnataka, India.

82. Kalsi, N.S.; Sehgal, V.; and Sharma, V.S. "Optimization and Modelling of a Process using Cryogenically Treated Tungsten Carbide Cutting Tool inserts in Turning", Proceedings of 'Asian Tribology Congress – 2014', 17-20 February, 2014 at Agra.

83. Singh, S.; Kumar, S.; and Kumar, S. "Optimizing the surface roughness during machining of En-8D steel using taguchi Approach" 4th International conference on 'Advances in Material and Manufacturing Technology (AMMT-14)', RAYAT, 2014.

84. Nanda, A.; Kumar, S.; and Kumar, S. "Optimization Of Surface Quality While Machining AISI D2 steel Under Different Environmental Conditions, Tool Shape And Cutting Parameters - A Taguchi Approach" International Conference on 'Advancements and Futuristic Trends in Mechanical and Materials Engineering' ,Oct. 16-18, 2014.

85. Singh, S.; Kumar, S.; Singh, H.; and Singh, L. "Experimental investigation on AISI 304l & AISI 310 alloys Welded by gas metal arc welding (GMAW) process" International Conference on 'Advancements and Futuristic Trends in Mechanical and Materials Engineering' ,Oct. 16-18, 2014.

86. Bhanot, V.K.; Beri, N.; and Kumar, A. "Machianability Assesment of Superni-800 during EDM with Powder Metallurgy Processed Cu-Ti Electrode Using Taguchi Method" , Proceedings of the 5th International & 26th All India Manufacturing Technology, 'Design and Research Conference (AIMTDR 2014)' December 12th–14th, 2014, IIT Guwahati, Assam, India, pp. 602-1 to 602-6.

87. Singh, J.; Singh,R.; and Bhushan, B. "Performance Investigation of Solar Air Heater Duct having Zig-Zag Triangular Protrusions as Roughness Geometry'',National conference on 'Recent Trends in Mechanical Engineering' , 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India.

88. Bhardwaj, N.; Singh, N.; and Bhushan, B. "Performance Investigation of Solar Air Heater Duct having Zig-Zag Square Protrusions as Roughness Geometry" ,National conference on 'Recent Trends in Mechanical Engineering', from 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India.

89. Singh, J.; Singh, R.; and Bhushan, B. "Performance Investigation of Solar Air Heater Duct having Triangular Protrusions as Roughness Geometry'', National conference on 'Recent Trends in Mechanical Engineering', 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India.

90. Joshi, B.; Singh, R.; and Bhushan, B. "CFD Based Investigation on Effect of Longway and Shortway Length of Roughness Element on Performance of Artificially Roughened Duct Used in Solar Air Heaters" National conference on 'Recent Trends in Mechanical Engineering', 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India.

91. Sharma, R.; and Bhushan, B. "Utilization of Phase Change Material inside Solar Thermal Collector for Water Heating Applications: Review" National conference on 'Recent Trends in Mechanical Engineering', from 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India.

92. Sharma, R.; Singh, P.; and Bhushan,B. "Experimental Investigation of Solar Thermal Flat Plate Collector with and without PCM" National conferenceon 'Recent Trends in Mechanical Engineering', 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India.

93. Singh, M.; Bhushan, B.; and Singh, S. " Review of Thermal Conductivity of Metal Matrix Composites" National conference on 'Recent Trends in Mechanical Engineering', 21-22, February 2015, Beant College of Engg. & Tech. Gurdaspur, Punjab India.

94. Pungotra, H., "Virtual Reality in Concept Design" Proceedings Int. Conf. on Advances in Mechanical Engineering, Noida, India, 84-88, 2012.

95. Jit,N., Tyagi, A.K., Singh, N.S., and Chand, D. " Properties of (A384.1)1-x [(SiC)p] x Composites by Keeping Particle Size at 0.220 µm", Proceedings of the World Congress on Engineering, Vol. III WCE 2011, London, U.K, 2011.

15.   Details of patents and income generated   :   **NIL**

16.   Areas of consultancy and income generated :   **NIL**

17.   Faculty recharging strategies
   - Annual increments for faculty
   - CAS(Career Advancement Scheme) for promotions
   - Funding for attending National and International Conferences
   - Facility of recommending books for Departmental Library
   - Faculty Development Programmes for motivating the faculty
   - Funding for organising National Conferences/ STC/Workshops, etc.

- Funding for membership of National/International Societies.

18. Student projects

- Percentage of students who have done in-house projects including inter-departmental: **100%**
- Percentage of students doing projects in collaboration with other universities/ industries / institutes: NIL

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

Sr. No.	Name of Faculty	Award	Year
1.	Sarabjit Singh	Contribution award by Journal of Mechanical Sc. and Tech. (Springer)	2014
2.	Jagjit Singh, Dr. R.K Awasthi	Won award for Best Oral Paper presented at ICIT (International Conference of Industrial Tribology) held at Pune	2012

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

Sr. No.	Name of Faculty	Title	Nature (Conference/Seminar/Winter school, etc.)	Funding agency	Year
1.	Dr. Ranjit Singh	Entrepreneurship Development, Self Employment Promotion, Business Club & Business Incubator	Workshop		2010
2.	Nrip jit, R. K. Awasthi	One day Patent Awareness Workshop	Workshop	PSCST	2010
3.	Nripjit, Vipan kumar	AutoCAD in engineering	Workshop	NITTTR/ MHRD	2010
4.	Dr. Jagdev Singh and Dr. Harish Pungotra	Recent Trends In Mechanical Engineering -RTME-2014	National Conference	TEQIP-II and PTU Jalandhar	2014
5.	Dr. Dilbag Singh	Advances in Mechanical Engineering	STC	TEQIP-II	2014
6.	Dr. Dilbag Singh, Dr. Nirmal	Recent Trends In Mechanical Engineering -RTME-2015	National Conference	TEQIP-II	2015

	Singh Kalsi, Dr. Brij Bhushan, Dr. Pungotra, Dr. Naveen Beri				
7.	Dr. Dilbag Singh	Workshop on Robotics on 22.09.2012	Workshop	BCET Gurdaspur	2012

21. Student profile course-wise: Students are admitted on the basis of JEE Mains rank.

Name of the Course	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female

22. Diversity of Students

Name of the Course (refer question no. 2)	% of students from the college	% of students from the state	% of students from other States	% of students from other countries
B.Tech.	Not applicable	85%	15%	Nil

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Batch 2011-2015:   GATE: 05   GRE: 00   Defence: 01
Batch 2010-2014:   GATE: 09   GRE: 01   Defence: 00
Batch 2009-2013:   GATE: 03   GRE: 03   Defence: 01
Batch 2008-2012:   GATE: 00   GRE: 00   Defence: 01

24. Student progression

Student progression	Percentage against enrolled			
	2007-2011	2008-2012	2009-2013	2010-2014
UG to PG	05	07	05	04
PG to Ph.D.	Nil	Nil	Nil	Nil
Ph.D. to Post-Doctoral	Nil	Nil	Nil	Nil
Employed • Campus selection • Other than campus recruitment	12 05	18 05	16 05	10 02
Entrepreneurs	Nil	Nil	Nil	Nil

25. Diversity of staff

Percentage of faculty who are graduates	
of the same university	31%
from other universities within the state	52%
from other universities from other states	17%
from universities outside the country	Nil

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period : 09

- Dr. Sarabjit Singh
- Dr. Nirmal Singh
- Dr. Brij Bhushan
- Dr. Naveen Beri
- Dr. Anil Kumar
- Dr. Harish Pungotra
- Dr. Simranpreet Singh Gill
- Dr. Darshan Kumar
- Dr. Nripjit

27. Present details about infrastructural facilities

a) Library : Available

Internet facilities for staff and students : 100Mbps wired connectivity in Staff Rooms, Laboratories, Hostels

a) Total number of class rooms : 07

b) Class rooms with ICT facility : 05

c) Students' laboratories : 15

d) Research laboratories : 03

List of Departmental Laboratories

Sr. No.	Name of Laboratory
1.	Theory of Machine lab.
2.	Strength of Material lab.
3.	Vibration lab.
4.	Thermodynamics lab.
5.	Heat transfer lab.
6.	Refrigeration and Air conditioning lab.
7.	CAD/CAM lab
8.	Engineering Graphics lab.
9.	Industrial Automation and Robotics lab.
10.	Fluid Mechanics lab.

11.	Fluid Machinery lab.
12.	Automobile lab.
13.	Mechanical Measurement & Metrology Lab.
14.	Metallurgy and Heat Treatment lab.
15.	Manufacturing Lab.

28. Number of students of the department getting financial assistance from College :
100% PG students are given scholarship under TEQIP-II.

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes, it is done by taking:
- Feedback from students (studying as well as pass-out)
- Feedback from Alumni of the Department
- Feedback from Companies in which students get placed
- Feedback from faculty

These feedbacks are taken and are analysed and accordingly decisions are taken

30. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?
- The department takes feedback from faculty and utilizes in identifying the academic gaps in the curriculum
- Identifying the need in improving the course contents by updating the syllabus
- Identifying the need for including new courses in the curriculum
- Identifying the pitfalls in the teaching learning process
- Strengthening the teaching learning process

b. Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?
The department obtains feedback from students on staff, curriculum and teaching learningevaluation. The questionnaires are given to students at the end of the semester and faculty and staff are evaluated accordingly. Further, the department analyzes the feedback and measures are taken accordingly, some of them are:

- Encouraging the faculty for skill enhancement programme
- Including the new subjects as per the industry demand
- Use of new methods in teaching learning process as to develop better understanding of the course contents
- Various measures are taken to strengthen the Teaching Learning process

c. Alumni and employers on the programs and what is the response of the department to the same?

The department obtains feedback from Alumni and employers through Alumni Surveyand Industry Survey. Based on the feedback, following steps are taken by the Department:

- Conducting various aptitude tests, group discussions for skill enhancement
- Various technical events are being organized by societies for improving skills of the students

31. List the Distinguished Alumni of the department (maximum 10)

Sr. No.	Name	Batch	Current Designation and Address
1.	Mritunjaya Sharma	2001	Deputy Commissioner, Income Tax Department, Noida, UP
2.	Amrinderpal Singh	2001	Product Design Manager, Amazon, California, USA
3.	Roshan Badyal	2005	Assistant Commissioner Customs and Central Excise (IRS), Delhi.
4.	Vimal Aggarwal	1999	Senior Project Manager, Cognizant Technology, Irving, Texas, USA.
5.	Ankur Kakroo	2010	Assistant Manager, Valvo comercial vehicle limited, Dewas, MP.
6.	Gurjinder Singh Dhami	2001	Design Engineer, Plexus Corporation, Bosworth.
7.	Manish Khosla	2004	Purchase Manager, Magneti Marelli Powertrain India Ltd., Gurgaon.
8.	Vikaramjit Singh	2012	Senior Service Engineer, JK Tyre and Ind. Ltd.
9.	Kamal Kishore	1999	Astt. Manager- Security, Security Solution Bishara, Muscat, Oman.
10.	Prabhjot Singh	2010	Design Engineer, Maico Gulf L.L.C, Industrial Area 15, Sharjah

32. Give details of student enrichment programs (special lectures / workshops / seminar) with external experts.

Date	Name and Designation	Topic
24.01.2013	Nikhil Dhiman	Expert Lecture on Career Guidance
01.04.2013	Lt. Ravinder Singh, Indian Army	Expert Lecture on Career Guidance in Defense forces
17.09.2013	Ducat	Expert Lecture on Auto CAD
03.12.2013	Mrs. Sunita Sharma, Managing Director,PELTC, Ludhiana	Expert lecture on interview skills

	Er. Kamaljit Ghai Manager, CIPET, Amritsar	An expert lecture on Composite Materials
05.03.2014		
28.10.2013	Sh. Jatinder Singh Randhawa Director, Edge Infosystems, Amritsar	Communication and Professional Skills
28.10.2013	Dr. S. K. Sinha Professor, Dr. B.R. Ambedkar NIT Jalandhar	Fundamentals of Management Skills
29.10.2013	Dr. Davinder Singh Associate Professor, GNDU, Amritsar	Importance of Psychology
29.10.2013	Dr. Sukhdev Singh H.O.D, Dept. of Business & administration, GNDEC Ludhiana.	Corporate Social Performance: Emerging Change in the Business World
29.10.2013	Mrs. Sunita Sharma Managing Director, PELTC, Ludhiana.	Fundamentals of Communication Skills
30.10.2013	Er. Rishabh Gupta Centre Director, T.I.M.E., Amritsar.	Analytical Abilities
30.10.2013	Dr. Vijay Srivastava Vice Chancellor, Chitkara University.	Interview Skills

33. List the teaching methods adopted by the faculty for different programs.

- Use of ICT such as projectors for seminars.
- Presentations on subject topics.
- Manual as well as online notes providing to students.
- Practical implementation of subject concepts in labs, wherever possible.
- Tests, assignments, quizzes and discussions for different subject related topics.

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

The department ensures that programme objectives are constantly met and learning outcomes are monitored through the skill enhancement techniques, teaching learning system and career and guidance cell. The Program Education Objectives and Program Outcomes of the department are as follows:

Program Educational Objectives (PEO):

1. To prepare students for successful careers in Indian and multinational industries/companies engaged in thermal systems, manufacturing processes, machine design and the related fields.
2. To develop the ability among students to understand and synthesize data/information and technical concepts for application to product/system/process design.
3. To prepare students to be able to work as part of teams on multidisciplinary projects involving professional ethics and codes of professional practice.
4. Todeveloptheabilityamongthestudentsfortakingresearch/teachingassignments.

Program Outcomes (PO):

1. Graduates will be able to use the basic knowledge of mathematics and science in engineering and technological applications.
2. Graduates will be able to identify, formulate and solve mechanical engineering problems.
3. Graduates will be able to design and conduct experiments, interpret and analyze data, and report results.
4. Graduates will be able to conceptualize and design the mechanical systems or processes that meet desired specifications and requirements.
5. Graduates will be able to function/participate as a member of the teams engaged in Engineering/Technology laboratories, as well as in multidisciplinary design teams in latest technologies.
6. Graduates will have ability to serve the society with professional ethics.
7. Graduates will be capable of self learning and development.
8. Graduates will have an understanding of the impact of engineering on society and demonstrate awareness of contemporary issues.
9. Graduates will be able to use modern engineering software tools and equipments to solve mechanical engineering problems.
10. Graduate will have the confidence to optimize available engineering resources.
11. Graduates will be able to deliver the engineering fundamentals in effective an innovative ways.
12. Graduates will be able to handle research projects for the development of engineeringand technology.

To achieve these, following measures are taken by the Department:

- The department ensures the curriculum is designed to meet the program outcomes.
- The faculty ensures the syllabus is revised and is involved in improving student skills through quizzes, assignments, mini projects, mid-semester test and final major project.

- The course file is being made by all faculty members for their respective courses and HOD monitors the coverage of syllabus with the help of Course file and sees the academic schedules are intact.
- The performance of the students is analyzed time to time and slow learners are identified. Special classes are planned for the slow learners called as remedial classes.
- For every class a students, one teacher is being allotted as advisor. These advisers counsel the students periodically (once in a week) and monitor their regularity, also address personal problems if any. They also help in guiding them regarding their future prospects. HOD of the department coordinates the counselling activity and sees that it is being done on a regular basis.
- Whenever the necessity occurs, the parents are called for and are advised to monitor their wards and take necessary actions.
- The entire faculty is involved in guiding the students for their project work which helps them in their future professional exposure.

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

STUDENTS

Students Activities		
Nature of Activity	Number of students enrolled	Recognition/Rewards received if any
Shaheed Bhagat Singh MemorialBlood Donation Camp (21-10-2010)	300	300 units blood has been donated to Blood bank, Civil Hospital, Gurdaspur.
Blood Donation Camp (29-09-2011)	200	200 units blood has been donated to Blood bank, Civil Hospital, Gurdaspur.
Blood Donation Camp (03-09-2012)	300	300 units blood has been donated to Blood bank, Civil Hospital, Gurdaspur.
Rally on "Women Criticism" held during Sui-Generis 2013(14-3-2013)	300	----------
Cleanliness Camp (08-10-2010)	300	----------
Swami Vivekanand Yuva Sandesh Yatra (19-08-2013)	200	----------
Van Mohotsava (14-09-2013)	300	150 trees has been planted inside the college campus.
"Bharat Jago Daurh" on Swami Vivekanand Yuva Sandesh Rally (24-09-2013)	120	----------
Swami Vivekanand Yuva Sammelan at Pathankot (29-09-2013)	90	----------
Stage Show on Swami Vivekanand	300	----------

(15-11-2013)		
Tree Plantation Degree & Polytechnic Wing (04/03/14)	300	300 trees has been planted inside the college campus.
Rally on "Voting Awareness" held during Sui-Generis 2014 (20-03-2014)	300	----------
Election Awareness Rally in Gurdaspur City (18-04-2014)	300	----------
Tree Plantation held in Degree Wing (23-04-2014)	300	250 trees has been planted inside the college campus.
Tree Plantation held in Degree Wing (08-08-2014)	300	200 trees has been planted inside the college campus.
"J & K Flood Relief Donation Camp" (03/10/14)	300	Rs.10,000/- has been sent to PTU for the victims.
"NSS Day" (24/09/2014)	300	"SAVE ENERGY & SAVE WATER" massage 2000 stikers has been pasted inside the college campus and hostels.
National level educational survey "ASER-2014" (28/09/2014)	70	26 villages of District Guradaspur has been surveyed.
Expert Lecture on "Usage of Swadesi Products" by Swadesi Munch, New Delhi (30/09/2014)	200	----------
"Swachha Bharat Abhiyaan" (02/10/14)	300	Central Jail to Sri Ravi Dass Chowk road has been cleaned by college students.
"Rastriya Ekta Divas" (31/10/2014)	200	----------
Expert Lecture on "Community Policing" by C.P.R.C. Gurdaspur (03-11-2014)	250	----------
Expert Lecture on "Combating Corruption-Technology as an Enabler" by Vigilance Deptt. Gurdaspur (04-11-2014)	150	----------
Donation Camp on "International White Crane Day Contributions 2014" (05/12/14)	300	Rs.7,500/- has been sent to Indian Association for Blind Fund, Madurai
Campus and Online Competition for voters on the occasion of "National Voter Day-2015" (23/01/2015)	100	----------
M & D organized SUI- GENERIS 2K11 in the college campus	144	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K12 in the college campus	132	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K13 in the college campus	126	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K14 in the college campus	130	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K15 in the college campus	122	1st & 2nd prizes were awarded to the winners.

Dav PTU ZONAL YOUTH FEST held at Dav Jalandhar in year 2011	10	2nd Prize
PTU ZONAL YOUTH FEST held at Dav Jalandhar in year 2012	32	Three 1st prize & two 2nd Prize
PTU ZONAL YOUTH FEST held at Baba Bhag Singh College of Engg. & Technology , Jalandhar in year 2013	44	Two 1st prize & two 2nd Prize
PTU ZONAL YOUTH FEST held at SSCET Badhani in 2014.	46	One 1st prize & Four 2nd Prize
PTU Inter College Hockey Tournament-2008-09 (Men)	16	Won Bronze Medal
PTU Inter Zonal Cricket Tournament 2008-09 (Men)	16	Zone Winner
PTU Inter College Table Tennis Tournament-2009-10	5	Participation
PTU Inter College Volleyball Tournament-2009-10 (M/W)	24	Participation
PTU Inter College Football Tournament-2009-10	16	Participation
PTU Inter College Hockey Tournament-2009-10 (Men)	16	Participation
PTU Inter College Hockey Tournament-2009-10 (Women)	16	4th Position
PTU Inter College Cricket Tournament-2009-10 (Men)	16	Zone Winner
PTU Inter College Handball Tournament-2009-10 (Men)	12	Participation
PTU Inter College Basketball Tournament-2009-10 (Men)	12	4th Position
PTU Inter College Basketball Tournament-2009-10 (Women)	12	Participation
PTU Inter College Athletic Meet 2009-10	10	Participation
PTU Inter College Table Tennis Tournament-2010-11(Men)	06	Participation
PTU Inter College Football Tournament-2010-11(Men)	18	Participation
PTU Inter College Kabaddi Tournament-2010-11 (Men)	12	Participation
PTU Inter College Basketball Tournament-2010-11 (Men)	12	Participation
PTU Inter College Hockey Tournament-2010-11 (Men)	16	5th Position
PTU Inter College Volleyball Tournament-2010-11 (M)	12	Participation
PTU Inter College Cricket Tournament 2010-11 (Men)	16	Zone Winner

PTU Inter College Athletic Meet 2010-11 (M/W)	09	Participation
PTU Inter College Football Tournament-2011-12(Men)	16	Participation
PTU Inter College Basketball Tournament-2011-12 (Men)	12	Participation
PTU Inter College Lawn Tennis Tournament-2011-12 (Men)	04	Participation
PTU Inter College Hockey Tournament-2011-12 (Men)	16	Participation
PTU Inter College Chess Tournament (Men) 2011-12	07	4th Position
PTU Inter College Cricket Tournament 2011-12 (Men)	16	Zone Winner
PTU Inter College Swimming Tournament 2012-13 (Men)	02	3rd Position
PTU Inter College Chess Tournament (Men) 2012-13	06	4th Position
PTU Inter College Cross Country Tournament (Men) 2012-13	02	Participation
PTU Inter College Table Tennis Tournament (Men) 2012-13	05	Participation
PTU Inter College Lawn Tennis Tournament-2012-13 (Men)	04	4th Position
PTU Inter College Hockey Tournament-2012-13 (Men)	16	Participation
PTU Inter College Football Tournament-2012-13(Men)	20	Participation
PTU Inter College Cricket Tournament 2012-13 (Men)	16	Zone Winner
PTU Inter College Athletic Meet 2012-13 (M/W)	17+11=28	Silver Medal In 100M, Bronze Medal In Shot Put, 4th Position In 1500M & 3000M (Women), 4th Position In 110M Hurdle & 4*100M Relay.
PTU Inter College Swimming Tournament 2013-14 (Men)	03	Participation
PTU Inter College Table Tennis Tournament 2013-14 (Men)	05	Participation
PTU Inter College Chess Tournament 2013-14 (Men)	08	Participation
PTU Inter College Basketball Tournament 2013-14 (Men/Women)	12+12=24	Participation
PTU Inter College Hockey Tournament 2013-14 (Men)	16	4th Position
PTU Inter College Football Tournament 2013-14 (Men)	16	Participation

PTU Inter College Volleyball Tournament 2013-14 (M/W)	12+12=24	Participation (Men) 4th Position (Women)
PTU Inter College Cricket Tournament 2013-14 (Men)	16	Zone Winner
PTU Inter College Athletic Meet 2013-14 (M/W)	16+11=27	Silver Medal In 100M(Men), Gold Medal In Shot Put (Women), Bronze Medal In 100M (Women), Bronze Medal In 1500M (Women), Bronze Medal In 4*100M Relay (Women) & Runner Up Trophy (Women)
PTU Inter College Table Tennis Tournament 2014-15 (M)	06	Participation
PTU Inter College Chess Tournament 2014-15 (M)	06	Participation
PTU Inter College Badminton Tournament 2014-15 (M)	07	Participation
PTU Inter College Basketball Tournament 2014-15 (M)	12	Participation
PTU Inter College Basketball Tournament 2014-15 (W)	12	Participation
PTU Inter College Football Tournament 2014-15 (M)	16	Participation
PTU Inter College Hockey Tournament 2014-15 (M)	16	3rd Position (Bronze Medal)
PTU Inter College Volleyball Tournament 2014-15 (M/W)	14+12=26	Participation(Women) 4th Position (Men)
State Level Wrestling Championship (57 Kg Weight Men) Held On 21st To 22nd February 2014 At Rohtak, Haryana.	01	Silver Medal
State Level Wrestling Championship (57 Kg Weight Men) Held On 3rd To 5th November 2014 At Gorakhpur, U.P.	01	Gold Medal
Senior National Wrestling Championship (57 Kg Weight Men) Held On 14th To 16th November 2014 At Utter Pradesh.	01	Bronze Medal
Senior National Wrestling Championship (59kg Weight Men) Held On 30 January-6 February 2015 At Kerala.	01	Bronze Medal

FACULTY

Sr. No.	Faculty	Society/institute/others)	Activity
1.	Dr. Jagdev	Members Board of Studies	Recommend the curriculum &Courses,

Sr. No.			
	Singh	Punjab Technical University Jalandhar (2008-2011), Chief Warden, Coordinator Polytechnic wing, Dean Students Welfare	books, panel of paper setters, measures for the periodical assessment; list of equipments and to act as a consultative body etc. To establish equivalence of curriculum in the studies of the discipline, Administration of all Hostels
2.	Dr. Dilbag Singh	Member, Board of Studies, Punjab Technical University Jalandhar (2012 to till date)	Recommend the curriculum & Courses, books, panel of paper setters, measures for the periodical assessment; list of equipments and to act as a consultative body etc. To establish equivalence of curriculum in the studies of the discipline.
3.	Jagjit Singh Maan	Faculty Incharge Music & Dramatics	
4.	Dr. Nripjit	Nodal officer of Intellectual property Right, Tobacco Act (Govt. of PB.)	Intellectual property Right awarenessTo ensure Tobacco free society
5.	Dr. Ranjit Singh	Coordinator, Renewable Energy Club and Energy Conservation Cell	Organization of activities concerning renewable energy
6.	Dr. Naveen Beri	Associate Nodal Oficer TEQIP, Member NBA Accreditation Committee Department	
7.	Dr. Anil Kumar	Incharge Establishment	
8.	Preetkanwal Singh	Fine Arts Club, ATPO	Fine Arts, Stage Decoration, Paintings, Training and Placement of students
	Dr. Sarabjeet Singh	Transport Controlling Officer, Student Adviser, Member NBA Accreditation Committee Department	

Professional Membership of Faculty

Sr. No.	Facult	Professional Society/institute/others
1.	Dr. Dilbag Singh	Life Member ISTE (Indian Society for Technical Education) New Delhi with Membership No. LM 25511
2.	Dr. Jagdev Singh	Member Fellow Institution of Engineers (India), Member of Institution of Engineers (India)
3.	Dr. Ranjit Singh	Life member - Solar Energy Society of India (SESI), Life member - Indian Society for Technical Education (ISTE), Life member - Punjab Academy of Sciences (PAS)

4.	Sh. Sanjeev Kumar	ISTE LIFE MEMBER Since 2008
5.	Dr.Nripjit	ISTE LIFE MEMBER since 2008 Life member GENCO ALUMNI
6.	Jagjit Singh Maan	Life Member TSI (Tribology Society of India) New Delhi , Member of SAE
7.	Dr. Naveen Beri	Life member ISTE, Life member TSI
8.	Dr. Anil Kumar	Life member ISTE
9.	Dr. Brij Bhushan	Member ISTE
10.	Sh. Arun Nanda	Member (IAENG) International Association of engineers, society of industrial Engg, society of Mechanical Engg, (ASHRAE) the American Society of Heating, Refrigerating, and Air-Conditioning Engineers, (ICRN) Indian Climate Research Network
11.	Dr. Om Pal Singh	Member of Institution of Engineers (India), ISI Japan

36. Give details of "beyond syllabus scholarly activities" of the department.
- Content Beyond syllabus is included in some subjects which are reflected in class time table as well.
- Projects are assigned to students in labs in addition to practical suggested in syllabus.
- Educational tours are conducted for students.
- Classes for weaker students are held to improve the performance of students.
- Various technical events are conducted for improving technical skills of students.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

Applied for NBA accreditation under Tier-1

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths:

1. Well Qualified and Experienced Faculty and Staff

2. Department is accredited by National Board of Accreditation (NBA) and ISO certified.

3. Good number of reputed International/National Journal and Conferences.

4. Well equipped labs for students.

5. Department has got grants from DST, AICTE and MODROB.

6. Good placement of students.

Weaknesses:

1. Location disadvantage

2. Lack of good consultancy projects

Challenges:

1. To maintain good academic record of the students

2. To start Post Graduation Courses in new areas

3. To enhance the interpersonal and technical skills of students.

4. To bring more research projects from various funding agencies.

39. Future plans of the department.

1. To conduct more short term training programs and conferences.

2. To start more full time post graduation courses in the department.

Evaluative Report of Department of Computer Science & Engg.

1. Name of the Department   : **COMPUTER SCIENCE & ENGINEERING**
   Year of establishment   : **1995**

2. Names of Programmes /Courses offered :   **B.Tech. CSE,**
                                                  M.Tech. CSE (Part Time)

3. Interdisciplinary courses and departments involved :
   Math, Physics, Chemistry, English : Applied Science
   Environmental science: Chemical & Bio Tech

4. Annual/ semester/choice based credit system   :Semester System

5. Participation of the department in the courses offered by other departments :
   Fundamental of Computer programming and IT :   Mechanical
   Operating system, Data structure, OOPS   :   ECE

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Category	Sanctioned	Filled
Professor	3	Nil
Associate Professor	6	2 + 4 (under CAS)
Assistant Professor	21	15

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. /M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided for the last 4 years
Dr. S.K. Gupta	Ph.D.	Associate Professor	DBMS	26 years	07 students are presently enrolled
Sh. Arpinder Singh	ME	Associate Professor	Image Processing	23 years	-
Dr. R.C. Gangwar	Ph.D.	Associate Professor	Network security	21 Years	06 students are presently enrolled

Ajay Kumar Dogra	M.S.	Associate Professor	Computer Science	19 Years	NIL
Sanjeev Mahajan	M.E.	Associate Professor	Computer Networks	21 Years	NIL
Sukhbir Singh	B.Tech.	Associate Professor	Cloud Computing	17 Years	NIL
Sukhwinder Bir	M.E.	Assistant Professor	Digital Image processing	14 Years	NIL
Rajeev Bedi	M.Tech.	Assistant Professor	Object Oriented Programming / Cloud Computing	14 Years	NIL
Sandeep Kaur	M.Tech.	Assistant Professor	Software Engineering	8 Years	NIL
Navneet Singh	M.Tech.	Assistant Professor	Network Security	2 Years	NIL
Jarnail Singh	M.Tech.	Assistant Professor	Software Engineering	1 Year	NIL
Gurjeet kaur	M.Tech.	Assistant Professor	Network Security	1 Year	NIL
Amarjeet Kaur	M.Tech.	Assistant Professor	DDOS	1 Year	NIL
Shelza	M.Tech.	Assistant Professor	Digital Signal Processing	4 Months	NIL
Priti Aggarwal	M.Tech.	Assistant Professor	Digital image Processing	1 Year	NIL
Geetanjali sharma	M.Tech.	Assistant Professor	Networking	1 Year	NIL
Prabhleen Kaur	M.Tech.	Assistant Professor	Networking	4 months	NIL

| Bharti | M.Tech. | Assistant Professor | Networking | 4 Months | NIL |
| Lalit Kashyap | M.Tech. | Assistant Professor | Programming | 5 Months | NIL |

8. Percentage of classes taken by temporary faculty – programme-wise information : 26 %

9. Programme-wise Student Teacher Ratio: No. of Student = 569; No. of faculty = 19; Ratio: 29.95

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Staff details	Sanctioned	Filled
Senior Lab. Technician	1	0
Lab. Technician	2	1
Lab. Attendant	3	3
Clerk	1	1

11. Number of faculty with ongoing projects from
   a) national   : None
   b) international funding agencies: None
   c) Total grants received : NIL

12. Departmental projects funded by DST-FIST; DBT, ICSSR, AICTE, etc.; total grants received

Sr. No.	Name of Faculty	Project Title	Sponsored By	Duration	Year	Amount Rs. (lacs)
1.	Dr. S.K. Gupta	MODROB	AICTE	2 years	2008-2010	7.5 lacs

13. Research facility / centre with
   o   state recognition   :   **NIL**
   o   national recognition   :   **NIL**
   o   international recognition :   **NIL**

14. Publications:

Journals:

1. Rakesh Chandra Gangwar, "Practical and Proven Group Key Agreement Protocols for mobile Ad Hoc networks," in the International Journal of Computer Intelligence and information security, Australia, Vol. 1, No.2,pp 58-69, March 2010.
2. S K Gupta, R K Chauhan and Parveen Kumar, "A Hybrid Coordinated Checkpointing Protocol for Deterministic Mobile Distributed Systems," in the International Journal of Applied Computer science and mathematics, Suceava Romania, No.9(4), ISSN: 2066-4273, 2010,.

3. Amanjot Kaur,Sukhwinder Bir and Reet Kamal, "Approximation of Missing Values in DNA Microarray Gene Expression Data," in the International Journal of Computer Applications (0975-8887), Vol. 4, No.3, July 2010.

4. S K Gupta, Parveen Kumar, "Review of some Checkpointing Algorithms for Distributed and mobile Systems," Advances in Network Security and Applications: Communications in Computer and Information Science, Vol. 196, Part 1, pp 167-177, DOI: 10.1007/978-3-642-22540-6-17, 2011.

5. Rakesh Chandra Gangwar, "Cryptanalysis of Remote User Authentication Scheme Using Hash Functions," in the International Journal of Research and Reviews in Computer Science, UK, Vol. 3, No.3, pp 691-695, June 2011.

6. Rakesh Chandra Gangwar, "Secure and Efficient Group Key Agreement Protocol for Mobile Ad hoc Network ," in the International Journal of Research and Reviews in Computer Science, UK, Vol. 2, No.4, pp 1038-1050, August 2011.

7. Rajeev kumarBedi, Nisha Sharma, "Image Vectorization using Line Extraction and Filtering", International Journal of Electronics Communication and Computer Engineering, Vol. 3, Issue 3, ISSN 2249-071X, pp 331-339.

8. Rajeev kumarBedi, "A Nonlinear approach for image denoising using different wavelet theresholding techniques", International Journal of advance Engg Research and studies,E-ISSN 2249-8974, April-June 2012.

9. MohitMarwaha, Rajeev kumarBedi, "Designing Data Storage Security and Privacy in Cloud Computing", International Journal of Advance information Science and Technology, Vol. 8, No. 8, ISSN 2319:2682, December 2012.

10. Rajeev kumarBedi, "Faliure in Cloud Computing", International Journal of Engineering Research and Applications, May-june 2012.

11. Rajeev kumarBedi, "A Survey on image Denoising using Thershold Discrete Wavelets", International Journal of Computer Science and Technology,April-June 2012.

12. Amanjotkaur, Harjasdeepsingh, SukhwinderBir, "Major Cloud Computing Threats And Their Possible solutions", International Journal of Engineering Research and technology, Vol. 1, Issue 9, ISSN: 2278-0181, November 2012.

13. Gurjeet Kaur,Pawansupreet Kaur,Dr.K.K.Saluja, "A Review OF Security Issues And Mitigation Measures In GSM" International Journal of Research in Engineering & Applied Sciences (IJREAS), ISSN: 2249-3905, Volume 2, Issue 2 , pp. 1011-1026, February 2012.

14. Gurjeet Kaur,Pawansupreet Kaur,Dr.K.K.Saluja, "Review of Short Messaging Service Security" UACEE International Journal of Advances in Computer Networks and its Security(IJACNS) - Volume 2 : Issue 1 pp. 99-104 ,[ISSN 2250 - 3757],Feb 2012

15. Gurjeet Kaur, Monika Sachdeva and Dr.K.K.Saluja, Member, IEEE "Mobile Communication:SMS Security Review" Coimbatore Institute of Information Technology International Journal(CiiT) CiiT International Journal of Networking and Communication Engineering, Print: ISSN 0974 – 9713 &Online: ISSN 0974–9616 DOI: NCE072012019, Issue: July2012.

16. Gurjeet Kaur, Monika Sachdeva and Navdeep Singh, "Mobile Client's Access Mechanism for Location based Service using Cell-ID" International Journal of Computer Applications © 2012 by IJCA Journal Volume 57 - Number 22 , (Volume 57/Number 22 (ISBN: 973-93-80870-61-8)), pp 50-57, doi:10.5120/9424-3842, November 2012

17. Gurjeet Kaur,Dr. Monika Sachdeva "Implementation of Secure Authentication Mechanism for LBS using best Encryption Technique on the Bases of performance Analysis of cryptographic Algorithms" International Journal of Security, Privacy and Trust Management (IJSPTM) Print: ISSN (2319 – 4103) & Online: ISSN (2277 – 5498)2319 - 4103 [Print]. Pp 11-27, Academy & Industry Research Collaboration Center(AIRCC) December 2012

18. Pawansupreet Kaur1, Monika Sachdeva2 and Gurjeet Kaur "Differentiated Services Ensuring Qos On Internet" International Journal Of Computer Science, Engineering And Information Technology (IJCSEIT), Vol.2, No.5, DOI: 10.5121/Ijcseit.2012.pp. 2504 37-44, October 2012.

19. Mukesh, Gianetan Singh Sekhon, "A review of Consecutive Frames Analysis based Patient movement Monitoring and Data Logging in real time", Pinnacle Research Journals, Vol. 1, Issue 4, ISSN 2278-0637, July 2012.

20. Mukesh, Gianetan Singh Sekhon, "Critical Patient Movement Monitoring and Data Logging in real time using Consecutive Frames Analysis Method", International Journal of Computer Science and Communication, Vol. 3, No. 1, ISSN 0973-7391, pp 171-173, January-June 2012.

21. Naveen Kumar, Sukhwinder Singh, "A Review on Text Fusion in Medical Images" in International Journal of Emerging Technology and Advanced Engineering (ISSN 2250-2459), Volume 2, Issue 6, June 2012.

22. Naveen Kumar, Sukhwinder Singh, "Text Fusion in Medical Images at Noisy Positions" International Journal of Computer Science & Communication. Vol. 3, No. 1, pp. 175-178, January-June 2012.

23. Nisha Sharma, Rajeev Kumar Bedi, Dr S.K. Gupta, "Latest Trends towards 3G Technologies – WiFivsWiMax", International journal of Computer Science and Mobile Computing, ISSN: 2320-088X, vol. 2, Issue 12, pp 124-127, December 2013.

24. Nisha Sharma, Rajeev Kumar Bedi, Ajay Kumar Dogra, "Comparison of Color road extraction using vectorization method with the existing methods", International journal of Advance Research in Computer Science and Management studies, ISSN: 2321-7782, vol. 1, Issue 7, pp 129-135, December 2013.

25. Nisha Sharma, Rajeev Kumar Bedi, Ajay Kumar Dogra, "An Approach to Extract road from Colour Image using Vectorization" , International journal of Advance Research in Computer Science and Software Engineering, vol. 3, Issue 11, pp 1292-1298, November 2013.

26. Nisha Sharma, Rajeev Kumar Bedi, Ajay Kumar Dogra, "A Survey on Road Extraction from Colour Image Using Vectorization", International journal of Research in Engineering and Technology, eISSN: 2319-1163 | pISSN: 2321-7308, Vol. 2, Issue 9, pp 453-458, October 2013.

27. MohitMarwaha, Rajeev Kumar Bedi,Amritpal Singh, Tajindersingh, "Comparative Analysis of Cryptographic Algorithms", International journal of Advance Engineering Technologies, ISSN: 0976-3945, vol. 4, Issue 3, pp 16-18, July-Sep 2013.

28. Tajindersingh, Rajeev Kumar Bedi,MohitMarwaha, "Need and Role of Underwater Acoustic Sensor networks", International journal of Electronics Communication and Computer Engineering, vol. 4, Issue 4.

29. Tajindersingh, Rajeev Kumar Bedi, "A Novel approach for Image Denoising Using Wavelets", International journal of Emerging Trends & Technology in Computer Science, ISSN: 2278-6856,vol. 2.

30. Amanjotkaur, SukhwinderBir, Harjasdeep Singh, "Image Segmentation Using Entropy: A Review", international journal of Emerging Science and Engineering, ISSN: 2319-6378, Vol. 2, Issue 2, December 2013.

31. Baljinder Singh, Sanjeev Mahajan and Guresh Pal Singh, "Taguchi's Quality Loss Function Approach for Optimizing the Performance of AODV MANET Routing Protocol", CiiT International Journal of Wireless Communication, Vol 5, No 2, page no. 76-81, Feburary 2013.

32. Sanjeev Mahajan, Guresh Pal Singh, "Impact of TCP Variants on the Performance of AODV MANET Routing Protocol", CiiT International Journal of Wireless Communication, Vol 5, No 2, page no. 92-96, Feburary 2013.

33. Baljinder Singh, Guresh Pal Singh and Sanjeev Mahajan, "Optimizing the Performance of Routing Protocol of MANET Using Taguchi Method",CiiT International Journal of Wireless Communication, Vol 5, No.1, page no. 18-23, January 2013.

34. SandeepKaur, Harjot Kaur, SumeetkaurSehra, "Modification of Contract Net Protocol (CNP): A Rule-Updation Approach", International journal of advanced coputer science applications, Vol. 4, No. 11, 2013.

35. Jarnail Singh, GurupdeshDhillon and ParminderKaur, "Analysis of Component Selection and Component Integration in Component-based Development Paradigm", International Journal on Information and Communication Technologies (IJICT), Serials Publications, India, Volume 6, No. 1-2, pp 188-192, January-June 2013.

36. Nancy, Navroop Kaur and Bhuvnesh Kumar,"Automatic Service Composition Using User-Centric Approach in Cloud Computing", International Journals in computer science and information engineering (JCT 2013).

37. Priti Aggarwal, Harish Kundra, " Image Restoration Using Intelligent Water Drops", International Journal of Advances in Computer Science and Communication Engineering,ISSN:2347-6788, Volume 1,Issue 1, pp 38-45,November 2013.

38. Palak Sharma, Shelza, Gurjit singh Randhawa, Dr.Rajiner Singh Virk ,"Cost optimization of pipeline systems using Genetic Algorithm" International Journal of Computer Engineering and Technology, Vol 4 Issue 4 , pp. 485-494, ISSN 0976 – 6375, July-August2013.

39. Gurleen Singh, Geetanjali Sharma and Prabhdeep Singh. "A Novel Algorithm to solve Vertex Cover Problem ,"(ICACSIT) by International Journal of Advanced Computational Engineering and Networking(ISSN: 2320-2106) ,Vol 1 Issue 1,; pp 60-66, March 2013

40. Amritpal Singh, Rajeev Kumar Bedi, Sunil Kumar Gupta, "Design and Implementation of an efficient Scheduling Algorithm for Load Balancing in Cloud Computing", International Journal of Emerging Trends & Technology in Computer Science, Volume 3, Issue 1, ISSN: 2278-6856 pp 106-109, January – February 2014.

41. Amritpal Singh, Sunil Kumar Gupta, Rajeev Kumar Bedi, "Comparative analysis of proposed algorithm with existing load balancing scheduling algorithms in Cloud Computing", International Journal of Emerging Trends & Technology in Computer Science (IJETTCS), Volume 3, Issue 1, ISSN 2278-6856 pp 197-200, January – February 2014.

42. Rahul Mahajan, Dr S K Gupta, Rajeev Kumar Bedi, " A Survey of Duplicate and near Duplicate techniques", International Journal of Scientific & Engineering Research, Volume 5, Issue 2, ISSN 2229-5518 pp 1531-1534, , February-2014

43. Rupinder Kaur, Rajeev Kumar Bedi, Sunil Kumar Gupta, " Review of Association Rule Mining", International Journal of Advanced Technology & Engineering Research (IJATER) Volume 4, Issue 2,ISSN No: 2250-3536 pp 14-17, March 2014.

44. Rupinder Kaur, Rajeev Kumar Bedi, Sunil Kumar Gupta, "Design and Implementation of Efficient APRIORI Algorithm", International Journal on Recent and Innovation Trends in Computing and Communication Volume 2, Issue 5, ISSN: 2321-8169 pp 1205– 1208, May 2014.

45. Rupinder Kaur, Rajeev Kumar Bedi, Sunil Kumar Gupta, "Comparative Analysis of Enhanced APRIROI Algorithm with Existing Algorithm", International Journal on Recent and Innovation Trends in Computing and Communication Volume 2, Issue 5, ISSN: 2321-8169 pp 1209 – 1213, May 2014.

46. Rahul Mahajan, Dr S K Gupta, Rajeev Kumar Bedi, "Challenges and Design Issues in Search Engine and Web Crawler", International Journal of Computational Engineering Research (IJCER) ISSN (e): 2250 – 3005 || Vol, 04 || Issue, 6 || pp 42-44 ,June – 2014.

47. Rohit Mahajan, Dr S K Gupta, Rajeev Kumar Bedi, "Comparison Of Various Approaches Of Software Fault Prediction: A Review " , International Journal of Advanced Technology & Engineering Research (IJATER) ISSN No: 2250-3536 Volume 4, Issue 4, pp 13-16, July 2014.

48. Manisha Birdi, R C Gangwar " A Data Mining Clustering Approach for Traffic Accident Analysis of National Highway -I " in International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 4, Issue 10, pp. 44-48, Oct 2014..

49. Harvinder Singh and R C Gangwar "Comparative Study of Load Balancing Algorithms in Cloud Computing Environment" in International Journal on Recent and Innovation trends in Computing and Communication, Vol. 2, Issue 10, pp. 3195-99, 2014.

50. Deepak Kumar, R C Gangwar "Efficient Matrices for Evaluating the Performance of IEEE 802.16 based Mesh Network at Node Level" in International Journal of Advanced Computer Technology, Vol 3, Issue 12, Dec 2014.

51. Deepak Kumar, R C Gangwar "A Review of Efficient Matrices for Evaluating the Performance of IEEE 802.16 based Mesh Network at Node Level" in International Journal of Research and Innovation in Computer Engineering, Vol. 1, Issue 1, Oct 2014.

52. Rupali Mehra, R C Gangwar "Enhanced offline Signature Recognition using Nureo-Fuzzy and SURF Feature Techniques" in International Journal of Compute Science and Information Technologies, Vol. 5, Issue 5, pp. 6521-27, 2014

53. Rupali Mehra, R C Gangwar "A Survey: Enhanced offline Signature Recognition using Nureo-Fuzzy and SURF Feature Techniques" in International Journal of Compute Science and Information Technologies, Vol. 5, Issue 3, pp. 4350-53, 2014

54. InderJit Singh, Prabhjot Kaur, R C Gangwar "Effcient Approach use to Increase Accuracy Multi-model Biometric System for feature level Fusion" in the International Journal Recent and Innovative Trends in Computing and Communication, Vol. 2, Issue 12, pp.3852-55, Dec 2014

55. InderJit Singh, Prabhjot Kaur, R C Gangwar "Review of Multi-Modal Biometric" in the International Journal Recent and Innovative Trends in Computing and Communication, Vol. 2, Issue 11, pp.3540-43, Nov. 2014.

56. Sanjeev Mahajan, "Performance Comparison of Dynamic Source Routing Under Varying Traffic Patterns",CiiT International Journal of Networking and Communication Engineering, Vol 6, No 2, Feburary 2014.

57. Amarjit Kaur, "The Robust system for antivenin DDOS by Rioter Puddle Expertise", International Journal of Innovative Research in Advanced Engineering (IJIRAE) Volume 1, Issue 1 (March 2014).

58. Priti Aggarwal, "Wireless and Wireline Network", International Journal of Computer Science & Information Technology, Vol, 1,Spl Issue 2,2014.

59. Harpreet Kaur, Priti Aggarwal, "A Hybrid Algorithm for Fingerprint Recognition System", International Journal of Advanced Engineering Research and Science, ISSN: 2349-6495, Vol.1, Issue 1, pp53-58, September 2014.

60. Shelza, Palak Sharma "Secure data transmission using modified LSB based audio steganography", IJRIT International Journal of Research in Information Technology, Volume 2, Issue 6, pp. 382-392, ISSN 2001-5569, June 2014.

61. Palak Sharma, Shelza, Dr. Rajinder Singh Virk "Effect of Replication Factor on the Cost of Sub Query allocation", IJRIT International Journal of Research in Information Technology, Volume 2, Issue 6, pp. 393-399, ISSN 2001-5569, June 2014.

62. Geetanjali Sharma, Malti Rani, "Advancement in Dynamic Source Routing Protocol for MANETS by International Journal of Computer Science and Mobile Computing (SBN-2320-088X) ," Vol 3 Issue 5, May 2014.

63. Bharti Kandari, Rajdeep Singh. "B-SEP: An Enhanced SEP Protocol for Wireless Sensor Network." (2014).

64. Bharti Kandari, Rajdeep Singh. "K-SEP: A more stable SEP using K-Means Clustering and Probabilistic Transmission in WSN." (2014).

40. Lalit, "Advance Reservation of Resources in Workflow System," in the International Journal of Computer Scicnece and Mobile Computing, Vol. 3, Issue 12, pp 140-145, December 2014.

65. Lalit, "Comparative Analysis of PRAM-NUMA Model and Extended PRAM-NUMA Model", Journal of Computing Technologies, Volume 3 Issue 12, pp 6-10, December 2014.

66. Anil Pandit, R C Gangwar " Issues and Challenges in Electronic Voting and Direct Recording Electronic Voting System" in International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 5, Issue 1, pp. 439-445, Jan 2015.

67. Prabhleen Kaur and Rajdeep Singh, Zonal based Deterministic Energy Efficient Clustering Protocol for WSNs. International Journal of Computer Applications 109(10):1-5, January 2015.

Conferences:

1. Satinder Kaur, S K Gupta, "Key Factors for Optimizing E-Business: A Review," Published in Proceedings of national conference on "Challenges in Emerging Computer Technologies, 2012" at RBIEBT, Mohali campus, pp 185-187, May 2012.

2. Rajeev kumarBedi, "Road extraction from High Resolution satellite Image By 191 Morphological directions Filtering and length filtering", National Conference on Challenges in Emerging Computer Technologies, 16-17 May 2012.

3. Rajeev kumarBedi, "Vulnerabilities in Cloud computing", National Conference on Emerging Principles and Practices in Computer and Communication Media, 7-8 April 2012.

4. Pawansupreet Kaur, Gurjeet Kaur, Monika Sachdeva " Differentiated Services: A Review" AICON – 12 (All India Conference),Accepted (Paper id-CSEA1218),Durg ,Chhattisgarh, 20,21 jan 2012.

5. Rajeev kumarBedi, "Road extraction of Satellite Image using vestorization method based on triangulation", International Conference on recent Trends in Computer Science ICSE 2012, April 2012.

6. Rajeev kumarBedi, "Security issue in cloud computing", International Conference on Emerging Dimensions in IT & its applications in industry, 2-3 March 2012.

7. Gurjeet Kaur, Pawansupreet Kaur, Dr.K.K.Saluja, "A Review OF Security Issues And Mitigation Measures In GSM" International Conference on Competitiveness & Innovativeness in Engineering, Management and Information Technology (ICCIEMI-2012),pp.66,Yamunanagar, Haryana, January 29, 2012

8. Gurjeet Kaur,Pawansupreet Kaur,Dr.K.K.Saluja, "Review of Short Messaging Service Security" International Conference on Advances in Computer Science and Electronics Engineering(ICACSEE) Editor In Chief Sahil Seth. Copyright © 2012 Universal Association of Computer and Electronics Engineers(UACEE)., pp 374-379, ISBN: 978-981-07-1403-1doi:10.3850/978-981-07-1403-1 838,New Delhi,India, Feb 2012

9. Gurjeet Kaur, Monika Sachdeva, Dr.K.K.Saluja, Member, IEEE "Mobile Communication:SMS Security Review" 2ND International Conference On Advances In

Engineering And Technology(ICAET)2012 ,Under Publication Process (Paper-id-519) ,CiiT Catalog Number: 11-08-0015,Nagapattinam,India, 28 & 29, 2012 March 2012.

10. Pawansupreet Kaur, Monika Sachdeva, Gurjeet Kaur, "Aggregate Flow Control In Differentiated Services", International Conference On Advances In Engineering, Science And Management (IEEE-ICAESM), pp. 377-382, 2012.

11. Jasveen Kaur, Prabhjot Kaur Chahal, Palak Sharma, Shelza " Locality and distribution of databases in grid application" Proceedings of the DAV National Congress on Science & Technology, DAVIET, Jalandhar, pp. 1683-1693, ISBN: 978-93-82062-37-0, May 30–31 2013.

12. Jasveen Kaur, Prabhjot Kaur Chahal, Palak Sharma, Shelza "Load Balancing In Parallel Database" Proceedings of the DAV National Congress on Science & Technology, DAVIET, Jalandhar, pp. 1694-1701, ISBN: 978-93-82062-37-0, May 30–31 2013.

13. Amarjit Kaur, Sandeep Sharma "An Adaptive approach to countermeasure against DDOS Attack using Router Pool Technology" Proceedings of National Science And Technology Congress, ISBN: 978-93-82062-38-7 , DAVIET Jalandhar 30-31 May 2013,

14. Jarnail Singh, ParminderKaur, "Component Selection Methods in Component-based Development Paradigm", Proceedings of International Conference on " Computing Sciences", Elsevier, WILKES100, India, pp 358-363, ISBN: 978-93-5107-172-3, 15-16 Nov, 2013.

15. Priti Aggarwal, Jaspreet Kaur " Applications of Intelligent Water drops" International Conference on Emerging Trends in Computer Science & Information technology(IISRO 2013).

16. Geetanjali Sharma, Rajinder Singh, Prabhdeep Singh. "Design and Develop an Eco with Secure Layered Architecture for MANETs in Energy Efficient Technologies for Sustainability (ICEETS) International Conference by IEEE ," pp 720-726.ISBN 978-1-4673-6149-1. DOI-10.1109/iceets.2013.6533474,April 2013.

17. Kaur, Prabhleen, Rajdeep Singh. "DDEC: Distance based deterministic energy efficient clustering protocol for wireless sensor networks." In Advances in Computing, Communications and Informatics (ICACCI, 2014 International Conference on, pp. 2168-2173. IEEE, 2014.

18. Kaur Prabhleen, Rajdeep Singh. "TDEC: Threshold-sensitive deterministic energy efficient clustering protocol for Wireless Sensor Networks." In Advances in Computing, Communications and Informatics (ICACCI, 2014 International Conference on, pp. 1670-1676. IEEE, 2014.

19. Shelza, Palak Sharma "Review on Audio Steganography Techniques", International Multi track conference on Sciences, Engineering and Technical Innovations, CT Group of institution Jalandhar , pp. 432-435, ISBN: 978-81-929077-0-3,June 3-4 2014.

20. Palak Sharma, Shelza, Dr. Rajinder Singh Virk "Comparison of cost of sub query allocation for different dynamic allocation plan", International Multi track conference on Sciences, Engineering and Technical Innovations, CT Group of institution, Jalandhar , pp. 247-251, ISBN: 978-81-929077-0-3,June 3-4 2014.

15. Details of patents and income generated   :   **None**

16. Areas of consultancy and income generated   :   **NIL**

17. Faculty recharging strategies

- Annual increments for faculty
- CAS (Career Advancement Scheme) for promotions
- Funding for attending National and International Conferences
- Facility of recommending books for Departmental Library
- Faculty Development Programmes for motivating the faculty
- National and International Conferences
- Funding for organizing and participation in STC/Seminar etc

18. Student projects

- Percentage of students who have done in-house projects including inter-departmental : **100%**
  As per the curriculum, all the students are required to do one in house project in the
  7th semester under the guidance of a faculty member
- Percentage of students doing projects in collaboration with industries / institutes   : **100%**
  As per the curriculum, all the students are required to undergo the six months
  industrial training in their 8th semester and complete a project there.

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

Sr. No.	Name of Faculty	Award	Year
1.	Dr. R.C. Gangwar	Best teacher award by C.T. Group of Institutions, Jalandhar	2014.

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

S. No.	Name of Faculty	Title	Nature	Sponsoring Authority	Year
1.	Dr. R.C. Gangwar	FOSS Applications and Linux Administration	STC	NITTTR Chandigarh	2011
2.	Dr. S. K. Gupta	Recent Trends in Cloud Computing	STC	TEQIP-II	2014

21. Student profile Programme-wise: Students are admitted on the basis of JEE Mains Rank.

Name of the Course	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female

22. Diversity of Students

Name of the Course (refer question no. 2)	% of students from the college	% of students from the state	% of students from other States	% of students from other countries
B.Tech.	-----------	85 %	15 %	Nil

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?
No. of Students qualified Gate in 2015: 01

24. Student progression

Student progression	Percentage against enrolled			
	2007-11	2008-12	2009-13	2010-14
UG to PG	3	18	22	15
PG to M.Phil	Nil	Nil	Nil	Nil
PG to Ph.D.	Nil	Nil	Nil	Nil
PG to Post Doctoral	Nil	Nil	Nil	Nil
Employed • Campus selection	24	14	18	25
• Other than campus recruitment	10	30	4	
Entrepreneurs				

25. Diversity of staff

Percentage of faculty who are graduates	
Of the same parent University	44.45
from other universities within the State	33.33
from other universities from other States	22.22

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period: 02
- Dr. Sunil Kumar Gupta
- Dr. Rakesh Chandra Gangwar

27. Present details about infrastructural facilities
  a) Library : Available

  b) Internet facilities for staff and students : 100 MBPS leased line internet connectivity is provided in faculty offices and all other rooms
  in the department, hostels

  c) Total number of class rooms:04

  d) Class rooms with ICT facility :02

  e) Students' laboratories : 6 software labs and one hardware lab
  f) Research laboratories:One Central Research Lab has been developed in the college to cater the need of all the departments.

28. Number of students of the department getting financial assistance from College:
Two students have been provided assistance of Rs. 9950/- for their innovative project 'ROBOWAR' in the year 2014-15

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes, it is done by taking
- Feedback from students (studying as well as pass-out)
- Feedback from Alumni of the Department
- Feedback from Companies in which students get placed
- Feedback from faculty

30. Does the department obtain feedback from
  a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

The department takes feedback from faculty and utilizes in
- Identifying the academic gaps in the curriculum
- Identifying the need in improving the course contents by updating the syllabus
- Identifying the need for including new courses in the curriculum
- Identifying the pitfalls in the teaching learning process
- Strengthening the teaching learning process

  b. students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

  The department obtains feedback from students on staff, curriculum and teaching-learning evaluation. The questionnaires are given to students at the end of the semester

and at the end of the graduate program and various rubrics are being set for various questions and students are evaluated accordingly. Further, the department analyzes the feedback and measures are taken accordingly, some of them are as follows:

- Encouraging the faculty for skill enhancement programme
- Including the new subjects as per the industry demand
- Use of new methods in teaching learning process as to develop better understanding of the course contents
- Measures to strengthen the Teaching Learning process
- Encouraging the faculty to attend FDP's/seminars/Guest Lectures

c. Alumni and employers on the programmes and what is the response of the department to the same?

The department obtains feedback from Alumni and employers through Alumni Survey and Industry Survey. Further, the department responses in the form of
- Conducting various aptitude tests, group discussions for skill enhancement
- Various technical events are being organized by societies for improving skills of the Students

31. List the distinguished alumni of the department (maximum 10)

Sr. No.	Name	Batch	Current Designation and Address
1.	Mr Sumit Goswami	1995-1999	Additional Director, DRDO, New Delhi
2.	Mr Kinshuman	1995-1999	Microsoft, USA
3.	Mr Vishal Devgon	1995-1999	BHEL, Industrial Valves Plant, Goindwal Sahib
4.	Mr Raj Kumar	1995-1999	SJVN, Shimla
5.	Mr Amandeep Bachho	1995-1999	AMDOCS, Pune
6.	Mr Bharat Bhushan	1995-1999	Assistant Executive Engineer, Punjab State Power Co Ltd. Ludhiana
7.	Mr Dinesh Kumar	1995-1999	Associate Professor & Head IT Deptt, DAVIET Jalandhar
8.	Aman Mahajan	1998-2002	Project manager, Infosys
9.	Mrs Deepmala Gupta	2000-2004	Accenture Technologies, Bangalore
10.	Rajinder Singh	2004-2008	Fighter Pilot, Indian Air Force
11.	Mr. Mohan Lal	1995-1999	BBMB, Chandigarh

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

135

S. No.	Dates	Name of the Expert and Organization	Topic
1.	24.01.13	Magnum Heights Educational Services	Career Guidance
2.	22.03.13	Sh C.S. Talwar IAS	Human Values
3.	01.04.13	BCET, Gurdaspur	Career Guidance in Defence Services
4.	11.04.13	BCET, Gurdaspur	Android Development and its Placement Scenario
5.	26.09.13	Sh Sumit Goswami, Additional Director, DRDO, New Delhi	DRDO academic Interaction Schemes
6.	27.09.13	Sh Sumit Goswami, Additional Director, DRDO, New Delhi	DRDO overview and Recent Trends in IT
7.	27.09.13	Sh Sumit Goswami, Additional Director, DRDO, New Delhi	Information Extraction/text mining
8.	03.12.13	BCET, Gurdaspur	Interview Skills
9.	24.02.14	T.I.M.E institute	Campus Recruitment traning
10.	15.03.14, 16.03.14	Mr. Sahil Baghla, CEO, EH 1 Infotech, Mohali.	IT Security & Ethical Hacking

33. List the teaching methods adopted by the faculty for different programmes.
- Use of ICT such as projectors, Internet etc for lecture, tutorials, and seminars etc;
- Manual as well as online notes providing to students;
- Practical implementation of subject concepts in labs, wherever possible.

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

The department ensures that programme objectives are constantly met and learning outcomes are monitored through the skill enhancement techniques, teaching learning system and career and guidance cell. The Program Education Objectives and Program Outcomes of the department are as follows:

Program Educational Objectives (PEO):

1. To build solid foundation in the field of general engineering among students to inculcate ability to formulate, solve and analyze engineering problems.

2. To develop creative and innovative skills among students and prepare thems to becapable of designing and developing real-world computing applications with highsocietal influence andimpact.

3. To prepare students for successful careers in national and multinational companies

engaged in the fields of Software/Hardware/Database etc. By developing the ability among them to understand and synthesize data/information and related technical concepts.

4. To prepare students capable to work as part of teams on multidisciplinary projects involving professional ethics and codes of professional practice.

5. To nurture strong understanding in logical, mathematical and analytical reasoning among students coupled with problem solving attitude that prepares them to productively engage in research and higher learning.

6. To instil communication and management skill that generates entrepreneurship and/or leadership qualities.

Program Outcomes (PO):

1. Graduates will be able to apply knowledge of mathematics and engineering sciences
2. Graduates will be able to design and conduct experiment
3. Graduates will be able to analyze and interpret data
4. Graduates will be capable of designing a system, component or process to meet the design requirement
5. Graduates will be able to use principles of sustainable design and development
6. Graduates will be able to function effectively as an individual in a group
7. Graduates will have capability to identify, formulate and provide creative/innovative/effective solution to a problem
8. Graduates will be able to communicate effectively with engineers, other professionals and community at large
9. Graduates will be able to recognize the need for and able to engage in lifelong learning
10. Graduates will be able to discuss relevant contemporary issues
11. Graduates will be able to use necessary skills, techniques and modern engineering tools for engineering practice
12. Graduates will be able to solve problems in advanced design and development.

To achieve the POs, following measures are being taken by the department:

1. The department ensures the curriculum is designed to meet the program outcomes.
2. The faculty ensures the syllabus is revised and is involved in improving student skills through assignments, mini projects, mid-semester test and final major project.
3. The course file is being made by all faculty members for their respective courses and HOD monitors the coverage of syllabus with the help of Course file and sees the academic schedules are intact.
4. The performance of the students is analyzed time to time and weaker students are identified. Special classes are planned for such students called as remedial classes.
5. For every section, one faculty is being allotted as student counselor. These student counselors counsel the students periodically and monitor their regularity, also address personal problems if any. They also help in guiding them regarding their future prospects. HOD of the department coordinates the counseling activity and sees that it is

being done on a regular basis. Whenever the necessity occurs, the parents are called for and are advised to monitor their wards and take necessary actions.

6. The entire faculty is involved in guiding the students for their project work which helpsthem in their future professional exposure.

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

Faculty:

S.No	Faculty Name	Professional Society/institute/others
1.	Dr. R C Gangwar, Assoc. Prof.	1.Advanced Computing and Comm. Society, IISc, Bangalore 2. International Association of Engineers (IAENG), Taiwan
2.	Dr. S K Gupta, Assoc. Prof.	ISTE
3.	Sh. Rajeev Bedi	ISTE
4.	Sh. Sukhbir Singh	ISTE
5.	Sh. Sanjeev Mahajan	ISTE

(A) Inter Department Competition		
Nature of activity	**Number of Students Enrolled**	**Recognition/Rewards Received if any**
Year 2011		
1.Teqfest 2K11 organized by ISTE chapter	24	1st, 2nd, 3rd
2. Asia's largest science and technical festival" Ethical hacking Expert workshop"	20	Attended
Year 2012		
A.Teqfest 2K12	314 students participated	
1. Techno talk	3	1st, 2nd
2. Collage making	1	1st
3. Minute to win	1	1st
4. Robowar	4	2nd, 3rd
5. Soap-o-ed	4	1st,3rd
6. Electrostein	3	2nd
7. RecyloMania	1	3rd
8. Group Disussion	1	1st
9. Bio-Business Mania	1	3rd
10. Antra-Shiraz	2	1st
11. Khed Punjab Di 'BAN'	1	1st
12. Hack Crack	1	3rd
13. Treasure Crack	1	1st
14. Racing Mania	1	
15. Water Missile	1	2nd
16. Western Singing	1	

17. Impulse	2	3rd
18. Hack Crack	2	1st
19. Test-o-mad	2	
20. Sports Villa	3	1st
21. Brain Stream	2	3rd
22. Experter	2	2nd, 3rd
23. See the C	2	1st,3rd
24. Akhbaar-e-Poshak	1	
25. Sher-o-market	2	
26. Tatto making	4	2nd, 3rd
27. Green-o-Tech	3	3rd
28. Test-o-Mad	1	3rd
29. Daredevils	2	2nd
30. Prop Car	1	
31. Sohni Gutt	2	3rd
32. R-SAT	2	2nd
33. Web-Spidey	3	3rd
34. LAN Gaming	4	1st, 3rd
35. BCET got talent	2	1st, 3rd
36. Electromentary	1	3rd
37. Code Junkey	3	3rd
38. Word War	4	1st, 3rd
39. Youth Parliament	1	
40. Roadies	2	
2013		
A.Teqfest 2K13	**135 students participated**	
1. Hacking Crux	2	1st,2nd
2. Shudh Desi Art	6	2nd, 3rd
3. Counter Strike	12	1st,2nd, 3rd, 4th
4. Vision-o-Tech	4	1st, 2nd, 3rd
5. Group Discussion	4	2nd, 3rd, 5th
6. Sher-o-market	1	2nd
7. Fun Tush	5	1st
8. Mashuri	2	2nd
9. Youth Parliament	1	2nd
10. Film-o-Fever	1	
11. WWF	3	1st, 2nd
12. NFS Most Wanted	6	1st, 2nd
13. Beat the basic	2	1st
14. Dream Company	1	3rd
15. Rangoli	1	2nd
16. Recyclomania	1	1st
17. Collage making	1	3rd
18. FIFA	1	1st
19. How Stuff works	1	3rd

139

20. Thermal Expo	1	1st
21. Techno Quiz	1	2nd
22. Game Mania	2	1st
B. Teqfest 2K14	**95 students participated**	
1. Lets Hang Socia	1	2nd
2. Tech- Marathun	1	2nd
3. Bridge Building	2	2nd
4. Share-o-idea	1	1st
5. Apti-o-Fun	1	3rd
6. Extempore	3	
7. Awaam ki Awaz	4	
8. Aap or Society	5	
9. Soch Vichar	5	
10. College ka Photoshop	5	
11. Dekho, Likho, Bolo	2	
12. Dekhiye or Bataiye	4	3rd
13. Taur Punjab Di	5	1st (1)
14. Mask Mania	8	4(1st),1(3rd)
15. Leaf-o-Collage	5	2nd (1)
16. Master Mind	2	1st
17. Tehzeeb	3	3rd
18. Mind Hunt	2	3rd
19. Shade-o-idea	8	3rd (3), 1st (1)
7th Annual Athletic Meet 2011-12	36	--
1. 100 mtrs Race	3	--
2. 400 mtrs Race	1	--
3. 200 mtrs	5	
4. Long Jump	2	
5. Shot Put	1	
6. 400 mtrs Relay	1	
7. March Past	28	
8th Annual Athletic Meet 2012-13	38	--
1 1500 mtrs Race Boys	8	2nd(1)
1. 200 mtrs	1	--
2. 100 mtrs(Boys)	1	--
3. Basketball	1	--
4. Javeline Throw	3	--
5. Tug-of-War	11	7(2nd),3(1st)
6. 400 mtrs Relay	5	3rd (2)
7. Tripple Jump(G)	9	1st (1)

8. March-Past	20	1st (18)
9. 100 mtrs (Girls)	5	2^{nd}(2)
10. 400 mtrs Race	6	2nd (2), 1st (1)
11. High Jump	3	2nd (1)
12. Track and Field Events(women)	1	--
13. 800 mtrs	8	2nd (1), 3rd (1)
14. Discuss Throw	2	--
15. Javeline(girls)	4	1st (2)
16. March Past	64	1st
17. Long Jump	1	--
18. Shot-put	1	2nd
9th Annual Athletic Meet 2013-14	36	--
1. Volley-Ball Girls	1	--
2. Basket Ball	1	--
3. 200 mtrs Race	4	1st (1)
4. Inter-Year Volley Ball	2	--
5. 100 mtrs Race	3	2nd (1)
6. 400 mtrs Race	3	--

EXTRA CURRICULAR ACTIVITIES OF THE STUDENTS

Nature of activity	Nature of activity	Nature of activity
B. Sui Generis 2K13	**76 tudents participated**	
1. Mind Spark	3	1st ,2nd
2. Fun & Games	7	3rd
3. Street Play	7	1st , 2nd
4. Robo War	4	1st , 2nd
5. Skit	10	2nd, 3rd
6. Sher-o-market	1	2nd
7. Solo Singing	5	2nd, 3rd
8. Form Frame	4	1st, 2nd
9. Word Attack	1	2nd
10. Collage Making	2	1st
11. Room Event	9	1st, 2nd, 3rd
12. Mix Veg	2	2nd
13. Consignee & Win	1	1st
14. Rangoli	1	1st
15. Bhangra	4	1st, 2nd
16. Solo Dance	1	1st
17. Group Dance	9	1st, 2nd
18. Face Painting & Tatoo Making	1	2nd
19. Udaan	2	2nd, 3rd

20. Ik Khed Punjab di	1	3rd
21. Minutes to win	1	
22. Dumakshri	2	2nd
23. Quiz organized by NSS	1	2nd
24. Solo Dance Classical	1	1st
25. Akbar-o-Poshak	2	1st
26. LAN Gaming	12	1st, 2nd
27. Mind Hunt	3	1st, 2nd
28. Dumshiraaz	1	1st
29. Pehchan Kaun	1	3rd
1. Tree plantation organized by NSS	19	
2. Swami Vivekananda organized by NSS	7	
3. NSS Rally	9	
4. NCC Extempore(2014)	1	
5. Chess Tournament 2014 organized by SUClub	7	
6. Football Tournament 2014	8	6(2nd)
7. Basketball Tournament 2014	3	1st
8. Blood Donation 2011	1	
9. IT Security &Ethical Hacking Workshop	2	
10. Developed Online Govt. Project	1	(mr. Manmohan Jha B.tech cse)
11. Workshop on Android Application Development -2012	1	
12. Table Tennis Tournament organized by SUClub	7	--
Year 2014		
A.Sui Generis 2K14	18 students participated	
1. Bhangra	2	
2. Mimicry	1	--

3. Khed Punjab Di	5	2nd
4. Fun With Words	1	--
5. Cluster of Brand	2	--
6. Tattoo Making Hand Painting	1	--
7. Sohni Gutt	1	--
EXTRA CURRICULAR ACTIVITIES OF THE STUDENTS		
Inter College Competition		
Nature of activity	**Nature of activity**	**Nature of activity**
1. Zonal Youth Festival 2014 PTU	Giddha	2nd (Avneet Kaur)
2. Youth Festival 2014 PTU	Painting	2nd

36. Give details of "beyond syllabus scholarly activities" of the department.
- Content Beyond syllabus is included in some subjects.
- Projects are assigned to students in labs in addition to practicals suggested in syllabus.
- Educational tours are conducted for students.
- Classes for weaker students are held to improve the performance of students.
- Various technical events are conducted for improving technical skills of students

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.
Applied for NBA accreditation under Tier-1

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strength

1. Highly qualified faculty and staff
2. Department has well equipped labs
3. Accredited by NBA in 2009 for three years
4. Good number of research publications in journals and conferences
5. Good Library

Weaknesses

1. Lacking of consultancy assignments.

Opportunities

1. With the academic autonomy, we can re-design syllabus according to current industry needs;
2. More freedom to enhance all academic activities.

Challenges

1. To maintain good academic record of the students;
2. To start Post Graduation Courses;
3. To enhance the interpersonal and technical skills of students;
4. To bring research projects from various funding agencies.

39. Future plans of the department.
- To start a regular M.Tech. CSE programme in the department of CSE;
- To bring consultancy; and
- To bring R&D projects.

Evaluative Report of Information Technology Department

1.   Name of the Department   :   **INFORMATION TECHNOLOGY**
        its year of establishment   :   **2001**

2.   Names of Program / Course offered   :   **B.Tech. IT**

3.   List of Interdisciplinary courses and departments involved :

Sr. No.	Name of Subject	Subject Code	Department
1.	Math	BTAM-101, BTAM-102, BTAM-302	Applied Sciences and Humanitarian
2.	Environmental Science	EVSC-101	Chemical Engineering
3.	HRM	CE-251	Applied Sciences
4.	Communicative English	BTHU-101	Applied Sciences
5.	EME	BTME-101	Mechanical Engineering
6.	Engineering Drawing	BTME-102	Mechanical Engineering
7.	BEEE	BTEE-101	Electronics and Communication Engineering
8.	DCLD	BTCS-303	Electronics and Communication Engineering
9.	Manufacturing Practices	BTMP-101	Central Workshop
10.	Engineering Physics	BTPH-101	Applied Sciences
11.	Engineering Chemistry	BTCH-101	Applied Sciences

4.   Examination System : Semester System

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

Sr. No.	Name of Subject		Department
1.	FCPIT	BTCS-101	Biotechnology/ Chemical /ECE
2.	Operating System	BTCS-401	ECE
3.	HVPE	HVPE-101	Biotechnology/ Chemical

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Name of the Post	Sanctioned	Filled
Professors	01	NIL
Associate Professors	04	01
Asst. Professors	10	06

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Guresh Pal Singh	M.Tech, Pursuing Ph.D	Assistant Professor	Programming Languages and Mobile Ad hoc Networks	16	Nil
Anil	M.Tech., Pursuing Ph.D	Assistant Professor	Routing in Mobile Ad hoc Networks	14	Nil
Mohit Marwaha	M.Tech.	Assistant Professor	Cloud Computing	6.2	Nil
Baljinder Singh	M.Tech.	Assistant Professor	Mobile Ad hoc Networks	6.2	Nil
Amrit Pal Singh	M.Tech.	Assistant Professor	Cloud Computing	4	Nil
Rupinder Kaur	M.Tech.	Assistant Professor	Web Administration	4	Nil
Richa Dogra	M.Tech.	Assistant Professor	Expert System	5	Nil

Davinder Singh	M.Tech.	Assistant Professor	Image Processing	4	Nil
Sandeep Singh	M.Tech.	Assistant Professor	Computer Networks	1	Nil
Amit Verma	M.Tech.	Assistant Professor	Distributed DBMS	3.5	Nil
Gurpreet Singh	M.Tech	Assistant Professor	Artificial Intelligence	3	Nil
Ritika	M.Tech	Assistant Professor	Data Mining/ Image Processing	3.5	Nil
Bharti	M.Tech	Assistant Professor	Networking	0.5	Nil
Prabhleen Kaur	M.Tech	Assistant Professor	Networking	0.5	Nil
Lalit	M.Tech	Assistant Professor	Software Engineering	1	Nil
Tajinder Singh	M.Tech	Assistant Professor	Digital Image Processing	4	Nil

8. Percentage of classes taken by temporary faculty–   :   25%

9. Program-wise Student Teacher Ratio   :   1:27

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

Name of the Post	Sanctioned	Filled
Lab Technician	01	Nil
Steno / Clerk	02	Nil
Lab Attendant	02	01
Attendant	01	01

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise   : Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received: Nil

13. Research facility / centre with
    o   state recognition   **:** Nil
    o   national recognition   : Nil
    o   international recognition   : Nil

14. Detail of the Publications:

Journal Publications

1. Singh B, Singh G, Mahajan S"Taguchi's Quality Loss Function Approach for Optimizing the Performance of AODV MANET Routing Protocol" CiiT International Journal of Wireless Communication, Vol 5, No 2, Feburary 2013, page no. 76-81

2. Singh G " Impact of TCP Variants on the Performance of AODV MANET Routing Protocol" CiiT International Journal of Wireless Communication, Vol 3, No 2,Feburary 2013, page no. 92-96

3. Singh B, Singh G, Mahajan S " Optimizing the Performance of Routing Protocol of MANET Using Taguchi Method" CiiT International Journal of Wireless Communication, Vol 5, No.1, January 2013, page no. 18-23

4. Singh G " Hop Count Based Performance Evaluation of On-demand MANET Routing Protocols" CiiT International Journal of Wireless Communication, Vol 3, No 11, August 2011, page No. 778-784

5. Mehta D, Sagar A " An Efficient Way to Detect and Recognize the Overlapped Coins using Otsu's Algorithm based on Hough Transform Technique" International Journal of Computer Applications 73(9):18-21, July 2013

6. Mehta D, Sagar A " A Survey on various Techniques of Coin Detection and Recognition" International Journal of Computer Applications 69(5):29-32, May 2013

7. Sagar A, Singh G" Performance Evaluation of AODV Routing Protocol with Rigorous Evaluation Standards Using Random Way Mobility" International Journal of Engineering & Information Technology, Oct. 2009, Volume 1, pg. no. 54-57

8. Randhawa S, Sagar A " Empirical Study of Various Speckle Noise Removal methods" International Journal of Emerging Technologies in Computational and Applied Sciences 8(6), March-May 2014, pp. 513-516.

9. Randhawa S, Sagar A" Novel Approach to Reduce Speckle Noise from Images using Adaptive Thresholding" International Journal of Advanced Research in Computer Science and Software Engineering, Vol 4, Issue 9, September 2014, pp. 786-790

10. Marwaha M" Comparative Study of DES, 3DES, AES and RSA " International Journal of Computer and Technology, Vol 9, No 3

11. Marwaha M" An Experimental Study of Effect of Speed Variation on the Performance of Fluid Film Journal Bearing System " published in IJAIST journal Vol.15., Issue15

12. Marwaha M" Optimization of Dispersion in Optical Fiber Communication " IJAIST journal Vol. 15. ,Issue 15

13. Marwaha M" Comparative Analysis Of Cryptographic Algorithms " International Journal of Advanced Engineering Technologies ISSN 0976-3945 Vol 4 Issue 3

14. Marwaha M" A Novel Approach For Image Denoising Using Wavelets " International Journal of Emerging Trends & Technology in Computer Science (IJETTCS) ISSN 2278-6856 Volume 2, having impact factor 2.524

15. Marwaha M" Enhancing Cloud Storage Security and Privacy " IJAIST.

16. Marwaha M" Analysis of Privacy Preserving Cloud Storage Frameworks in Cloud Computing " International Journal of Computer Science and Information Technology.

17. Marwaha M" Designing Data Storage Security and Privacy in Cloud Computing " International Journal of Advanced Information Science and Technology ,Vol.8, No.8, December 2012

18. Marwaha M" Applying Encryption Algorithm for Data Security and Privacy in Cloud Computing " IJCSI International Journal of Computer Science Issues, Vol. 10, Issue 1, No 1, January 2013

19. Gurpreet Singh " Using intelligent agents for building evacuation: A Uml approach " International Journal of Computer Applications (0975 – 8887) Volume 50-No18

20. Gurpreet Singh " Simulating the building evacuation by using agents " International Refereed Journal of Engineering and Science(irjes) ISSN(Online) 2319-183X, (Print) 2319-1821 Volume1 Issue 1 (September 2012)

21. Gurpreet Singh " Building Evacuation Using Intelligent Agents " International Journal of Engineering and Innovative Technology (IJEIT).Volume 2, Issue3, September2012

22. Gurpreet Singh " A survey on the techniques and advantage of Reusability of the Software " International Journal of Computer Applications (0975 – 8887) Volume 7– No.14, October 2010

23. Gurpreet Singh " A Review of various Methods for Software Testing " International journal of advanced research in computer science. www.ijarcs.info ISSN no.0976-5697.Volume1.

24. Gurpreet Singh " Software engineering – Survey of Reusability Based on Software Component " International Journal of Computer Applications (0975 – 8887). Volume8-No.12.

25. Verma A" Comparative Analysis of Joins and Semi Joins in Distributed Query Optimization " JCT Journals, Volume 2, Issue 5 May 2013

26. Ritika" Contrast Enhancement Techniques for Images - A Visual Analysis " International Journal of Computer Applications (IJCA), Vol.64, No. 17, February 2013, pp. 20-25

27. Ritika" A Novel Approach for Local Contrast Enhancement of Medical Images using Mathematical Morphology " International Journal of Computer Science and Information Technology & Security (IJCSITS), Vol. 2, No.2, April 2012, pp. 392-397

Conference Publications

1. Singh G " A Survey of Energy Efficient Protocols " National Conference on Recent Advances in Computation Techniques in Electrical Engg., page 24, 25-26 Feb, 2011, SLIET, Sangrur

2. Singh G " Energy Efficient Protocols for MANET: A Challenge " National Conference on " Recent trends in Computer Science & IT" at BCET Gurdaspur

3. Sagar A " Routing Protocols in Wireless Adhoc Networks " National Conference on " Recent trends in Computer Science & IT" at BCET Gurdaspur

4. Sagar A " Quality of long haul optical communication " National Conference on " Recent trends in Computer Science & IT" at BCET Gurdaspur

5. Marwaha M " Security issues in Cloud Computing " International Conference on Emerging Dimensions in IT & its applications in industry

6. Ritika" Image Enhancement Techniques – A Perspective " International Conference on Computer Networks and Information Technology (ICCNIT - 2014), ISBN: 978-93-838420-27-8, NITTTR, Chandigarh, Punjab, India

7. Ritika" Sequential Pattern Mining-A Review " Second National Conference on Emerging Principles & Practices in Computers and Communication Media (EPPCCM-2014), SSCET, Badhani, Pathankot

8. Ritika" Survey of Techniques for Contrast Enhancement of Images " National Conference on Emerging Principles & Practices in Computers and Communication Media (EPPCCM), SSCET, Badhani, Pathankot

9. Ritika" A Review of Thinning Methodologies " Second National Conference on Recent Advances in Electronics & Communication Technologies (RAECT-11), GNDEC, Ludhiana

10. Ritika" Various Image Fusion techniques and their Comparison " Second National Conference on Recent Advances in Electronics & Communication Technologies (RAECT-11), GNDEC, Ludhiana

11. Gurpreet Singh" Bioinformatics and computational biology – computational aspects of system biology "International Conference on Biomedical Engineering and Assistive Technologies (BEATs-2010). Held at DR. B.R Ambedkar National Institute of Technology, Jalandhar on 17-19 December 2010 Paper Id_144

12. Gurpreet Singh" Computer Aided Software Engineering (Case Tools)" International Conference on Biomedical Engineering and Assistive Technologies (BEATs-2010). Held at DR. B.R Ambedkar National Institute of Technology, Jalandhar on 17-19 December 2010 Paper Id_126

13. Gurpreet Singh" Specifications of Software Testing " National Conference at Rayat and Bahra Campus, Mohali

15. Details of patents and income generated : Nil

16. Areas of consultancy and income generated

Internal Revenue Generation (IRG)

Sr. No.	Year	Course/Training	Revenue Generated (in Rs.)
1	2011-12	6 Week Training to students on ".NET"	66500/-
2	2012-13	6 Week Training to students on "PHP and MySql" and ".NET"	70,000/-
3	2014-15	6 Week Training to students on ".NET"	57000/-
		Total	1,93,500/-

17. Detail of Faculty recharging strategies

1. Annual increments for faculty

2. CAS (Career Advancement Scheme) for promotions

3. Funding for attending National and International Conferences

4. Facility of recommending books for Departmental Library and Central Library

5. Faculty Development Programmes for motivating the faculty

6. National and International Conferences

7. Funding for membership of National/International Societies

18. Student projects
   o Percentage of students who have done in-house projects including inter-departmental : 100%
   o Percentage of students doing projects in collaboration with other Universities/industries / institutes : NIL

19. Awards / recognitions received at the national and international level by
   o Faculty : NIL
   o Doctoral / post doctoral fellows : NIL
   o Students : NIL

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

21. Student profile course-wise: Students are admitted on the basis of JEE Mains rank.

Course	Application Received	Selected		Pass Percentage	
		Male	Female	Male	Female

22. Diversity of Students

Name of the course	% of the student from the college	% of the student from the state	% of the student from the other state	% of the student from the other country
B.Tech	Not Applicable	85%	15%	NIL

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

    Batch 2011-2015:   GATE: 02   GRE: 00   Defence: 00
    Batch 2010-2014:   GATE: 01   GRE: 01   Defence: 00
    Batch 2009-2013:   GATE: 00   GRE: 03   Defence: 00
    Batch 2008-2012:   GATE: 00   GRE: 01   Defence: 00

24. Student progression

Student progression	Percentage against enrolled			
	2007-2011	2008-2012	2009-2013	2010-2014
UG to PG	03	07	05	04
PG to Ph.D.	Nil	Nil	Nil	Nil
Ph.D. to Post-Doctoral	Nil	Nil	Nil	Nil
Employed • Campus selection • Other than campus recruitment	24 05	10 05	07 04	05 05
Entrepreneurs	Nil	Nil	Nil	Nil

25. Diversity of staff

Percentage of faculty who are graduates	
From the same University	100%
From other university within same the states	0%
From other universities from other states	0%
From universities from outside countries	0%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period.
: Nil

27. Present details about infrastructural facilities
  a) Library:- central Library   : 4651 books Department Library:- 82 books
  b) Internet facilities for staff and students   : Yes
  c) Total number of class rooms   : 02
  d) Class rooms with ICT facility   : 01
  e) Students' laboratories   : 05
  f) Research laboratories   : 01

28. Number of students of the department getting financial assistance from College.
  19% students are getting SC/ST scholarship

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.
  Yes, it is done by taking
  - Feedback from students (studying as well as pass-out)
  - Feedback from Alumni of the Department
  - Feedback from Companies in which students get placed
  - Feedback from faculty
    These inputs were given to the university in Board of Studies (BOS) meetings. Depending upon the feedback and other social requirements, measures are taken to improve curriculum. Presently BOS has been constituted at institute level as per UGC regulation as after academic autonomy obtained on on19.06.2014 [vide letter no. NF22/1-2014(ac)]. Same methodology (as above said in section 3.5.1.) will be adopted for improving course curriculum design.

30. Does the department obtain feedback from

  a) Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?
  The department takes feedback from faculty and utilizes in
  - Identifying the academic gaps in the curriculum
  - Identifying the need in improving the course contents by updating the syllabus
  - Identifying the need for including new courses in the curriculum
  - Identifying the pitfalls in the teaching learning process
  - Strengthening the teaching learning process

b)   Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?

The department obtains feedback from students on staff, curriculum and teaching-learning evaluation. The questionnaires are given to students at the end of the semester and at the end of the graduate program and various rubrics are being set for various questions and students are evaluated accordingly. Further, the department analyzes the feedback and measures are taken accordingly, some of them are

- Encouraging the faculty for skill enhancement programme
- Including the new subjects as per the industry demand
- Use of new methods in teaching learning process as to develop better understanding of the course contents
- Measures to strengthen the Teaching Learning process
- Encouraging the faculty to attend FDP's/seminars/Guest Lectures

c) Alumni and employers on the programme and what is the response of the department to the same?

The department obtains feedback from Alumni and employers through Alumni Survey and Industry Survey. Further, the department responses in the form of
- Conducting various aptitude tests, group discussions for skill enhancement
- Various technical events are being organized by societies for improving skills of the students

31. List the distinguished alumni of the department (maximum 10)

Sr. No.	Name	Batch	Current Designation and Address
1.	Rachit Kalani	2009	Associate Software Engineer Solitaire Infosys, Bangalore
2.	Sukhamrit Kaur	2009	Software Engineer C.S soft solutions
3.	Anmol Sharma	2010	Heuristics Informatics Pvt. Ltd, Noida
4.	Manisha Nanda	2010	Heuristics Informatics Pvt. Ltd, Noida
5.	Sanish Handu	2010	Associate Software Engineer Infosys, Bangalore
6.	Tanuj Chawala	2004	Software Developer Wipro Technologies
7.	Aprajita Jaryal	2004	Software Developer Accenture
8.	Tarun Dhingra	2004	Network Engineer Huawei India
9.	Manav Kundra	2005	Software Tester L&T Infotec, New Delhi
10.	Aman Trehan	2006	Software Developer Infosys ,Trivandrum
11.	Mohit Sharma	2005	Software Developer Infosys Bangalore
12.	Ranjot Kaur Walia	2006	Software Developer Infosys Bangalore

13.	Goindi Jasleen	2008	Software Developer Infosys Bangalore
14.	Maninder Pal Singh Arri	2008	Software Developer Infosys Bangalore
15.	Abhishek Sharma	2008	Software Developer Infosys Bangalore
16.	Prerna Pathania	2005	Indian Air Force
17.	Gagandeep Singh	2005	DBA IBM, Chandigarh
18.	Abhishek Sharma	2006	Captain ,Indian Army

32. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts

Date	Name and Designation (Company or Oraganisation)	Topic
01/04/2011	Prof. R.S. Salaria, Professor and Head of Computer Science Department, Rayat Bahara Institute of Engineering and Nano Technology, Hoshiarpur	Professional Career Awareness
03/09/2012 - 07/09/2012	SKDIT Amritsar	Personality Development Classes
24/01/2013	Nikhil Dhiman	Expert Lecture on Career Guidance
14/02/2013	Net Max Technologies Pvt Ltd.	Workshop on Robotics, Embedded System
18/02/2013	Arcadian Technocrats Pvt Ltd	Seminar on Cloud Computing, 4G, Android
12/03/2013	Stellar Data	Workshop on latest Technologies
01/04/2013	Lt. Ravinder Singh	Expert Lecture on Career Guidance in Defense forces
07/10/2013	Sh. Vipin Gupta, Director, U-Net Solutions, Moga, Punjab	Cloud Computing
05/11/2013	Dr. Parteek Bhatia Assistant Professor, Deptt. of Computer Science & Engg. Thapar University, Patiala	Internals of NoSql
07/02/2014	SLR infotech, Chandigarh	Seminar on Java technologies
07/02/2014	Dr. Major Singh Associate Professor, Deptt. of Computer Science & Engg. SLIET, Longowal, Sangrur	Grid Computing
17/02/2014	WebTek labs pvt Ltd, New Delhi	Latest trends in CSE/IT
18/02/2014	Techno campus, Chandigarh	Enhancement employability skills and become a industry ready professional

155

33. List the teaching methods adopted by the faculty for different programmes?

- Use of ICT such as projectors for seminars
- Presentations on subject topics
- Manual as well as online notes providing to students
- Practical implementation of subject concepts in labs, wherever possible

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

The department ensures that programme objectives are constantly met and learning outcomes are monitored through the skill enhancement techniques, teaching learning system and career and guidance cell. The Program Education Objectives and Program Outcomes of the department are as follows:

Program Educational Objectives (PEO):

1. To provide students with a solid foundation in mathematical, scientific and engineering fundamentals required to solve engineering problems and also to pursue higher studies.
2. To prepare students for a successful career with effective communication skills, teamwork skills and work with values that meet the needs of Multi-national Companies.
3. To provide students a sound foundation in the latest achievements in technologies, R&D and to gain knowledge in multidisciplinary aspects by projects and industrial training.
4. To produce graduates that will obtain positions as information technology professionals in various industries and government agencies that are involved in the creation, maintenance and use of computers, computer networks and computer information systems.

Program Outcomes (PO):

1. Graduates will be able to apply knowledge of mathematics and engineering sciences
2. Graduates will be able to design and conduct experiment
3. Graduates will be able to analyze and interpret data
4. Graduates will be capable of designing a system, component or process to meet the design requirement
5. Graduates will be able to use principles of sustainable design and development
6. Graduates will be able to function effectively as an individual in a group
7. Graduates will have capability to identify, formulate and provide creative/innovative/effective solution to a problem
8. Graduates will be able to communicate effectively with engineers, other professionals and community at large
9. Graduates will be able to recognize the need for and able to engage in lifelong learning
10. Graduates will be able to discuss relevant contemporary issues

11. Graduates will be able to use necessary skills, techniques and modern engineering tools for engineering practice

12. Graduates will be able to solve problems in advanced design and development.

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

STUDENTS

Students Activities		
Nature of Activity	**Number of students enrolled**	**Recognition/Rewards received if any**
Shaheed Bhagat Singh Memorial Blood Donation Camp (21-10-2010)	300	300 units blood has been donated to Blood bank, Civil Hospital, Gurdaspur.
Blood Donation Camp (29-09-2011)	200	200 units blood has been donated to Blood bank, Civil Hospital, Gurdaspur.
Blood Donation Camp (03-09-2012)	300	300 units blood has been donated to Blood bank, Civil Hospital, Gurdaspur.
Rally on "Women Criticism" held during Sui-Generis 2013(14-3-2013)	300	----------
Cleanliness Camp (08-10-2010)	300	----------
Swami Vivekanand Yuva Sandesh Yatra (19-08-2013)	200	----------
Van Mohotsava (14-09-2013)	300	150 trees has been planted inside the college campus.
"Bharat Jago Daurh" on Swami Vivekanand Yuva Sandesh Rally (24-09-2013)	120	----------
Swami Vivekanand Yuva Sammelan at Pathankot (29-09-2013)	90	----------
Stage Show on Swami Vivekanand (15-11-2013)	300	----------
Tree Plantation Degree & Polytechnic Wing (04/03/14)	300	300 trees has been planted inside the college campus.
Rally on "Voting Awareness" held during Sui-Generis 2014 (20-03-2014)	300	----------
Election Awareness Rally in Gurdaspur City (18-04-2014)	300	----------
Tree Plantation held in Degree Wing (23-04-2014)	300	250 trees has been planted inside the college campus.
Tree Plantation held in Degree Wing (08-08-2014)	300	200 trees has been planted inside the college campus.
"J & K Flood Relief Donation Camp" (03/10/14)	300	Rs.10,000/- has been sent to PTU for the victims.

"NSS Day" (24/09/2014)	300	"SAVE ENERGY & SAVE WATER" massage 2000 stikers has been pasted inside the college campus and hostels.
National level educational survey "ASER-2014" (28/09/2014)	70	26 villages of District Guradaspur has been surveyed.
Expert Lecture on "Usage of Swadesi Products" by Swadesi Munch, New Delhi (30/09/2014)	200	----------
"Swachha Bharat Abhiyaan" (02/10/14)	300	Central Jail to Sri Ravi Dass Chowk road has been cleaned by college students.
"Rastriya Ekta Divas" (31/10/2014)	200	----------
Expert Lecture on "Community Policing" by C.P.R.C. Gurdaspur (03-11-2014)	250	----------
Expert Lecture on "Combating Corruption-Technology as an Enabler" by Vigilance Deptt. Gurdaspur (04-11-2014)	150	----------
Donation Camp on "International White Crane Day Contributions 2014" (05/12/14)	300	Rs.7,500/- has been sent to Indian Association for Blind Fund, Madurai
Campus and Online Competition for voters on the occasion of "National Voter Day-2015" (23/01/2015)	100	----------
M & D organized SUI- GENERIS 2K11 in the college campus	144	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K12 in the college campus	132	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K13 in the college campus	126	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K14 in the college campus	130	1st & 2nd prizes were awarded to the winners.
M & D organized SUI- GENERIS 2K15 in the college campus	122	1st & 2nd prizes were awarded to the winners.
Dav PTU ZONAL YOUTH FEST held at Dav Jalandhar in year 2011	10	2nd Prize
PTU ZONAL YOUTH FEST held at Dav Jalandhar in year 2012	32	Three 1st prize & two 2nd Prize
PTU ZONAL YOUTH FEST held at Baba Bhag Singh College of Engg. & Technology , Jalandhar in year 2013	44	Two 1st prize & two 2nd Prize
PTU ZONAL YOUTH FEST held at SSCET Badhani in 2014.	46	One 1st prize & Four 2nd Prize
PTU Inter College Hockey Tournament-2008-09	16	Won Bronze Medal

(Men)		
PTU Inter Zonal Cricket Tournament 2008-09 (Men)	16	Zone Winner
PTU Inter College Table Tennis Tournament-2009-10	5	Participation
PTU Inter College Volleyball Tournament-2009-10 (M/W)	24	Participation
PTU Inter College Football Tournament-2009-10	16	Participation
PTU Inter College Hockey Tournament-2009-10 (Men)	16	Participation
PTU Inter College Hockey Tournament-2009-10 (Women)	16	4th Position
PTU Inter College Cricket Tournament-2009-10 (Men)	16	Zone Winner
PTU Inter College Handball Tournament-2009-10 (Men)	12	Participation
PTU Inter College Basketball Tournament-2009-10 (Men)	12	4th Position
PTU Inter College Basketball Tournament-2009-10 (Women)	12	Participation
PTU Inter College Athletic Meet 2009-10	10	Participation
PTU Inter College Table Tennis Tournament-2010-11(Men)	06	Participation
PTU Inter College Football Tournament-2010-11(Men)	18	Participation
PTU Inter College Kabaddi Tournament-2010-11 (Men)	12	Participation
PTU Inter College Basketball Tournament-2010-11 (Men)	12	Participation
PTU Inter College Hockey Tournament-2010-11 (Men)	16	5th Position
PTU Inter College Volleyball Tournament-2010-11 (M)	12	Participation
PTU Inter College Cricket Tournament 2010-11 (Men)	16	Zone Winner
PTU Inter College Athletic Meet 2010-11 (M/W)	09	Participation
PTU Inter College Football Tournament-2011-12(Men)	16	Participation
PTU Inter College Basketball Tournament-2011-12 (Men)	12	Participation
PTU Inter College Lawn Tennis Tournament-2011-12 (Men)	04	Participation
PTU Inter College Hockey Tournament-2011-12 (Men)	16	Participation
PTU Inter College Chess Tournament (Men) 2011-	07	4th Position

12		
PTU Inter College Cricket Tournament 2011-12 (Men)	16	Zone Winner
PTU Inter College Swimming Tournament 2012-13 (Men)	02	3rd Position
PTU Inter College Chess Tournament (Men) 2012-13	06	4th Position
PTU Inter College Cross Country Tournament (Men) 2012-13	02	Participation
PTU Inter College Table Tennis Tournament (Men) 2012-13	05	Participation
PTU Inter College Lawn Tennis Tournament-2012-13 (Men)	04	4th Position
PTU Inter College Hockey Tournament-2012-13 (Men)	16	Participation
PTU Inter College Football Tournament-2012-13(Men)	20	Participation
PTU Inter College Cricket Tournament 2012-13 (Men)	16	Zone Winner
PTU Inter College Athletic Meet 2012-13 (M/W)	17+11=28	Silver Medal In 100M, Bronze Medal In Shot Put, 4th Position In 1500M & 3000M (Women), 4th Position In 110M Hurdle & 4*100M Relay.
PTU Inter College Swimming Tournament 2013-14 (Men)	03	Participation
PTU Inter College Table Tennis Tournament 2013-14 (Men)	05	Participation
PTU Inter College Chess Tournament 2013-14 (Men)	08	Participation
PTU Inter College Basketball Tournament 2013-14 (Men/Women)	12+12=24	Participation
PTU Inter College Hockey Tournament 2013-14 (Men)	16	4th Position
PTU Inter College Football Tournament 2013-14 (Men)	16	Participation
PTU Inter College Volleyball Tournament 2013-14 (M/W)	12+12=24	Participation (Men) 4th Position (Women)
PTU Inter College Cricket Tournament 2013-14 (Men)	16	Zone Winner
PTU Inter College Athletic Meet 2013-14 (M/W)	16+11=27	Silver Medal In 100M(Men), Gold Medal In Shot Put (Women), Bronze Medal In 100M (Women), Bronze Medal In 1500M (Women), Bronze Medal In 4*100M Relay (Women) &

160

		Runner Up Trophy (Women)
PTU Inter College Table Tennis Tournament 2014-15 (M)	06	Participation
PTU Inter College Chess Tournament 2014-15 (M)	06	Participation
PTU Inter College Badminton Tournament 2014-15 (M)	07	Participation
PTU Inter College Basketball Tournament 2014-15 (M)	12	Participation
PTU Inter College Basketball Tournament 2014-15 (W)	12	Participation
PTU Inter College Football Tournament 2014-15 (M)	16	Participation
PTU Inter College Hockey Tournament 2014-15 (M)	16	3rd Position (Bronze Medal)
PTU Inter College Volleyball Tournament 2014-15 (M/W)	14+12=26	Participation(Women) 4th Position (Men)
State Level Wrestling Championship (57 Kg Weight Men) Held On 21st To 22nd February 2014 At Rohtak, Haryana.	01	Silver Medal
State Level Wrestling Championship (57 Kg Weight Men) Held On 3rd To 5th November 2014 At Gorakhpur, U.P.	01	Gold Medal
Senior National Wrestling Championship (57 Kg Weight Men) Held On 14th To 16th November 2014 At Utter Pradesh.	01	Bronze Medal
Senior National Wrestling Championship (59kg Weight Men) Held On 30 January-6 February 2015 At Kerala.	01	Bronze Medal

36. Give details of "beyond syllabus scholarly activities" of the department.
   ▪ Content Beyond syllabus is included in some subjects which are reflected in class time table as well.
   ▪ Projects are assigned to students in labs in addition to practical suggested in syllabus.
   ▪ Educational tours are conducted for students.
   ▪ Classes for weaker students are held to improve the performance of students.
   ▪ Various technical events are conducted for improving technical skills of students.

37. State Whether the Programme / department is accredited / graded by other agencies. Give details.

   Applied for NBA accreditation under Tier-1
         :

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

1. Well Qualified and Experienced Faculty and Staff
2. Good number of reputed International/National Journal and Conferences including .
3. Well equipped labs for students.
4. Good placement of students.

Weaknesses:

1. Less number of permanent faculty members.
2. Lack of good consultancy projects.

Challenges:

1. To maintain good academic record of the students.
2. To start Post Graduation Courses in new areas.
3. To enhance the interpersonal and technical skills of students.
4. To bring more research projects from various funding agencies.

39. Future plans of the department:

1. To conduct more short term training programs and conferences.
2. Start full time post graduation courses in the department.

Evaluative Report of the Bio Technology Departments

1. Name of the Department : **BIOTECHNOLOGY**
   Year of establishment : **2006**

2. Names of Programmes / Courses offered : **B.Tech (Regular)**

3. Interdisciplinary courses and departments involved**:**
   Maths : **Applied Science**

4. Examination system : **Semester System**

5. Participation of the department in the courses offered by other departments
   Environmental Science : **All Departments**

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Designation	Sanctioned	Filled	Remarks
Professors	02	NIL	
Associate Professors	03	NIL	
Asst. Professors	09	10	One post of assistant professor filled against the vacant seat of professor

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Dr. Rajinder Kaur	PhD.	Assistant Professor	Microbiology	Nil	Nil
Mr. Shyamal Jyoti	M.Tech	Assistant Professor	Immunology	2.2 Years	Nil
Mr. Indesh Attri	M.Tech	Assistant Professor	Enzymology	1 Year	Nil

Ms. Manila Kashyap	M.Tech	Assistant Professor	Plant Biotechnology	1 Year	Nil
Ms. Paul Mahajan	M.Tech	Assistant Professor	Industrial Microbiology	1 Year	Nil
Mr. Nakul Dewan	M.Tech	Assistant Professor	Biomedical Engineering	Nil	Nil
Ms. Aanchal Sharma	M.Tech	Assistant Professor	Enzyme Technology	06 months	Nil
Mr. Akshay Mahajan	M.Tech	Assistant Professor	Environment Science & Technology	Nil	Nil
Ms. Arvinder Kaur	M.Tech	Assistant Professor	Microbiology	10 Months	Nil
Ms. Salony Sharma	M.Tech	Assistant Professor	Biofuels	Nil	Nil

8. Percentage of classes taken by temporary   :   NIL
9. Programme-wise Student Teacher Ratio   :   1:11
10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Filled
Lab Attendant	01

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise:NIL

    No grant received from 2009-2014 from Central funding agency. However the   department received a share of TEQIP grant sanctioned to college in financial year of 2012-13

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received**: NIL**

13. Research facility / centre with
    o   State recognition   **:**   NIL
    o   National recognition   **:**   NIL
    o   International recognition   **:**   NIL

14. Publications:

    Journal Publications:

1. Kaur, R. and Goyal, D."Mineralogical studies of coal fly ash for soil application in agriculture",International Journal Particulate Science and Technology, http://dx.doi.org/10.1080/02726351.2014.938378ISSN no. 0272-6351; SCI IF: 0.50, 2014.

2. Kaur, R. and Goyal, D. "Soil application of fly ash based biofertilizers for increased crop production", VEGETOS - An International Journal of Plant Research. 27 (VEGETOS 2):291-300;DOI: 10.5958/2229-4473.2014.00047.0 (to appear in Vegetos 27(2) September, 2014). ISSN no. 2092-7843; SCI IF 0.04, NAAS IF 6.2, 2014

3. Kaur, R. and Goyal, D. "Mineralogical comparison of flyash with soil" submitted to "International Journal of Material Cycles and Waste Management (JMCW)" ISSN no. 1438-4957; IF : 0.856(accepted), 2014

4. Kaur, R. and Goyal, D."Impact of field application of flyash based cyanobacterial biofertilizers on yield of different rice cultivars". Journal of Crop Protection. ISSN: 0261-2194IF: 1.54 (accepted), 2015.

5. Kaur, R. and Goyal, D."Isolation and characterisation of cultured strains of cyanobacteria (Nostocales) isolated from the paddy field and pond fly ash of India" Journal of Plankton research. ISSN 1464-3774 IF: 2.23 (communicated), 2014.

6. Akhtar, N., Sharma, A., Goyal, D. and Goyal, A., "Simplification and Optimization of Media Ingredients for Enhanced Production of CMCase by Newly Isolated *Bacillus subtilis* NA15", Environmental progress and Sustainable energy, (Doi number: 10.1002/ep.12004), 2014.

7. Akhtar, N., Sharma, A., Goyal, D. and Goyal, A., "Biodiversity of cellulase producing bacteria and its application". Cellulose chemistry and technology. (In Press 2014).

8. Tuli M., Gurumayum S., Kaur S., Nagal S. and Attri I., "Isolation and screening of cellulolytic fungi by baiting method from soil of Jalandhar", "Research Journal of Pharmaceutical, Biological and Chemical Sciences". ISSN no. 0975-8585, 6(2), 375-380, 2015.

Conference Publications:

1. Kaur, R. and Goyal, D. "Mineralogical studies of fly ash that act as a soil ameliorant in agriculture" Proceedings ofInternational Conference on 'Powder, Granule and Bulk Solids: Innovations and Applications (PGBSIA)' Thapar University November 28-30, 2013 (pp. 125).

2. Kaur, R. and Goyal, D. "Bioleaching of heavy metals from flyash by cyanobacteria" Proceedings of 54th Annual conference of Association of Microbiologists of India, Maharshi Dayanand University (MDU), Rohtak, Haryana, India, November 17-20, 2013 at EMBD 143 (pp. 453).

3. Goyal. D., Kaur, R. and Malhotra, K., "Production and application of cyanobacterial biofertilizers for paddy cultivation" Proceedings of National Symposium on Fundamental and Applied Phycology, Punjabi University, Patiala, March 25-26, 2013, PI-18, (pp. 37).

4. Kaur, R. and Goyal, D. "Screening of nitrogen fixing cyanobacteria from paddy fields of Punjab" Proceedings of National Symposium on Fundamental and Applied Phycology, Punjabi University, Patiala, Punjab, India, March 25-26, 2013, B-04, (pp. 61).

5. Goyal. D. and Kaur, R. "Flyash as a mineral source for soil amendment and decontamination" Proceedings of National seminar organized by C-FARM, New Delhi and IMMT, Bhubaneshwar, 2012.

6. Kaur, R. and Goyal, D., "Screening of microalgae having highest lipid content for biodiesel production" Proceedings of 52nd AMI conference (Association of microbiologist of India),Punjab University, Punjab, 4-6th November, 2011, IM-59, (pp. 170).

7. Goyal D., Aggrawal H. and Kaur, R., "Flyash as carrier for microbial inoculants to improve soil fertility" Proceedings of National Seminar organized by National Institute of Ecology and Central Soil Salinity Research Institute, 07-08 May, 2011,Lucknow, (pp. 40).

8. Kaur, R., "Entrepreneurship in Biofertilizer Production Technology" Proceedings of National Conference on Management organized by STEP& LMTSOM, Thapar University, Patiala, 2010.

9. Rana, P. and Attri, I., "Solid state fermentation of lignocellulolytic agrowaste for cellulase and hemicellulase production by *Fusarium oxysporum*MTCC 7229" Proceedingsof International conference on Exploring Basic and Applied Sciences for Next Generation Frontiers,Lovely Professional University, 14-15 November, 2014, (pp. 206).

10. Kumar, A., Chaurasia, A. and Attri, I., "Factors Governing Regulation of Stem Cells towards the Path of Neurogenesis" Proceedings of 3rd Bhartiya Vigyan Sammelan, Lovely Professional University, Punjab, 2012.

11. Attri, I., "Production of Cellulase by Solid State Fermentation using Agrowaste for Application in Fruit Juice Extraction" Proceedings of DBT sponsored National Seminar on Emerging Trends in food technology, DAV College Jalandhar, 2013.

12. Kaur, A. andKaur, M., "Isolation, Characterization and Identification of Amylase producing microorganisms" Proceedings of National Conference on Emerging Trends in Biotechnology and Pharmaceutical Research,Mangalayatan University, Aligarh (U.P), 2012.

13. Akhtar, N. andSharma, A., "Simplification and optimization of media ingredients for enhanced production of CMCase by newly isolated *Bacillus subtilis* NA15" Proceedings of National conference on perspective trends in plant sciences and biotechnology, Punjab University Chandigarh, 21-23February, 2014.

14. Priyanka., Dewan, N. and Kumar, A., "Effect of anisotropy and Scattering Coefficient on Light Distribution in a semi-infinite tissue", Proceedings of International Conference on Modeling and Simulation of Diffusive Processes and Applications, IIT Varanasi, 9-12 October, 2012 (pp 178-181).

15. Dewan, N. and Kumar, A., "Effect of Different Laser Beam Profiles on Thermal Damage of Basal Cell Carcinoma", Proceedings of International Conference on Biomedical Engineering and Assistive Technologies, 6-7 December, 2012.

15. Details of patents and income generated   :   NIL

16. Areas of consultancy and income generated   :   NIL

17. Faculty recharging strategies
   - Annual increments based on appraisal for faculty
   - CAS (Career Advancement Scheme) for promotions
   - Funding for attending National and International Conferences
   - Faculty Development Programmes for motivating the faculty
   - National and International Conferences

18. Student projects

   - Percentage of students who have done in-house projects including inter-departmental: **100%**
   - Percentage of students doing projects in collaboration with industries / institutes**: NIL**

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

   - Faculty   :   NIL
   - Doctoral / post-doctoral fellows :   NIL
   - Students   :   NIL

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

Workshop/Seminar conducted

Sr. No.	Title of Workshop/Seminars	Duration	Dates	No. of participants	Sponsoring Authority
1.	On day Symposium on Current innovations in imaging instrumentation& radio-pharmaceutical diagnostic & therapeutic applications	One Day	28.09.2013	60	IEQIP-II, NPIU, New Delhi

Expert Lecture Conducted

Sr. No.	Title of Expert Lecture	Duration	Dates	No. of participants	Name of Expert and Organization
1.	Research motivation	One day	04/03/2015	60	Dr. R.K Sud Senior Principal

| 2. | Entrepreneurship and Personality Development | One day | 04/03/2014 | 90 | Scientist CSIR-IHBT Palampur |
| | | | | | Ms.Priya Malik, Managing Director, Finesse, Chandigarh |

21. Student profile course-wise: Students are admitted on the basis of JEE Mains rank.

Name of the Course	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female

22. Diversity of Students

Name of the Course	% of Students from the college	% of students from the state	% of students from other States	% of students from other countries
B.Tech Biotechnology	Not Applicable	85%	15%	Nil

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

	GATE	GRE	Defence
Batch 2011-2015	00	00	00
Batch 2010-2014	02	03	01
Batch 2009-2013	08	00	01
Batch 2008-2012	00	00	00
Batch 2007-2011	01	00	00

24. Student progression

Student progression	Percentage against enrolled			
	2007-2011	2008-2012	2009-2013	2010-2014
UG to PG	33	90	20	15
PG to Ph.D	Nil	Nil	Nil	Nil
Ph.D to Post –Doctoral	Nil	Nil	Nil	Nil
Employed				
• Campus selection	03	03	Nil	04
• Other than campus recruitment	10	12	12	Nil
Entrepreneurs	Nil	Nil	Nil	Nil

25. Diversity of staff

Percentage of faculty who are graduates	
of the same parent university	40%
from other universities within the state	60%
from other universities from other states	NIL
from universities outside the country	NIL

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period**:** NIL

27. Present details about infrastructural facilities

    a)   Library   : Available
           Internet facilities for staff and students   : 100 MbpsInternet facility in
                                          faculty office, Wi-Fi Hostel, Comp. lab
    b)   Total number of class rooms   : 03
    c)   Class rooms with ICT facility   : 02
    d)   Students laboratories & Research laboratories:06

S.No.	Lab Name
1.	Microbiology Lab
2.	Biochemistry lab
3.	Industrial Microbiology Lab
4.	Bioanalytical lab
5.	Bioinformatics lab
6.	Genetics

28. Number of students of the department getting financial assistance from College: NIL

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes, it is done by taking:
- Feedback from students (studying as well as pass-out)
- Feedback from Alumni of the Department
- Feedback from Companies in which students get placed
- Feedback from faculty

These feedbacks are taken from time to time and a committee is formed which analyses these feedbacks which then plans for modification of course or introduction of new course.

30. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?
- The department takes feedback from faculty and utilizes in
- Identifying the academic gaps in the curriculum identifying the need in improving the course contents by updating the syllabus
- Identifying the need for including new courses in the curriculum
- Identifying the pitfalls in the teaching learning process
- Strengthening the teaching learning process

b. Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?
The department obtains feedback from students on staff, curriculum and teaching-learning evaluation. The questionnaires are given to students at the end of the semester and at the end of the graduate program and various rubrics are being set for various questions and students are evaluated accordingly. Further, the department analyzes the feedback and measures are taken accordingly, some of them are

- Encouraging the faculty for skill enhancement programme
- Including the new subjects as per the industry demand
- Use of new methods in teaching learning process as   to develop better understanding of the course contents
- Measures to strengthen the Teaching Learning process

c. Alumni and employers on the programmes and what is the response of the department to the same?
The department obtains feedback from Alumni and employers through Alumni Survey and Industry Survey. Further, the department responses in the form of

- Conducting various aptitude tests, group discussions for skill enhancement
- Various technical events are being organized by societies for improving skills of the students

31.   List the distinguished alumni of the department (maximum 10)

Sr. No.	Name	Batch	Current Designation and Address
1.	Manila Kashyap	2006	Assistant Professor, BCET Gurdaspur
2.	Arvinder Kaur	2006	Assistant Professor, BCET Gurdaspur
3.	Akshay Mahajan	2007	Assistant Professor, BCET Gurdaspur
4.	Salony Sharma	2007	Assistant Professor, BCET Gurdaspur
5.	Dilpreet singh	2009	Flying Officer, Indian Air Force
6.	Inayat Bajwa	2010	Research scholar at Pennsylvania state university, USA.
7.	Amit kumar	2009	Research scholar, IIT, Roorke
8.	Manmeet Kahlon	2009	Research scholar, NIFTEM, Sonepat
9.	Shaheen Bakshi	2007	Freelancer, Modeling

32.   Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

Sr. No	Title/Workshop	Name and Designation	Duration	Dates
1	Entrepreneurship & Personality Development	Ms. Priya Malik, Managing Director, Finesse, Chandigarh	1 day	04.03.2014
2	Research motivation	Dr. R.K Sud Senior Principal Scientist CSIR-IHBT Palampur	1 day	04.03.2015

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

- Use of ICT such as projectors for seminars
- Presentations on subject topics
- Manual as well as online notes providing to students
- Practical implementation of subject concepts in labs, wherever possible   Tests, assignments, quizzes and discussions for different subject related topics

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

Programme Educational Objectives (PEO)

1. To provide students with a sound foundation in the mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies.
2. To develop the ability among students to synthesize data and technical concepts to solve problems relevant to the general practice of chemical engineering and engineering design.
3. Students will develop professional skills that prepare them for immediate employment in industries and other organizations.
4. Students will learn to communicatetheir ideas to be effective in collaboration with other members of engineering teams.
5. To promote student awareness of the life-long learning and to introduce them to professional ethics and codes of professional practice.

Expected Programme Outcomes (POs)

1. The graduates are expected to have ability to apply knowledge of mathematics, science and engineering.
2. Graduates are expected to identify, formulate and solve Chemical engineering problems.
3. The graduates are expected to have ability to design and conduct experiments, as well as to analyze and interpret data.
4. The graduates are expected to have ability to design a system, a component, or a process that meets desired specifications and requirements.
5. The graduates are expected to possess ability to function on multi-disciplinary teams.
6. The graduates are expected to have understanding of professional and ethical responsibility.
7. The graduates are expected to engage themselves in life-long learning.
8. The graduates are expected to have knowledge of contemporary issues.
9. The graduates are expected to possess ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
10. The graduates are expected to have the broad education necessary to understand the impact of engineering solutions in a global, economic and societal context.
11. The graduates are expected to deliver engineering fundamentals in effective and innovative ways.
12. Graduates are expected to handle research projects for the development of engineering and technology.

Consistency of the PEOs with the Mission

PEOs	Consistency with the Mission
• To provide students with a sound foundation in the mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies. • To develop the ability among students to synthesize data and technical concepts to solve problems relevant to the general practice of chemical engineering and engineering design. • Students will develop professional skills that prepare them for immediate employment in industries and other organizations. • Students will learn to communicate their ideas to be effective in collaboration with other members of engineering teams. • To promote student awareness of the life-long learning and to introduce them to professional ethics and codes of professional practice.	• Development of human resources in the field of Chemical engineering to serve the cause of nation. • Creation of a sustained learning environment for acquiring technical knowledge and professional application of the same in the domain of chemical engineering. • Inculcating amongst our students a deep understanding of the fundamental principles, concepts and practice in chemical engineering. • Preparing budding Chemical engineers to meet the ever increasing technological and social challenges with its traditions of self discipline, hard work, all round personality development and a creative approach to problems.

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

List of Professional Societies/Chapters in the institute

• Indian Society for Technical Education (ISTE)
• Literary Society (LS)
• Society of Automotive Engineers (SAE)
• Fine Art Club (FAC)
• Music and Dramatics Club (MAD)
• Punjabi Sabhyacharak Club(PSC)

•	APEX
•	BIOGEN(Department Of Biotechnology Society)
•	Institution of Engineers India (IEI)
•	Electronics Society for Technical Education and Research (ESTER)
•	IT Security and Computing Society (ITSC)
•	Society of Mechanical Engineers (SME)
•	Chemical Engineering Society (CHES)
•	SU
•	Entrepreneurship Development Club and Incubation Center (EDC & IC)

List of major engineering events organized by various Professional Societies/Chapters

Sr. No.	Year	Name of Event	Name of Society/Club/Chapter	Date	Achievements
1	2012-13	Annual Tech fest TEQFEST 2K12)	ISTE, LS, SAE, FAC, MAD, PSC, APEX, BIOGEN, IEI, ESTER, ITSC, SME CHES, SU, EDC & IC	18-10-2012 To 20-10-2012	More than 65 events were held
2	2013-14	Annual Tech fest TEQFEST 2K13)	ISTE, LS, SAE, FAC, MAD, PSC, APEX, BIOGEN, IEI ESTER, ITSC, SME CHES, SU, EDC & IC	18-10-2013 to 19-10-2013	More than 65 events were held
3	2014-15	Annual Tech fest TEQFEST 2K14)	ISTE, LS, SAE, FAC, MAD, PSC, APEX, BIOGEN, IEI ESTER, ITSC, SME CHES, SU, EDC & IC	13-11-2014 to 14-11-2014	More than 65 events were held

Organization of paper contests, design contests, etc. and achievements

Sr. No.	Year	Name of Event	Name of Society/Club/Chapter	Date
1	2012-13	Aa Dekhein Zara Returns	ChES	14th March
		Penyard Wars	ChES	14th March
		Earn & Deliver	ChES	15th March
		Tech tails	ChES	18Oct
		Element-o-locha	ChES	18Oct
		Snap your mind	ChES	19Oct
2	2013-14	Technovision	ChES	30th Jan
		Scien-o-Darshan	ChES	10th,Oct
		Process-o-nama	ChES	11th,Oct
3.	2014-15	Navyug Avishkar	ChES	13th Nov,2014
		Scien-o-Darshan	ChES	13th Nov,2014

36. Give details of "beyond syllabus scholarly activities" of the department.

- Content Beyond syllabus is included in some subjects which are reflected in class time table as well.
- Projects are assigned to students in labs in addition to practical suggested in syllabus.
- Educational tours are conducted for students.
- Classes for weaker students are held to improve the performance of students.
- Various technical events are conducted for improving technical skills of students

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.
Applied for NBA accreditation under Tier-1

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths: Well qualified and experienced faculty
Well-equipped labs and class rooms
Adequate infrastructure facilities and building
Provision for faculty/Staff development programmes /sponsorship for

	International, national conferences
	Adequate grant-in-aid
Weaknesses	Educationally backward area
	Lack of Chemical Industry in nearby area
	Quality of students
Opportunities	To promote self-employment in the area by starting vocational courses
	Entrepreneurship development center to cater the needs of entrepreneurs
	Young faculty development programmes
	To explore new horizon in research work/studies
Challenges	Privatization of professional education
	Less employment opportunities

39.   Future plans of the department.

1. To conduct more short term training programs and conferences.
2. Start full time post-graduation courses in the department.
3. Industry institute interaction will be enhanced.

Evaluative Report of the Chemical Engineering Departments

1. Name of the Department   :   **CHEMICAL ENGINEERING**
   Year of establishment   :   **1996**

2. Names of Programmes / Courses offered :   **B.Tech Chemical Engg**

3. Interdisciplinary courses and departments involved:
   Mathematics   : Applied Science
   Human Resource Management : Humanities & Management
   Strength of Material   : Mechanical Engineering

4. Examination system   **:**   Semester system

5. Participation of the department in the courses offered by other departments
   Environment Science   : All Departments
6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

	Sanctioned	Filled	Remarks
Professors	01	0	
Associate Professors	01	02	Promoted Through CAS
Asst. Professors	05	5	

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of year of experience	No. of Ph.D. students guided for the last 4 years
Sh Baljeev Kumar	M.Tech	Associate Professor	Composite Polymer	26	NIL
Sh. Parmod Kumar	M.Tech	Associate Professor	Heat Transfer & Numerical Method	17	NIL
Dr. Vipan Kumar	PhD	Assistant Professor	Computational Analysis & Kinetics	14	NIL
Dr. Seema	PhD	Assistant Professor	Fluid Mechanics & Supply Chain Management	14	NIL
Dr. Rajesh Kumar	PhD	Assistant Professor	Petroleum Engineering	07	NIL
Sh. Kanchan Kumar	M.Tech	Assistant Professor	Polymer Engineering	03	NIL

Mrs. Kuljeet Kaur	M.Tech	Assistant Professor	Environment Engineering	01	NIL

8. Percentage of classes taken by temporary faculty : 0%

9. Programme-wise Student Teacher Ratio : 1:13

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled

	Sanctioned	Filled
Senior Lab. Technician		0
Jr. Lab. Technician		2
Lab. Attendant		1
Clerk		1

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise: **NIL**

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received

No grant received from 2009-2014 from Central funding agency. However the department received a share of TEQIP grant sanctioned to college in financial year of 2012-13

13. Research facility / Centre with
   o state recognition : **NIL**
   o national recognition : **NIL**
   o international recognition : **NIL**

14. Publications

Journals Papers

1. Kumar,B., Yadav,P.K. "Structure and properties of Talc Filled Polypropylene" International Journal Of Applied Engg. & Research, Vol 6,No-18,pp-2668-2670 (2011).

2. Yadav,P.K., Kumar,B. " Design and fabrication Of Briquetting Machine", International Journal Of Applied Engg Research" Vol 6,No-18,pp-2695-2699(2011)

3. Sohpal,V.K., Singh, A., Dey, Apurba. "MEGA a Biocenteric Software for Sequence and Phylogenetic Analysis: A Review" International Journal of Bioinformatics Research & Application, Vol: 6 No.3 pp 230-240 (2010)

4. Sohpal,V.K., Singh, A., Dey, Apurba. "Sequence alignment and phylogenetic analysis of Human Herpes Simplex Virus (HHV) using bioinformatics tool: a review" Int. J. Computational Biology and Drug Design, Vol: 3 No.1 pp 68-88 (2010)

5. Sohpal,V.K., Singh, A., Dey, Apurba. "A Comparative Analysis of Operating Variables on Xylanase Enzyme Activity in Melanocarpus Albomyces Batch Culture Using Fuzzy and Kinetics Approach" Journal of Engineering Research and Studies, Vol.1, Issue II pp 135-141 (2010)

6. Sohpal,V.K., Singh, A., Dey, Apurba. "A Comparative Study of Molar Ratio Effect on Transesterification of Jatropha Curcas using Kinetic and Fuzzy Techniques"(2011) International Journal of Oil, Gas & Coal Technology, Vol. 4, No.3 pp. 296 – 306

7. Sohpal,V.K., Singh, A., Dey, Apurba. "Fuzzy Modeling to Evaluate the Effect of Temperature on Batch Transesterification of Jatropha Curcas for Biodiesel Production" (2011) Bulletin of Chemical Reaction Engineering & Catalysis, Vol:6 No.1 pp 31-38

8. Sohpal,V.K.,Sharma,R.K. "Investigate of kinetics Process Parameters of Penicillin G Amidase Activity in Batch Culture System" (2011) International Journal of Pharmaceutical Studies and Research, Volume II/ Issue I, pp 7-9

9. Sohpal,V.K., Singh, A.,Sharma,R.K. "A Comparative Analysis of Mixing Intensity Effect on Batch Transesterification of Jatropha Curcas using ANFIS Approach" International Journal of Chemical Engineering Research, Volume 2, Number 3, pp. 323–334 (2010)

10. Kaur, S., Sohpal,V.K.,Singh,PK. "Clustering Algorithm Approach for Prokaryotic and Eukaryotic Gene Prediction " Journal of Computational Intelligence in Bioinformatics, Volume 4, Number 3 (2011) pp. 273-282

11. Sohpal,V.K., Singh,A., Dey, Apurba. "Optimization of Substitution matrix for Sequence Alignment of Major Capsid Protein of Human Herpes Simplex Virus" International Journal of Bioautomation, Volume 15, Issue4 (2011) pp. 277-284

12. Sohpal,V.K., Singh, A., Dey, Apurba. "Sequence Alignment of Triplex Capsid Protein of Human Herpes Simplex Virus" International Journal of Life Sciences & Technology, Volume 5, Issue1 (2012) pp. 1-7

13. Sohpal,V.K., Singh, A., Dey, Apurba. "Substitution model analysis of human herpes simplex virus using molecular evolutionary genetic analysis" International Journal of Biotechnology, Bioinformatics and Bioengineering,Volume1, Issue 4 (2011) pp 451-45

14. Kumar, D., Singh,J.,Singh,O.P., Seema. "A decision support system for analysis of effects of timely fulfilment of customer demand in supply chain management practices", International Journal of Advanced Manufacturing Technology, 61, pp. 809-826 (2011).

15. Seema., Kumar,D. "Effect of manufacturing system on business objectives of the organizations", International Journal of Services and Operations Management, 13(4), pp. 457-477 (2012).

16. Kumar, D., Singh,J.,Singh,O.P., Seema. "A fuzzy logic based decision support system for evaluation of suppliers in Supply chain management practices", International Journal of Mathematical and Computer Modeling, 57(11-12), pp. 2945-2960 (2013).

17. Seema, Kumar,D. "An analytical approach to supplier selection problem", International Journal of Indian Culture and Business Management, 9(2), pp. 164-180 (2013).

18. Seema,Kaur,R., Kumar,D. "Designing a decision support system to evaluate and select suppliers using MOORA method", International Journal of Logistics and Supply Chain Management Perspectives, 3(1), pp. 898-906 (2014).

19. Seema,Kaur,R., Kumar,D. "Designing a mathematical model using fuzzy based MOORA method for supplier selection", International Journal of Advanced Engineering Technology, 5(1), pp. 16-24 (2014).

20. Seema,Kumar,D."A decision support system for IMS selection based on Fuzzy VIKOR method", International Journal of Services and Operations Management, (In press).

21. Sharma,R. K., B. S. Rana, D. Varma, R. Kumar, R. Tiwari, M. K. Jha and A. K. Sinha"3-D Mesoporous Titanosilicate Support for Highly Effective Hydrodesulfurization Catalysts" Microporous and Mesoporous Materials 155 (2012) 177-185

22. R. K. Sharma, M. Anand, B. S. Rana, R. Kumar, S. A. Farooqui, M. G. Sibi, A. K. Sinha "Jatropha-oil conversion to liquid hydrocarbon fuels using mesoporous titanosilicate supported sulfide catalysts."Catalysis Today ,198 (2012) 314-320

Conference Papers

1. Vipan Kumar, Jatinder Kumar "Kinetic Study on Jatropha Curcus transesterification in Batch Reactor" Proceedings of the World Congress on Engineering and Computer Science 2008 WCECS 2008, October 22 - 24, 2008, San Francisco, USA. pp 85-88, (2008).

2. Vipan Kumar Sohpal, Apurba Dey & Amarpal Singh " Investigate of Process Parameters on Xylanase Enzyme Activity in Melanocarpus Albomyces Batch Culture" Proceedings of the World Congress on Engineering 2010 Volume I (WCE 2010, 30 June 3, 2010, London, U.K.), Pages 562-565, (2010)

3. Vijay Sodhi and Vipan Kumar Sohpal " Treatment of Chromium (VI) Containing Aqueous Effluent of Tanneries and Electroplating Units by Membrane Process" published Proceedings of the International Conference on Environmental

Pollution and Remediation Ottawa, Ontario, Canada, 17-19 August 2011 Paper No. 227, pp 227.1-8 (2011)

4. Vipan K Sohpal, Rajesh K Sharma, "Emission Analysis of Non edible Jatropha Curcus and Madhuca Longifolia B20 Blends with Edible Oil Environment Engineering" Intl. Conf. on Advances In Bio-Informatics And Environmental Engineering-(ICABEE 2014),Rome, Italy, pp 1-4 (2014)

5. Baljeev Kumar, Yadav Pramod, Bhinder Surinder Singh "Study of effect of Talc of different grades as a filler on mechanical properties and Rheological properties of Polypropylene" Proceedings of the International conference on Emerging Trends in Engg. And Technology 2010, 0ctober 14 - 16, 2010, GIMT,Kanipla, Kurukshetra. Pp 85-88, (2008).

6. Baljeev Kumar ,"Membrane separation processes in advanced waste water treatment" Proceedings of the National conference on Waste management and Recycling 2011, December 09 - 10, 2011, SLIET Longowal .

7. Baljeev Kumar, Pramod Yadav "Structure and properties of Talc filled polypropylene " Proceedings of the International conference on Emerging Trends in Engg. And Technology 2011, 0ctober 20 - 22, 2011, GIMT,Kanipla, Kurukshetra.

8. Baljeev Kumar, "Utilization of Flyash as filler in HDPE/ Flyash polymer composites in " Proceedings of the International conference on Emerging Trends in Engg. And Technology 2012, November 09 - 11, 2012, GIMT,Kanipla, Kurukshetra.

9. Baljeev Kumar, "Effect of Flyash as a filler on properties of HDPE/Flyash polymer composites" Proceedings of the International Conference on sustainable technologies for energy and environment, Indian Chemical Engineering Congress, CHEMCON2012, December 27 - 30, 2012, International Conference on sustainable technologies for energy and environment, Indian Chemical Engineering Congress, CHEMCON2012. Pp 85-88, (2008).

10. Baljeev Kumar, Upinderpal Singh "Influence of Talc as filler on mechanical properties and melt rheology of Polypropylene composites" National Conference on Recent trends in Mechanical Engineering, February 21 - 22, 2014, BCET, Gurdaspur. pp 250-252, (2014).

11. Baljeev Kumar, Rajeev Garg "Study in" International Conference on Frontiers in Materials Research and Applications, October 30 - 31, 2014, SBSSTC, Ferozpur. pp 85-88, (2008).

12. Baljeev Kumar, UpinderpalSingh "Study of properties of polypropylene composites filled with Talc particles as filler" International Conference on Advancements in Polymeric Materials (APM 2015), February 20 - 22, 2015, IISc, Bengaluru. Pp 85-88, (2008).

13. P.K.Yadav, Dr. Rajeev Kumar Garg, " Modeling approach for fluid catalytic cracking reaction kinetic", International conference on "Frontiers in Materials Research & Applications", FMRA-14., October, 30-31,2014, SBSSTC, Ferozpur

14. Parmod Kumar, Puspa Paul, " Biomass briquetting a way to waste utilisation" National conference on Waste management and Recycling, 09-10th Dec, 2011, SLIET Longowal

15. Seema , "Importance of supply chain management for an industry'" International Conference on industrial competitiveness ,10/04/2010, Gulzar Institute of Technology, Khanna, Punjab

16. Seema, " Some observations on Indian Textile Industries" National Conference on Managing Global Business in Competitive Business Environment, May 01, 2010, Rattan Group of Institutions, Mohali

17. Seema, "Supplier selection and evaluation a must for industry" Higher education in India: The changing facet, Jan. 04-05, 2013, CT Institute of Engineering, Mgmt & Tech., Jalandhar

18. Seema, "Analysing alternatives for multi criteria decision making problems" National Conference on 'Building competitiveness in Indian manufacturing sector' , March 09, 2013., GNA-IMT, Phagwara,

19. Seema, "Supply chain management: Basics through different models" 3rd International Conference on Production and Industrial Engineering, March 29-31, 2013, Dr. B.R. Ambedakar NIT, Jalandhar, Punjab

20. Seema, " Mathematical model for supplier selection problem" International Conference on Information & Mathematical Sciences, Oct. 24-26, 2013, Baba Farid College of Engg. & Tech., Bathinda, Punjab

21. Seema, "Basics of decision support system: an interactive computer base system" National Conference on 'Recent trends in computing, information and applications, May 24, 2014, Sri Sai University, Palampur

15. Details of patents and income generated   :   **NIL**

16. Areas of consultancy and income generated   :   **NIL**

17. Faculty recharging strategies
   - Annual increments for faculty
   - CAS(Career Advancement Scheme) for promotions
   - Funding for attending National and International Conferences
   - Facility of recommending books for Departmental Library
   - Faculty Development Programmes for motivating the faculty
   - Funding for organising National Conferences/ STC/Workshops, etc.
   - Funding for membership of National/International Societies.

18. Student projects
   - Percentage of students who have done in-house projects including inter-departmental: **100%**

- Percentage of students doing projects in collaboration with other universities/
  industries / institutes: NIL

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

Sr. No.	Name of Faculty	Award	Year
1.	Dr. Vipan Kumar Sohpal	Chair a Session, International Conference WCE-2010, Imperial College, London (2010)	2010
2.	Manshu Kapoor	Bronze Medal awarded "The Institution of Engineers (India)" for National Design & Research Forum	2013

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

Sr. No.	Name of Faculty	Title	Nature (Conference/Seminar/Winter school, etc.)	Funding agency	Year
1.	Vipan Kumar Sohpal	Fuzzy Logic's Application in Engineering	STC	NITTTR, Chandigarh	2011

21. Student profile course-wise: Students are admitted on the basis of JEE Mains rank.

Name of the Course	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female

22. Diversity of Students

Name of the Course (refer question no. 2)	% of students from the college	% of students from the state	% of students from other States	% of students from other countries
B.Tech.	Not applicable	85%	15%	Nil

23. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Batch 2011-2015: GATE: 01   GRE: 00   Defence: 00
Batch 2010-2014: GATE: 01   GRE: 00   Defence: 00
Batch 2009-2013: GATE: 00   GRE: 00   Defence: 00
Batch 2008-2012: GATE: 00   GRE: 00   Defence: 00

24. Student progression

Student progression	Percentage against enrolled			
	2007-2011	2008-2012	2009-2013	2010-2014
UG to PG	10	07	20	05
PG to Ph.D.	Nil	Nil	Nil	Nil
Ph.D. to Post-Doctoral	Nil	Nil	Nil	Nil
Employed • Campus selection • Other than campus recruitment	 00 11	 03 04	 02 06	 04 00
Entrepreneurs	02	Nil	Nil	Nil

25. Diversity of staff

Percentage of faculty who are graduates	
of the same university	28.57
from other universities within the state	57.14
from other universities from other states	14.28
from universities outside the country	Nil

26. Number of faculty who were awarded Ph.D., D.Sc. and D. Litt. during the assessment period :   03

- Dr. Vipan Kumar Sohpal
- Dr. Seema
- Dr. Rajesh Kumar Sharma

27. Present details about infrastructural facilities

a) Library : Available

Internet facilities for staff and students : 100 Mbps wired connectivity in Staff

Rooms, Laboratories, Hostels

a) Total number of class rooms   : 03
b) Class rooms with ICT facility   : 02
c) Students' laboratories   : 08
d) Research laboratories   : 0

List of Departmental Laboratories

Sr. No	Name of Lab
1	Heat Transfer
2.	Mass Transfer
3.	Chemical Reaction Engineering
4.	Chemical Process Control
5.	Software Lab
6.	Process Technology
7.	Mechanical Operation
8.	Environment Engineering

28. Number of students of the department getting financial assistance from College : Nil

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.

Yes, it is done by taking:
- Feedback from students (studying as well as pass-out)
- Feedback from Alumni of the Department
- Feedback from Companies in which students get placed
- Feedback from faculty

These feed-backs are taken and are analyzed and accordingly decisions are taken

30. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?
   - The department takes feedback from faculty and utilizes in identifying the academic gaps in the curriculum
   - Identifying the need in improving the course contents by updating the syllabus
   - Identifying the need for including new courses in the curriculum
   - Identifying the pitfalls in the teaching learning process
   - Strengthening the teaching learning process

b. Students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?
   The department obtains feedback from students on staff, curriculum and teaching learning evaluation. The questionnaires are given to students at the end of the semester and faculty and staff are evaluated accordingly. Further, the department analyzes the feedback and measures are taken accordingly, some of them are:

   - Encouraging the faculty for skill enhancement programme
   - Including the new subjects as per the industry demand
   - Use of new methods in teaching learning process as to develop better understanding of the course contents
   - Various measures are taken to strengthen the Teaching Learning process

c. Alumni and employers on the programs and what is the response of the department to the same?

   The department obtains feedback from Alumni and employers through Alumni Survey and Industry Survey. Based on the feedback, following steps are taken by the Department:

   - Conducting various aptitude tests, group discussions for skill enhancement

- Various technical events are being organized by societies for improving skills
  of the students

31. List the Distinguished Alumni of the department (maximum 10)

Sr. No.	Name	Batch	Current Designation and Address
1.	Dr. Vikas Mittal	1996-2000	Associate Professor The Petroleum Institute, Abu Dhabi, UAE
2.	Mrs. Samita	2004-2008	Assistant Engineer, Punjab Pollution Control Board, Jalandhar
3.	Mr. Gaurav Mahajan	2000-2004	Senior engineer Production Khasa Distillery, Amritsar
4.	Mr. Deepak Goyal	2000-2004	Assistant Manager, HSSE, Safety at IOT Infra-Energy Limited
5.	Mr. Surinder Singh Bhinder	1996-2000	Assistant Professor, Department of Chemical Engineering, PU, Chandigarh
6.	Mrs. Kuljit Kaur	2003-2007	Assistant Professor, Department of Chemical Engg, BCET, Gurdaspur
7.	Mr. Manish Sharma	2002-2006	Manager, Reliance Industries, Vadodra, Gujarat
8.	Mrs. Preeti Mahajan	2005-2009	Assistant Professor, Department of Chemical Engineering, DAV University, Jalandhar
9.	Mr. Sandeep Sharma	2010-14	Assistant Manager, Dorf Ketel India Pvt Limited, Mumbai
10.	Mr. Akshay Kohli	2005-2009	Assistant Engineer, Dairy farming, New Zealand

32. Give details of student enrichment programs (special lectures / workshops / seminar) with external experts.

Sr. No	Dates	Name and Designation	Title
1	28.09.2013	Prof. Baljinder Singh, Dr. R.P Soni, Dr. Anil Mishra, Prof. R.K Bhandari	Symposium on CIIIPD
2	08.11.2013	Dr. Upinder Pal Singh	Advance Plastic Processing
3	26.02.2014	Dr. M.K Jha	Overview of Petroleum Industry
4	04.03.2014	Ms.Priya Malik,	Entrepreneurship & Personality Development

33. List the teaching methods adopted by the faculty for different programs.

- Use of ICT such as projectors for seminars.
- Presentations on subject topics.
- Manual as well as online notes providing to students.
- Practical implementation of subject concepts in labs, wherever possible.
- Tests, assignments, quizzes and discussions for different subject related topics.

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

The department ensures that programme objectives are constantly met and learning outcomes are monitored through the skill enhancement techniques, teaching learning system and career and guidance cell. The Program Education Objectives and Program Outcomes of the department are as follows:

Program Educational Objectives (PEO):

1. To provide students with a sound foundation in the mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies.
2. To develop the ability among students to synthesize data and technical concepts to solve problems relevant to the general practice of chemical engineering and engineering design.
3. Students will develop professional skills that prepare them for immediate employment in industries and other organizations.
4. Students will learn to communicate their ideas to be effective in collaboration with other members of engineering teams.
5. To promote student awareness of the life-long learning and to introduce them to professional ethics and codes of professional practice.

Program Outcomes (PO):

1. The graduates are expected to have ability to apply knowledge of mathematics, science and engineering.
2. Graduates are expected to identify, formulate and solve Chemical engineering problems.
3. The graduates are expected to have ability to design and conduct experiments, as well as to analyze and interpret data.
4. The graduates are expected to have ability to design a system, a component, or a process that meets desired specifications and requirements.

5. The graduates are expected to possess ability to function on multi-disciplinary teams.

6. The graduates are expected to have understanding of professional and ethical responsibility.

7. The graduates are expected to engage themselves in life-long learning.

8. The graduates are expected to have knowledge of contemporary issues.

9. The graduates are expected to possess ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

10. The graduates are expected to have the broad education necessary to understand the impact of engineering solutions in a global, economic and societal context.

11. The graduates are expected to deliver engineering fundamentals in effective and innovative ways.

12. Graduates are expected to handle research projects for the development of engineering and technology.

To achieve these, following measures are taken by the Department:

1. The department ensures the curriculum is designed to meet the program outcomes.
2. The faculty ensures the syllabus is revised and is involved in improving student skills through quizzes, assignments, mini projects, mid-semester test and final major project.
3. The course file is being made by all faculty members for their respective courses and HOD monitors the coverage of syllabus with the help of Course file and sees the academic schedules are intact.
4. The performance of the students is analyzed time to time and slow learners are identified. Special classes are planned for the slow learners called as remedial classes.
5. For every 20-25 students, one teacher is being allotted as advisor. These advisers counsel the students periodically (once in a week) and monitor their regularity, also address personal problems if any. They also help in guiding them regarding their future prospects. HOD of the department coordinates the counselling activity and sees that it is being done on a regular basis.
6. Whenever the necessity occurs, the parents are called for and are advised to monitor their wards and take necessary actions.
7. The entire faculty is involved in guiding the students for their project work which helps them in their future professional exposure.

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

STUDENTS

Sr. No.	Year	Name of Event	Name of Society/Club/Chapter	Date	Achievements
1	2012-13	Annual Tech fest TEQFEST 2K12)	ISTE, LS, SAE, FAC, MAD, PSC, APEX, BIOGEN, IEI, ESTER, ITSC, SME CHES, SU, EDC & IC	18-10-2012 To 20-10-2012	More than 65 events were held
2	2013-14	Annual Tech fest TEQFEST 2K13)	ISTE, LS, SAE, FAC, MAD, PSC, APEX, BIOGEN, IEI ESTER, ITSC, SME CHES, SU, EDC & IC	18-10-2013 to 19-10-2013	More than 65 events were held
3	2014-15	Annual Tech fest TEQFEST 2K14)	ISTE, LS, SAE, FAC, MAD, PSC, APEX, BIOGEN, IEI ESTER, ITSC, SME CHES, SU, EDC & IC	13-11-2014 to 14-11-2014	More than 65 events were held

Organization of paper contests, design contests, etc. and achievements

Sr. No.	Year	Name of Event	Name of Society/Club/Chapter	Date
1	2012-13	Aa Dekhein Zara Returns	ChES	14th March
		Penyard Wars	ChES	14th March
		Earn & Deliver	ChES	15th March
		Tech tails	ChES	18Oct
		Element-o-locha	ChES	18Oct
		Snap your mind	ChES	19Oct
2	2013-14	Technovision	ChES	30th Jan
		Scien-o-Darshan	ChES	10th,Oct

		Process-o-nama	ChES	11th,Oct
3.	2014-15	Navyug Avishkar	ChES	13th Nov,2014
		Scien-o-Darshan	ChES	13th Nov,2014

FACULTY

Sr. No.	Faculty	Society/institute/others)	Activity
1.	Dr. Vipan Kumar Sohpal	Members Board of Studies Punjab Technical University Jalandhar (2009-2012), Warden and Member IQAC committee	Recommend the curriculum &Courses, books, panel of paper setters, measures for the periodical assessment; To establish equivalence of curriculum in the studies of the discipline, Administration of all Hostels
2.	Sh. Baljeev Kumar	Member, Board of Studies, Punjab Technical University Jalandhar (2009 to till date)	Recommend the curriculum & Courses, books, panel of paper setters, measures for the periodical assessment; list of equipment and to act as a consultative body etc. To establish equivalence of curriculum in the studies of the discipline.
3.	Dr. Seema	Faculty In-charge NSS (ChE)	
4.	Dr. Rajesh K Sharma	ATPO Chemical Engineering	Placement & Industrial Tour
5.	Sh P. K Yadav	Coordinator, Store & Purchase of college	Purchase & Store of college items

Professional Membership of Faculty

Sr. No.	Faculty	Professional Society/institute/others
1.	Dr. Vipan Kumar Sohpal	1. Indian Society for Technical Education (LM – 76269) 2. Life Member of International Association of Engineer (IAENG Member No: 64099) 3. Member of Petrotex Society ,USA 4. Senior Member of Universal Association of Civil,Structural And Environmental Engineer (SNM1007037) 5.Member of Asia Pacific Chemical, Biological and Environment Engineering Society (CBEES -201171)
2.	Sh. Baljeev Kumar	1 Life member of Institute of chemical engineer society
3.	Sh P. K Yadav	1.Life member of Indian Society for Technical Education 2. Life member of Institute of chemical engineer society

36. Give details of "beyond syllabus scholarly activities" of the department.
- Content Beyond syllabus is included in some subjects which are reflected in class time table as well.
- Projects are assigned to students in labs in addition to practical suggested in syllabus.
- Educational tours are conducted for students.
- Classes for weaker students are held to improve the performance of students.
- Various technical events are conducted for improving technical skills of students.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.   :

Applied for NBA accreditation under Tier-1

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths:	Well qualified and experienced faculty
	Well-equipped labs and class rooms
	Adequate infrastructure facilities and building
	Provision for faculty/Staff development programmes /sponsorship for International, national conferences
	Adequate grant-in-aid
Weaknesses	Educationally backward area
	Lack of Chemical Industry in nearby area
	Quality of students
Opportunities	To promote self-employment in the area by starting vocational courses
	Entrepreneurship development center to cater the needs of entrepreneurs
	Young faculty development programmes
	To explore new horizon in research work/studies
Challenges	Privatization of professional education
	Less employment opportunities

39. Future plans of the department.

1. To conduct more short term training programs and conferences.

2. Start full time post-graduation courses in the department.

3. Industry institute interaction will be enhanced.

Evaluative Report of the
Department of Applied Sciences, Humanities & Management

1. Name of the Department   : **DEPT. OF APPLIED SCIENCES, HUMANITIES AND MANAGEMENT**

     Year of establishment   : **1995**

2. Names of Programmes / Courses offered : **M.Sc Applied Physics(Started 1ˢᵗ Batch from August 2014) and Applied Mathematics**

3. Interdisciplinary courses and departments involved: Dept. of Computer Sc. and Engg.

4. Annual/ semester/choice based credit system   :Semester system

5. Participation of the department in the courses offered by other departments :
Various Courses of Other Departments.

6. Number of teaching posts sanctioned and filled (Professors/Associate Professors/ Asst. Professors)

Designation	Sanctioned	Filled	Remarks
Professors	02	01	Promoted Through CAS
Associate Professor	04	05	Promoted Through CAS
Assistant Professor	10	09	

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Dr. Rakesh Dogra	Ph.D.	Professor	Solid State & Nuclear Physics	19 years	
Dr. S.K. Srivastava	Ph.D.	Associate Professor	Differential Systems and its stability	19 years	Two Awarded & Two Registered
Dr.J.K. Behl	Ph.D.	Associate Professor	Communication Skills	28 years	-
Dr. Arvind Kumar	Ph.D	Associate Professor	Material Science	18 years	-
Dr. Rajeev Malhotra	Ph.D	Associate Professor	Solid State Physics	19 years	-

Dr.Anju Awasthi	Ph.D	Associate Professor	Polymers	18 years	-
Mr.Vijay Kumar	M.Phil.	Assistant Professor	Mathematics Modelling	11 years	-
Mrs. Harvinder Kaur	M.Phil.	Assistant Professor	Differential Equation	14 years	-
Mr.Rishi Tuli	M.Phil.	Assistant Professor	-	8 years	-
Mrs. Lovejit Kaur	M.Phil.	Assistant Professor	Physiochemical and different characteristics of a sample	6.5 years	-
Mr.Vishal Mahajan	M.B.A.	Assistant Professor	Marketing	6.5 years	-
Mrs. Pallvi Mahajan	M.Phil.	Assistant Professor	Differential Equations	5 years	-
Mrs. Manbir Kaur	M.Phil.	Assistant Professor	Boolean Algebra	6.5 years	-
Mrs. Priti Wadhera	M.Sc. NET	Assistant Professor	-	6 years	-
Dr. Vinod Kumar	Ph.D.	Assistant Professor	Material Science	3 years	-
Ms Ramandeep kaur	M.A.B.Ed.	Assistant Professor	-	3 years	-

8. Percentage of classes taken by temporary faculty – programme-wise information
    50 % of Communication Skills Classes are engaged by temporary faculty.

9. Programme-wise Student Teacher Ratio : 8:1

10. Number of academic support staff (technical) and administrative staff: sanctioned and filled :

	Sanctioned	Filled
Clerk	1	1
Lab Assistant	3	1
Lab Attendant	3	2

11. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise. :   Nil

12. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received :
                                                Nil

13. Research facility / centre with
    o state recognition :   Nil
    o national recognition :   Nil

 * Monographs :   Nil

 * Chapter(s) in Books: Nil

 * Editing Books: Nil

 * Books with ISBN numbers with details of publishers:
   Engg. Math-II (Technical Publishers, Pune) (2009)
   Engg. Physics-I&II (Kataria Publisher) (2010)

 * number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.): Nil

 * Citation Index – range / average: Nil

 * SNIP: Nil

 * SJR :   Nil

 * Impact factor – range / average: 0.5-3.5

 * h-index: Nil

14. Publications:

List of Publications (National/International/Conferences):

1. Satinder Kumar, Arvind K.Gathania, Ankush Vij, A.K. Sharma, R. Dogra , Ravi Kumar, Absorption, Photoluminescence and Thermoluminescence studies of γ-irradiated pure and Eu doped LiF phosphors, S. P. Materials Research Letter (2015), Accepted for publication.

2. Sood, Anju and Srivastava, Sanjay K., Ψ-Eventual Stability of Differential Systems with Impulses, Global journal of science frontier research: F. Mathematics and decision sciences, vol. 14, Issue 6, ver.1.0, 1-9, 2014.

3. Vinod Kumar, Rajesh Kumar, D. K. Shukla, S. K. Arora, I.V. Shvets, Kiran Singh and Ravi Kumar, "Spin States and Glassy magnetism in $LaCo_{1-x}Ni_xO_3$ ($0 \leq x \leq 0.5$)", Materials Chemistry and Physics 147 (2014) 617-622.

4. Vinod Kumar, Rajesh Kumar, Kiran Singh, S K Arora, I.V. Shvets and Ravi Kumar, "Evidence of Spin glass State in $NdCo_{1-x}Ni_xO_3$ ($0.3 \leq x \leq 0.5$)", Journal of Applied Physics116, 073903 (2014).

5. Wadhwa Neha, Neeti Bhandari, Srivastava, Sanjay K., On the stability of impulsive differential equations with variable moments, Periodic research, vol.II, issue-II, 17-19, November 2013.

6. Kaur, Kanwalpreet and Srivastava, Sanjay K., Stability of impulsive differential equation with any time delay, Int. Journal of Innovation and applied studies, vol2, no.3, 280-286, mar 2013.

7. Kaur, Kanwalpreet and Srivastava, Sanjay K., New results on exponential stability of impulsive functional differential equation with infinite delays or finite delays, proc. of Int. conf. on info. And mathematical sciences, held on 24-25 Oct. 2013, at BFCET, Bathinda, 134-136, 2013.

8. Singh, Dilbaj and Srivastava, Sanjay K., Eventual stability of impulsive functional differential equations, Int. J. of math. Sci. & engg. Appls. (IJMSEA), vol.7, no. IV, 341-351, July, 2013.

9. Singh, Dilbaj and Srivastava, Sanjay K., Eventually stabilization of impulsive functional differential equations by using piecewise continuous lyapunov functions, Int. transactions in mathematical sci. and computers, vol.6, no.1, 105-115, January-June 2013.

10. Singh, Dilbaj and Srivastava, Sanjay K., Uniform strict practical stability criteria for impulsive functional differential equations, Global journal of Science frontier research, vol. XIII, issue 1, version 1, 1-8, 2013.

11. Gupta, Bhanu and Srivastava, Sanjay K., strict stability of fuzzy differential equations with impulse effect, International journal of mathematics, computational, physical, and quantum engineering, vol.7, no.5, 547-551, 2013.

12. 12. Gupta, Bhanu and Srivastava, Sanjay K., Existence of nonlinear fuzzy differential equations with impulses, Journal of Indian math. Soc., vol.80, nos. 3-4, 373-384, 2013.

13. 13.Vinod Kumar, Yogesh Kumar, Rajesh Kumar, D K Shukla, S K Arora, I V Shvets and Ravi Kumar ,Structural, magnetic and X-ray absorption studies of $NdCo_{1-x}Ni_xO_3$ ($0 \leq x \leq 0.5$), *Journal of Applied Physics*, 113, 043918 (2013).

14. Vinod Kumar, Rajesh Kumar, D K Shukla, Ravi Kumar, "Disorder Controlled Electrical Transport Properties of $NdCo_{1-x}Ni_xO_3$ ($0 \leq x \leq 0.5$)",Journal of Alloys and Compounds574 (2013) 316–319.

15. Vinod Kumar, Rajesh Kumar, D K Shukla, S Gautam, Keun Hwa Chae and Ravi Kumar, "Electronic Structure and Electrical Transport Studies of $LaCo_{1-x}Ni_xO_3$ ($0 \leq x \leq 0.5$)", Journal of Applied Physics, 114 (8) 2013.

16. Sood, Anju and Srivastava, Sanjay K., New conditions for stability of solutions of impulsive differential equations, Applied mathematical sciences, vol. 6, no.86, 4295-4300, 2012.

17. Singh, Dilbaj and Srivastava, Sanjay K., Strict stability criteria for impulsive functional differential equations, Proceedings of the world congress on engineering, vol.1, July 4-6, 2012.

18. Singh, Dilbaj and Srivastava, Sanjay K., Strict stability criteria for impulsive differential equations with comparison results, advances in differential equations and control processes, vol.10, no.2, 171-182, 2012.

19. Gupta, Bhanu and Srivastava, Sanjay K., Global existence results for impulsive delay differential systems, Bull. Cal. Math. Soc., vol.104, 383-392, 2012.

20. Gupta, Bhanu and Srivastava, Sanjay K., Existence of Ψ- Bounded solution for non-homogenous impulsive differential system, Advances in applied mathematics analysis, vol.7, no. 1, 1-8, 2012.

21. Gupta, Bhanu and Srivastava, Sanjay K., Fuzzy differential equations with impulses and the extension principle, Int. J. of Mathematical Sciences and applications, vol.2, no.1, 251-257, 2012.

22. 22. A. K. Sharma,R. Dogra, Shalendra Kumar, S. K. Mishra, S. P. Lochab, and Ravi Kumar. Thermoluminescence Characteristics of Nanocrystalline LiF Phosphors Synthesized at different pH Values Science of Advanced Materials 4 (2012) 147.

23. Satinder Kumar , A.K Sharma , S.P. Lochab , Ravi Kumar . Thermoluminescence of Eu activated LiF nanophosphors, American Institute of Physics(2012) .

24. A.K Sharma ,R. Dogra , S.K. Mishra , S.P. Lochab , Ravi Kumar Thermoluminescence studies of Tissue Equivalent LiF nanophosphors American Scientific Publishers (2012)

25. A.K Sharma ,Satinder Kumar , S.P. Lochab , Ravi Kumar. Pure LiF nanophosphors for a high exposures of gamma rays. American Institute of Physics(2012)

26. Gupta, Bhanu and Srivastava, Sanjay K., Stability and boundedness of impulsive delay differential systems, The mathematics student, vol.80, nos. 1-4, 99-113,2011.

27. Surinder Singh, Arvind Kumar, Bikramjit Singh Bajwa, Sandeep Mahajan, Vinod Kumar and Sunil Dhar.Radon Monitoring in Soil Gas and Ground Water for Earthquake Prediction Studies in North West Himalayas, India. Terr. Atmos. Ocean. Sci., Vol. 21, No. 4, 685-695, August 2010.

28. Surinder Singh, Baldev Singh, Kawaljit Singh, Arvind Kumar, Sanjeev Kumar, Vinod Kumar, Bhupinder Singh, Ajay Kumar "Uranium analysis in drinking water samples for health risk assessments "Atti della Fondazione Giorgio Ronchi" ANNO LXV, N.2, 173-180 (2010).

29. Gupta, Bhanu and Srivastava, Sanjay K., Ψ-Exponential Stability for Non-linear Impulsive Differential Equations, International journal of computational and mathematical sciences, vol. 4,issue 7, 328-331, 2010.

30. R. Dogra, A.W. Carbonari, M.E. Mercurio, M.R. Cordeiro, J.M. Ramos, R.N.Saxena. Search for room temperature ferromagnetism in low-concentrationtransition metal doped ZnO nanocrystalline powders using a microscopic technique.IEEE Transactions of Magnetics 46 (2010) 1780.

31. S.B. Rana, P. Singh, A.K. Sharma, A.W. Carbonari,R. Dogra. Synthesis andcharacterization of pure and doped ZnO nanoparticlesJournal of OptoelectronicsandAdvanced Materials 12 (2010) 257.

32. R. Dogra, M.R. Cordeiro, A.W. Carbonari, R.N. Saxena, M.S. Costa.Absence of room temperature ferromagnetism in transition metal doped ZnO nanocrystalline powders from PAC spectroscopy.Hyperfine Interactions 179 (2010) 77.

33. Gupta, Bhanu, Mahajan, Aakanksha and Srivastava, Sanjay K.,Uniform Exponential stability of impulsive delay differential systems, Advances in differential equations and control processes, vol.4, issue 1, 29-39, 2009.

34. Kaur, Amanpreet and Srivastava, Sanjay K., Lipschitz stability of nonlinear systems of impulsive differential equations II. Llapunov functions, International J. of Math. Sci.& engg. Appls. (IJMSEA), vol.3, no.II, 109-120, 2009.

35. Kaur Amanpreet and Srivastava, Sanjay K., A new approach to stability of impulsive differential equations, Int. Journal of math. Analysis, vol.3, no.4, 179-185, 2009.

36. Kaur Amanpreet and Srivastava Sanjay K., Eventual Stability of impulsive differential system, applied mathematical sciences, vol.3, no.9, 403-414, 2009.

37. Dhawan, Dinesh, Singh, Kawaljeet and Srivastava, Sanjay K., RSA algorithm: a pillar of information security, Int. J. of computer applications in engineering, technology and sciences (IJ-CA-ETS), vol.1, issue.2, 318-320, April-September 2009.

38. Ajay Kumar, Arvind Kumar, Yudhvir Singh, Kawaljit Singh, Vinod Kumar and Surinder Singh, Radioactivity measurements in the environment of the Udhampur area, Jammu and Kashmir Himalayas, India Radiation Effects & Defects in Solids, Vol. 164, No. 11, November 2009, 719–725

39. R. Dogra,A.P. Byrne and M.C. Ridgway. PAC investigations of radiation damage annealing in ^{111}In implanted ZnOOptical Materials 31 (2009) 1443.

40. R. Dogra, A.P. Byrne and M.C. Ridgway.The Potential of the Perturbed Angular Correlation Technique in Characterizing SemiconductorsJournal of Electronic Materials 38 (2009) 623.

15. Details of patents and income generated :   Nil

16. Areas of consultancy and income generated : Nil

17. Faculty recharging strategies :

-Annual increments/ incentives based on appraisal for faculty

-CAS(Career Advancement Scheme) for promotions

-Funding for attending National and International Conferences

-Facility of recommending books for Departmental Library

-Faculty Development Programmes for motivating the faculty

-National and International Conferences

18. Student projects
   o   percentage of students who have done in-house projects including inter-departmental :   Nil
   o   percentage of students doing projects in collaboration with industries /

institutes :   Nil

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

- o   Faculty :   Nil
- o   Doctoral / post doctoral fellows **:**One faculty member as Visiting Scientist at IPEN/CNEN Sao Paulo Brazil
- o   Students **:**   Nil

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

- National Conference on Recent Advancements in Mathematics held on 1-2 Feb. , 2014 , partially funded by P.T.U , Jalandhar and TEQIP-II Grants.
- One day workshop-cum-exhibition on "Nuclear Technology :Addressing needs of people" was jointly organised by Beant College of Engg. & Technology, Gurdaspur And Media Relations and Public Awareness Section, BARC, Mumbai on Sept. 11, 2014

21.   Student profile course-wise:

Name of the Course	Applications received	Selected		Pass percentage	
		Male	**Female**	**Male**	**Female**
M.Sc (Applied Physics)	15	-	8	N.A.	N.A.

22.   Diversity of Students

Name of the Course	% of students from the college	% of students from the state	% of students from other States	% of students from other Countries
M.Sc. (Applied Physics)	Nil	100%	Nil	Nil

23.   How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?

Not Applicable

24. Student progression

Student progression	Percentage against enrolled
UG to PG	N.A
PG to M.Phil.	N.A
PG to Ph.D.	N.A
Ph.D. to Post-Doctoral	N.A
Employed • Campus selection • Other than campus recruitment	N.A
Entrepreneurs	N.A

25. Diversity of staff:
Percentage of faculty who are graduates

of the same parent university	Nil
from other universities within the State	75%
from other universities from other States	25%

26. Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the assessment period: One

27. Present details about infrastructural facilities

a) Library :   Central Library

b) Internet facilities for staff and students : Available

c) Total number of class rooms :   2

d) Class rooms with ICT facility :   2

e) Students' laboratories :   4

f) Research laboratories :   Central Facility

28. Number of students of the department getting financial assistance from College. : Nil

29. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology. Not Applicable

30. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?
- On the basis of feedback from faculty department identifies the academic gaps in the courses and accordingly revise the course contents as per the needs of the course.

b. students on staff, curriculum as well as teaching-learning-evaluation and what is the response of the department to the same?
- feedback from students are taken at the end of each semester and after evaluation the concerned faculty/staff are suggested to do the needful   required.

c. alumni and employers on the programmes and what is the response of the department to the same?
- feedback from the alumni are taken from time to time by training and placementoffice.

31. List the distinguished alumni of the department (maximum 10)

Not Applicable

32. Give details of student enrichment programmes (special lectures / workshops / seminar) with external experts.

Department arranges expert lectures on various topics from time to time .

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

Besides classroom teaching the faculty uses multi-media projectors and overhead projector.

34. How does the department ensure that programme objectives are constantly met and learning outcomes monitored?
The department ensures that programme objectives are constantly met and learning outcomes are monitored with following measures:

- The department ensures the curriculum is designed to meet the program outcomes.

- The faculty ensures the syllabus is revised and is involved in improving student skills through assignments and mid-semester test .

-The course file is being made by all faculty members for their respective courses and HOD monitors the coverage of syllabus with the help of Course file and sees the academic schedules are intact.

- The performance of the students is analyzed time to time and slow learners are identified. Special classes are planned for the slow learners called as remedial classes.

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

Student Activities
: NIL

Faculty Activities:

S. No.	Name of Faculty	Member of Society/ Institute/ others
1.	Rakesh Dogra	Member Board of Studies in Physics PTU Jalandhar, Dean Faculty welfare, Incharge Central Laboratory, Head of Department, Member (Academic Council), Member various committees of the college, College Library Committee, Co-ordinator polytechnic wing, Incharge College NBA Committee.
2.	Jatinder Kumar Behl	Training & Placement Officer, Dean (Planning & Development), Assistant Co-ordinator TEQIP-II project, Head of Department, Member Board of Studies in English PTU Jalandhar , Lab Incharge
3.	Sanjay Kumar Srivastava	Chief Warden, Member Board of Studies in Mathematics PTU Jalandhar, Incharge Literary Club
4.	Arvind Kumar	Registrar, Co-ordinator TEQIP-II project, Nodal Officer Procurement TEQIP-II, Life member ISTE chapter
5.	Rajiv Malhotra	Head of Department, Member Board of Studies in Physics PTU Jalandhar, Warden, Lab-Incharge, Coordinator M.Sc Physics
6.	Anju Awasthi	Head of Department, Warden, Member of IPC
7.	Harwinder Kaur	Warden, Lab Incharge
8.	Vijay Kumar	Deputy Dean (Academic) ,member admission committees, chairman printing Information Brochures 2013-14 & 2014-15,chairman printing Identity cards of 2014 batch, Member of various committees to get academic autonomy,coordinator SC/OBC(Pb),PMSS and other states like UP,HP,Bihar etc.,Member of Institute (Engg.wing,Poly wing,School wing) ,development committees,member of discipline committees etc
13.	Priti Wadhera	Lab-Incharge

36. Give details of "beyond syllabus scholarly activities" of the department.

-Classes for weaker students are held to improve the performance of students.

37. State whether the programme/ department is accredited/ graded by other agencies. Give details.

Not Applicable

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department

Strengths
-Well qualified faculty
-Participation of faculty in various National/ International conferences.
-Large number of publications in International journals of repute

Weaknesses
-Less number of permanent faculty members.
-Lack of research projects in the department.

Challenges
-To start post graduate course in Applied Chemistry
-To get research projects from various funding agencies.

39. Future plans of the department.
   -To start post graduate course in Applied Chemisty
   -To bring research projects from various funding agencies.

Evaluative Report of Electronics & Communication Engineering Department

1.	Name of the Department	**ELECTRONICS AND COMMUNICATION**
	Year of establishment	**1997**
2.	Names of Programmes/ courses offered	**B. Tech. (UG)**

3. Interdisciplinary courses and departments involved

Maths, Chemistry, Physics, Communication Skills, Applied science Engg. Economics & Industrial Management	
Environmental Science	Chemical Engineering
Elements of Mechanical Engineering,Engineering Drawing	Mechanical Engineering
Fundamental of Computer Programming & IT, Object Oriented Programming, Operating System	Computer Science and Engineering

4.	Examination system	Semester system

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

Basic of Electrical & Electronics	Common course in First year offered to all departments
Digital Circuit and Logic Design	Computer Science and Engineering & Information Technology

6. Number of teaching posts sanctioned and filled:

Designation	Sanctioned	Filled	Remarks
Professor	02	NIL	
Associate Professors	03	05	04 under CAS
Assistant Professors	10	10	

7. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

S.No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the Last 4 Years
1.	Gurpadam Singh	M.Tech	Assoc. Prof.	Microprocessor. Micro-Controllers	17	NIL
2.	Dr. Jaswinder Singh	Ph.D	Assoc. Prof.	Optical Comm.	18	04 guiding
3.	Dr. Ajay Kumar	Ph.D	Assoc. Prof.	Electromagnetics	18	12 guiding
4.	Dr. Amarpal Singh	Ph.D	Assoc. Prof.	Optical Comm.	20	09
5.	Parveen Kumar	M.Tech	Assoc. Prof.	Wireless Comm	19	NIL
6.	Neetu	M.Tech	Astt. Prof.	Wireless Comm	16	NIL
7.	Mandeep Kaur	M.Tech	Astt. Prof.	Wireless Comm	16	NIL
8.	Anita Suman	M.Tech	Astt. Prof.	Instrumentation	13	NIL
9.	Saurabh Mahajan	M.Tech	Astt. Prof.	Electronics & Communication	07	NIL
10.	Amandeep	M.Tech	Astt. Prof.	Electronics	03	NIL
11.	Amit Singh	M.Tech	Astt. Prof.	Electronics	02	NIL
12.	Rajwinder Singh	M.Tech	Astt. Prof.	Electronics	01	NIL
13.	Harpreet Singh	M.Tech	Astt. Prof.	Electronics	01	NIL
14.	Jaspreet Kaur	M.Tech	Astt. Prof.	Electronics		NIL
15.	Nitish Rana	M.Tech	Astt. Prof.	Microelectronics	03 months	NIL

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

Session	%age of classes taken by Temporary Faculty
JAN-JUNE , 2011	23%
JULY- DEC , 2011	44%
JAN- JUNE, 2012	38%
JULY - DEC , 2012	56% *
JAN- JUNE, 2013	52%*
JULY - DEC , 2013	54%*

JAN- JUNE, 2014	18%
JULY - DEC , 2014	10%
JAN- JUNE, 2015	08%

* Temporary faculty was engaged because of increase in seats in 2010 from 60 to 120.

9. Programme-wise Student Teacher Ratio:

YEAR	Student /Teacher Ratio
2009	271/11
2010	349/11
2011	433/13
2012	514/15
2013	596/15
2014	548/15

10. Number of academic support staff(technical) and administrative staff:

	Sanctioned	Filled
Lab Technician	04	04
Steno/Clerk	01	01
Lab Attendant	02	02
Attendant	01	01

11. Number of faculty with ongoing projects: NIL

Number of faculty with ongoing projects	---
Name of the Project	---
Funding Agency level	---
Name of Funding Agency	---
Total grants received	----

12. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE;DBT,ICSSR,AICTE etc. NIL

13. Research facility/ centre:
> State Recognition: Nil
>
> National Recognition: Nil
>
> International Recognition: Nil

14. Number of papers published in peer reviewed Journals/Conferances

Journals Papers

1. Baljit Singh, Parveen Kumar," Understanding the effects of Scaling in case of a High Speed Low Power Low resolution ADC through Simulation" International Journal of Electronic Engineering Research, Volume I Number 4 (2009) pp. 349-356, 2009.

2. V. Seethalaksmi and Gurpadam Singh, "Lossless Watermarking for Image Authentication", in CIIT International Journal of Digital Image Processing, Volume 1, No 5, August 2009, India.

3. R.P.P. Singh, Parveen Kumar, Balwinder Singh, "Performance Analysis of 32-Bit Array Multiplier with a Carry Save Adder and with a Carry-Look-Ahead Adder" International Journal of Recent Trends in Engineering Vol. 2, No. 6, Nov 2009 PP 83-86, Finland.

4. Amarpal Singh, Ajay K Sharma, and T.S. Kamal "Investigation on Modified FWM Suppression Methods in DWDM Optical Communication System", Optics Communication, Elsevier Science Volume 282, Issue 3, pp. 392-395, Feb. 2009.

5. Amarpal Singh, Ajay K Sharma, T S Kamal, "The Effect of Phase Matching Factor on Four Wave Mixing in WDM Optical Communication Systems: Fuzzy and Analytical Analysis" International Journal of Computer Applications in Technology, InderScience, UK, Volume 34, Issue 3, pp. 165-171, 2009.

6. Amarpal Singh, Ajay K Sharma T S Kamal and Manju Sharma, "Comparative study of FWM in WDM Optical Systems Using OptSim and ANFIS", International Journal for Information & Systems Sciences, Canada Volume. 5(1), pp 72-82, 2009.

7. Amarpal Singh, Ajay K Sharma, T S Kamal and Manju Sharma "Simulative Investigations of power penalty for DWDM link in the presence of FWM", Optik, International Journal for Light and Electron Optics, Germany, Elsevier Science, Volume 120, Issue 12, pp. 579-584, July 2009.

8. Balwant Raj, Anita Suman, Gurmohan Singh,"Analysis Of Power Dissipation In Dram Cells Design For Nanoscale Memories", International Journal of Information Technology & Knowledge Management. Vol. 2, No. 2, July-Dec 2009 pp 371-374, New Delhi.

9. Rashima Mahajan and Gurpadam Singh, "A Simulative Investigation: PSNR/Compression ratio directs the selection of compression technique", in Engineering Today National Monthly Journal, Volume XI, Issue 08, August 2009, India.

10. Rashima Mahajan and Gurpadam Singh, "Transform Coding Based Image Compression Techniques – A Simulative Investigation", in CIIT International Journal of Digital Image Processing, Volume 1, No 5, August 2009, India.

11. Amarpal Singh, Ajay K Sharma, Sharanjot Singh, Manju Sharma and Paramjit Singh "Performance of a 4×10 Gbit/s Optical Time Domain Multiplexed System using SMZ Switching", Optik, International Journal for Light and Electron Optics, Germany, Elsevier Science, Volume 120, Issue 14, Pages 699-703 September 2009.

12. Randhir Singh, Parveen Lehana and Gurpadam Singh, "Investigations of the phonemes in the calls of little owls using vector quantization, "International Journal of Information Technology & Knowledge Management, vol. II, December. 2009.

13. Ashish Suri and Gurpadam Singh, "Security Aspects in GSM and its Flaws" published in Telecommunications: The Indian Journal of Telecommunications in April 2010, vol. 59/3, p32-38.

14. Balwant Raj, Anita Suman, Gurmohan Singh,"SRAM Cell Design for Nanoscale Memories with Low Power and Low Leakage Current", International Journal of Computing and Information Technology (IJCIT), Serials Publications, New Delhi. Jan-June 2010.

15. Ginni Sharma, Anita Suman, Sanjeev Kumar, Parveen Kumar, "Performance Analysis of Convolution Coded WLAN Physical Layer under Different Modulation Techniques" Signal Processing: An International Journal (SPIJ), Volume (4): Issue (4) pp. 213-218 Oct-10.

16. Jaswinder Singh, M. L. Singh, "Design of 3-D Wavelength/Time/Space Codes for asynchronous Fiber Optic CDMA Systems", IEEE PTL, pp. 131-133, 2010.

17. Neetika Soni, Jaswinder Singh, Performance evaluation of temporal phase encoded optical CDMA system", Optik-International journal for light and electron optics, Volume 121, Issue 9, May 2010, Pages 788-792

18. Jaswinder Singh, "Performance of asynchronous fiber-optic code division multiple access system based on three-dimensional wavelength/time/space codes and its link analysis", OSA J. Applied Optics, pp. 1355-1363, March 2010.

19. Jaswinder Singh, Influence of polarizer detuning on performance of OTDM systems employing SMZ interferometer based demultiplexing, IJAET, pp. 40-42, 2011.

20. Jaswinder Singh, Optimizing duty cycle of RZ transmission for optical TDM communications, IJAET, pp. 242-245, 2011.

21. Jaswinder Singh, Optical code division multiple access systems, IJAET, pp.246-250, 2011.

22. Jaswinder Singh, Analysis of wavelength conversion using four wave mixing and cross-gain modulation techniques, NCCN Conference, pp 21-23, Feb., 2011.

23. Jaswinder Singh, Reducing SOA non-linearity by employing feed forward linearization technique in ROF link, NCCN Conference, pp 6-8, Feb., 2011.

24. Manish Sharma and Gurpadam Singh "Evaluation of Proactive, Reactive and Hybrid Ad hoc Routing Protocol for various Battery models in VANET using Qualnet" International Journal of Smart Sensors and Ad Hoc Networks (IJSSAN) I Volume-1, Issue-2, 2011.

25. Rajniti, Anita Suman, Anu Sheetal and Parveen Kumar, "Comparison of RZ and NRZ data formats for 2.5Gb/s bidirectional WDM/TDM-PON using narrowband AWG" IJVSPA International Journal of VLSI and signal Processing Application, Vol. 1, Issue 2, May 2011, pp.95-101.

26. Kawaldeep Singh ,Parveen Kumar, "Algorithm for Blocking Artifact Detection & Reduction using adaptive filtering in Compressed Images" IJAEST International journal of advanced engineering sciences and technologies , vol no. 5, issue no. 2, 2011, pp.156 – 162.

27. Manish Sharma and Gurpadam Singh "Evaluation of Proactive ,Reactive and Hybrid Ad hoc Routing Protocols for IEEE 802.11 MAC and 802.11 DCF in VANET using Qualnet" PP209-220, Volume 1- Vol. No.2,May 2011 International Journal of Computer Science and Information Technology.

28. Saurabh Mahajan and Gurpadam Singh., (2011) "Reed-Solomon code Performance for M-ary Modulation over AWGN Channel" International Journal of Engineering Science and Technology, vol. 3, No.5, pp.3739-3745, May 2011, ISSN: 0975-5462.

29. Saurabh Mahajan and Gurpadam Singh., (2011) "BER Performance of Reed-Solomon Code Using M-ary FSK Modulation in AWGN Channel" International Journal of Advances in Science and Technology, vol. 3, No.1, pp.7-15, July 2011.

30. Manish Sharma and Gurpadam Singh, "Performance Evaluation AODV, DYMO, OLSR and ZRPAD HOC Routing Protocol for IEEE 802.11 MAC and 802.11 DCF in VANET using QUALNET". International Journal on AdHoc Networking Systems, Vol. 2, No. 1, January 2012.

31. Preetinder Singh, Ajay Kumar, "AES Keys and Round Functions for Data Security"International Journal of Computer Applications, Vol.39, No.11, February 2012.

32. Kawaldeep Singh and Parveen Kumar "A Novel Approach for Blocking Artifact Reduction in JPEG Compressed Images" international journal of Emerging Technology and Advanced Engineering, Volume 2, issue 2, February 2012.

33. Neetu Gupta, Gurpadam Singh, Mandeep Kaur Sekhon, "Performance Evaluation of STBC Codes With Increased Order Of Pseudo-random Number Generator", International Journal of Engineering Research and Applications,Vol. 2, Issue 2, Mar-Apr 2012, pp.099-102.

34. Shashi B. Rana, V.K. Bhardwaj, Satbir Singh, Amarpal Singh, Navneet Kaur, "Influence of surface modification by 2-aminothiophenol on optoelectronics properties of ZnO nanoparticles", Journal of experimental Nanoscience, Taylor and Francis (2012)

35. Nidhi Mehta, Mandeep Kaur Sekhon, Gurpadam Singh, "Performance Evaluation of STBC Codes with Channel Estimation by Optimized Pilot Bits", published in International Journal of Electronics and Communication Engineering and Technology (IJECET), Volume 3, Issue 1, June, 2012, pp. 54-61.

36. Dinesh, Ajay Kumar, Jatinder Singh, "Mobile Ad-Hoc Networks: A Survey",International Journal of Computer Science and Technology for publication, has been accepted Nov., 2012.

37. Vibha Raj Nag, Gurpadam Singh,(2012)," Design and Analysis of Dual Band Microstrip Patch Antenna with Microstrip feed line and slot for Multiband Application in Wireless

Communication", International Journal of Computer Science and Information Technology & Security, vol. 2, No.6, December 2012.

38. Rajat Arora, Ajay Kumar, "Finite Element Modeling & Design of Rectangular Patch Antenna with Different Feeding Techniques", Open Journal of Antennas & Propagation vol.1,pp 11-17,2013.

39. Vibha Raj Nag, Gurpadam Singh, "Design and Analysis of Circular Slotted MSA for Wireless Communication", IJAIR - International Journal of Advanced and Innovative Research, ISSN: 2278-7844 Vol. 2, and No 2, PP 341-344, February 2013.

40. Jai Kumar, Anita Suman, "Simulation and evaluation of convolution encoder for different noisy channel over wireless communication network in CDMA environment" International Journal of Advanced Research in Computer Engineering & Technology, Volume 2, Issue 2, February 2013.

41. Sonal Sood, Amarpal Singh and Vishal sharma, "Enhanced analysis of spread spectrum schemes in wireless mesh networks", International Journal of Computer Networking, Wireless and Mobile Communications, Trans steller, vol. 3, Issue 1, Mar 2013, 131-136.

42. Neeru Malhotra, Pankaj Kumar, Anupma Marwaha, Ajay Kumar, "Adaptive Finite Element Analysis for Optimized Design of Coaxial Antenna Fed DI Water-Stowed Waveguide Applicator for Therapeutic Local Hyperthermia System" ,Int. Journal of Electronics Communication and Computer EngineeringVolume 4, Issue 4, pp1145-1149, 2013.

43. Neetu, Parveen Kumar, "Performance Analysis and Comparison of DSDV and AODV Routing Protocols for MANET" IJAERS International Journal of Advanced Engineering Research and Studies Vol. I, Issue III (220-222), April-June, 2012.

44. Virendra Kumar, Dr. Ajay Kumar, "Simulative Analysis for Image Denoising using Wavelet Threshold Techniques", Int. Journal of Advanced Research in Computer Engg & Tech,ISSN:2278-1323,Vol.2,No.5,2013.

45. Vishal Sharma, Amarpal Singh, Ajay K. Sharma, "RF-and Optical- Integrated Radio-over-Fiber (RoF) Network with High Channel Allocation Capability", Accepted, OPTIK, Elsevier, Volume 124, Issue 13, July 2013, Pages 1536-1541.

46. Vishal Sharma, Amarpal Singh, Ajay K. Sharma "Transmission Performance of OSSB-RoF System Using MZM Electro-Optical External Modulator",Optik, International Journal for Light and Electron Optics, Germany, Elsevier Science, vol .124, Issue 13, July 2013, pp.1555-1559.

47. Rajwinder Singh, Jasvir Singh, AS Kang, "Cognitive Radio New Dimension in Wireless Communication-State of Art" in International Journal of Computer Applications, Volume 74- No.10, July 2013.

48. Virendra Kumar, Dr. Ajay Kumar, "Simulation & Evaluation Analysis of Shrinkage Techniques for Image Denoising under Additive White Gaussian Noise", Int. Journal of Sc. Research Publications, ISSN: 2250-3153, Vol.3, Issue 7, 2013.

49. Rajat Arora, Ajay Kumar, "Design Analysis and Comparison of HE and E Shaped Microstrip Patch Antennas", Advances in Electrical &Electronics Engineering 2013.

50. Vaishali Sood, Parveen Kumar, " Controlling the Motion of Moving Vehicle using Fuzzy Logic" Open Journal of Artificial Intelligence OJAI 2013, volume1, page 1-7, August 2013.

51. Shashi B. Rana , V.K. Bhardwaj, Satbir Singh, Amarpal Singh, Navneet Kaur, "Synthesis and optical characterization of ZnO nanoparticles capped with 2-aminothiols, Journal of material: Material in Electronics, Springer, 24 (2013)20.

52. Shashi B. Rana, Amarpal Singh, Navneet Kaur, "Structural and optoelectronics characterization of prepared and Sb doped ZnO nanoparticles", Journal of material science: material in Electronics, Springer, 24 (2013) 44.

53. Gurpreet Kaur, Mrs. Mandeep Kaur Sekhon, "To Enhance Life Time of WSN using Neural Network Approach", International Journal For Advance Research In Engineering And Technology, Vol. 1, Issue IX, Oct.2013.

54. Teena Sharma, Mandeep Kour, Jang Bahadur Singh, Parveen Lehana, "Effect of Anger on EMG Signals Generated in Occipitofrontalis Muscle for Palatal Consonants",International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 11, November 2013, pp.1421- 1425.

55. A Singh, D Engles, "Calculation of cladding modes using both two layer and three layer geometry in LPFG", OPTIK Volume 124, Issue 21 November 2013, pp.5042–5045.

56. Teena Sharma, Mandeep Kour, Parveen Lehana, "Effect of Anger on EMG Signals Generated in Zygomaticus Muscle for Velar Consonants", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 3, Issue 12, December 2013, pp. 1-6.

57. Shashi B. Rana, Amarpal Singh, Satbir Singh "Characterization and optical study of pure and antimony (Sb) doped ZnO nanoparticles", International Journal of Nanoelectronics and Material 6(2013)45.

58. Shashi B. Rana , Simanpreet Kaur, Satbir Singh, Amarpal Singh, Narinder Singh Navneet Kaur," Synthesis and Characterization of Semiconductor Zinc Oxide (ZnO) Nanoparticles: Selective Extraction and Transport of Zn(II) with Organic Receptor", World Applied Science Journal (2013).

59. Vaishali Sood and, Parveen Kumar, "Adaptive fuzzy controller for controlling the dynamics of robot motion', Int. J. Fuzzy Computation and Modelling, Vol. 1, No. 1, 2014, pp.37–50.

60. A Singh, D Engles, A Sharma, M Singh, "Temperature sensitivity of long period fiber grating in SMF-28 fiber", OPTIK Volume 125, Issue 1, January 2014, pp.457–460.

61. Gurpreet Kaur, Mandeep Kaur Sekhon, "Heterogeneous Enhanced Energy Efficient Protocol with Static Clustering in Wireless Sensor Networks" International Journal of Applied Research and Studies (iJARS), Volume 3, Issue 1, Jan 2014.

62. Er. Kamaldeep Vyas and Mrs. Neetu "Optimized design of IIR polyphase multirate filter for wireless communication system" in International journal of advanced research in computer Engineering and technology,Vol-3,issue :3 march-2014,PP:833-839.

63. Neeru malhotra, Dr. Anupma marwaha, Dr. Ajay Kumar, "Accurate Investigation of Coaxial-Slot Antenna for Invasive Microwave Hyperthermia Therapy",International Journal of Sciences: Basic and Applied Research, no. 1, vol. 16, pp. 388- 396, 2014.

64. Neeru Malhotra,Anupma Marwaha & Ajay Kumar , "Finite Element Modeling of Novel Rectangular Plate Antenna for Superficial Hyperthermia", International Journal of Electronics and Communication, vol. 14, issue 2, pp. 1491-1496, 2014.

65. Sourabh Mahajan, Parveen Kumar, Neha Mahajan, Anita Suman, Saurabh Mahajan, "Reduction of Peak to Average Power Ratio and Bit Error Rate Ratio in OWDM and OFDM" International Journal of Engineering Research & Technology (IJERT) Vol. 3 Issue 2, February-2014.

66. Pardeep Pathania, Parveen Kumar, Shashi B. Rana,"A Modified Formulation of Path Loss Models for Broadcasting Applications. International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-3 Issue-3, pp-44-54, July 2014.

67. Shashi B. Rana, Amarpal Singh, Optical studies of modified ZnO nanoparticles using 4-aminothiophenol as a capping agent, Springer and KIM (2014)

68. A Singh, S.B Rana, M Singh, A Sharma, Study and investigation of long period grating as refractive index sensor, OPTIK Volume 125, Issue 7, April 2014, pp.1860–1863.

69. Sourabh Mahajan, Parveen Kumar,Anita Suman, "Analysis of OFDM and OWDM System with various Wavelets Families"International Journal of Engineering Research and General Science Volume 2, Issue 3, April-May 2014.

70. Pardeep Pathania, Parveen Kumar, Shashi B. Rana,"Performance Evaluation of Path Loss Parameters for Broadcasting Applications" IJRET: International Journal of Research in Engineering and Technology, Volume: 03 Issue: 04, Apr-2014.

71. Pardeep Pathania, Parveen Kumar, Shashi B. Rana,"Performance Evaluation of different Path Loss Models for Broadcasting applications" American Journal of Engineering Research ,Volume-03, Issue-04, pp-335-342, 2014.

72. Jai Sukh Paul Singh, Rajwinder Singh, Mritunjay Kumar Rai, Jasvir Singh, A. S. Kang, "Cooperative Sensing for Cognitive Radio: A Powerful Access Method for Shadowing Environment", Wireless Personal Communications, Volume 80, Issue 4, pp 1363-1379, 2014.

73. Neetu, Parveen Kumar, "simulation analysis and comparison of DSDV and AODV routing protocols for MANET" in international journal of advanced engineering research and studies, APR-JUN,2012 ,pp. 220-222.

74. Satbir Singh, Tilak Raj, Amarpal Singh, Vimal K. Bhardwaj & Navneet Kaur, "Characterisation and Optoelectronics Investigations of Polymer Directed Semiconductor

ZnO nanoparticles", Journal of J of Nanoelctronics & Optoelectronics, American Scientific Publisher, vol. 9, pp 1-8, August (2014).

75. Shikha, Neetu, " Various Image Fusion Techniques A Review" is published in Asian Academic Research Journal of Multidisciplinary on, pp. 186-197.vol 1.ISSUE 24. AARJMD, August-2014.

76. Shikha, Neetu, " A new Integrated MAX-AC-DCT based Image Fusion using Gray World Constancy & Switching Median Filter"will be published in "International journal of Advanced Research of Computer Science and Software Engineering" (IJARCSSE) Volume-4, Issue-11.Nov 2014.

Conference Papers

1. V. Seethalaksmi and Gurpadam Singh, "Lossless Watermarking for Image Authentication", National conference 'NCACN-09', at Avinashilingam University for Women, Coimbatore, Tamilnadu on 8th January 2009.

2. Rashima Mahajan and Gurpadam Singh, "Comparison of image compression algorithms: From DCT to Wavelets", in proceedings of National conference 'NCACN-09', at Avinashilingam University for Women, Coimbatore, Tamilnadu on 8th January 2009.

3. Rashima Mahajan and Gurpadam Singh, "Simulative comparison of image compression methods", in proceedings of National conference 'NCCN-09', at Sant Longowal Institute of Engineering and Technology, Longowal, Punjab on 6-7th March 2009.

4. Randhir Singh, Gurpadam Singh and Parveen Lehana, "Investigations of the calls generated by crows using vector quantization, "UGC Sponsored National conference on Pattern Recognition, Analysis and Applications, March 2009.

5. Rashima Mahajan and Gurpadam Singh,, "Wavelet Based Image Coding Techniques: A Study", in proceedings of International Conference on Wireless Networks and Embedded Systems 'WECON-2009', at Chitkara University, India, on 23rd -24th October,2009.

6. Randhir Singh, Gurpadam Singh and Parveen Lehana, "Investigations of the phonemes in the calls of little owls using MFCC's, "International Conference on Wireless Networks & Embedded Systems (WECON-2009), at Chitkara University, India, on 23rd -24th October 2009.

7. Randhir Singh, Parveen Lehana and Gurpadam Singh, "Investigations of the calls generated by little owls using vector quantization,"2nd National Conference on Emerging Principles & Practices of Computer Science & Information Technology (EPPCSIT'09),GNDEC, Ludhiana, September 2009.

8. Vibha Raj Nag and Gurpadam Singh, "A new Approach to High Speed Internet using White Space Technology" a paper in International Conference on Computer Communication and Informatics, at Sri Shakti Institute of Engineering and Technology, Coimbatore during 11-12th Jan., 2011.

9. Saurabh Mahajan and Gurpadam Singh, "Simulation Performance of Reed-Solomon Codes as a Function of Redundancy in AWGN Channel" published in National Conference on

"Recent Advances in Computational Techniques in Electrical Engineering" Feb. 25-26, 2011 organized by Electrical and Instrumentation Engineering Department, SLIET Longowal, Sangrur, Punjab, India

10. Jaswinder Singh, Analysis of wavelength conversion using four wave mixing and cross-gain modulation techniques, NCCN Conference, pp 21-23, Feb., 2011.

11. Jaswinder Singh, Reducing SOA non-linearity by employing feed forward linearization technique in ROF link, NCCN Conference, pp 6-8, Feb., 2011.

12. Manish Sharma and Gurpadam Singh ,"Evaluation of Proactive, Reactive and Hybrid Ad hoc Routing Protocols for Various battery models in VANET using Qualnet" PP. 208-213, ISBN-9788192091396, International conference on control communication and computer Technology organized by Inter-science Research Network (Bhubaneshwer) held at New Delhi, 6th -7th August 2011.

13. Manish Sharma and Gurpadam Singh, "Evaluation of Proactive Fisheye Ad hoc Source Routing Protocol for various Battery models in VANET using Qualnet." AISC 130, PP. 255-266, [springerlink.com], Proceedings of the International conference in Soft Computing and Programming System 2011, at IIT Roorkee.

14. Saurabh Mahajan and Guriqbal Singh,"Long Term Evolution-Advanced (LTE-A): An Introduction" International Conference of Emerging Dimensions in IT and its Application in Industry, "EDIAI 2012", Global Institutes of Management & Emerging Technologies, Amritsar, March 02-03, 2012.

15. Neetu Gupta, Gurpadam Singh, Mandeep Kaur Sekhon "Performance Evaluation of STBC Codes With third order of Pseudo-random Number Generator" International Conference of Emerging Trends in IT and its applications Vol 1 Issue 1 on 2nd - 3rd March, 2012 Global Inst. Of Engineering and Technology, Amritsar.

16. Neeru Malhotra,Anupma Marwaha & Ajay Kumar., , "Microwave interstitial Tumor Ablation: New Modality for Treatment of Liver Cancer", International Conference on BEATS,NIT, Jalandhar,2012.

17. Harneet Kour Khajuria, Saurabh Mahajan, Akhil Vaid,"Fuzzy Logic Application: Temperature Control"National Conference on "Emerging Principles & Practices in Computers and Communication Media" "EPPCCM-2012" at Sri Sai College Of Engineering & Technology, Badhani Pathankot April 7-8,2012, pp.68.

18. Nidhi Mehta, Mandeep Kaur Sekhon, Gurpadam Singh, "Performance Evaluation of STBC Codes with Variable Pilot Bits for Channel Estimation", published and presented in National Conference on "Emerging Principles & Practices in Computer and Communication Media (EPPCCM) -2012", 7th -8th April 2012 , (page 58) organized by Department of Computer Science, Sri Sai College of Engineer and Technology, Bhadani-Pathankot.

19. Saurabh Mahajan,"Review of Long Term Evolution" UGC Sponsored National Seminar on "Issues in Cloud Computing and wireless Communication" Guru Nanak Dev University, Regional Campus, Gurdaspur, August, 13-14, 2012.

20. Saurabh Mahajan,"Radio Over Fiber A New Approach to Wireless Network" UGC Sponsored National Seminar on "Issues in Cloud Computing and wireless Communication" Guru Nanak Dev University, Regional Campus, Gurdaspur, August, 13-14, 2012.

21. Saurabh Kher, Gurpadam Singh, "Bit Error Rate Analysis of Wimax Physical Layer under various modulation Techniques and Cyclic prefix", at PTU Sponsored National Conference on Emerging Researches in Engineering, Technology & Managementfrom 19-20 Oct. 2012 held at KC College of Engineering & IT, Nawanshahr.

22. Vibha Raj Nag, Gurpadam Singh, "Evaluation of Microstrip Patch Antenna using Different Feeding Techniques for Wireless Communication", at PTU Sponsored National Conference on Emerging Researches in Engineering, Technology & Management from 19-20 Oct. 2012 held at KC College of Engineering & IT, Nawanshahr.

23. Jaspreet Kaur, "Comparative Study of Bio inspired Evolutionary & Swarm Intelligence Optimization Algorithms"International Conference IMS-13 on Information & Mathematical Sciences at BFCET, Bathinda,2013.

24. Neetu, "Comparison of Digital Image Steganography Algorithm based on DCT and Wavelet" National Seminar on Recent Trends In Cloud Computing and Communication February, GNDU Regional Campus, GURDASPUR, 7th-8th, 2014.

25. Neetu, "Image fusion: Introduction, 1st National conference on Innovations in Engineering and Information Technology (IEIT-14), at Khalsa College of Engineering & Technology, Amritsar,2014.

26. Aashima Thakur, Saurabh Mahajan, "A Review on Robustness of Decision Based Median Filters in the Removal of Salt and Pepper Noise"2ndNational Conference on "Emerging Principles & Practices in Computers and Communication Media" "EPPCCM-2014" at Sri Sai College Of Engineering & Technology, Badhani, Pathankot May 30th -31th, 2014, pp.93.

27. Inderpreet Kaur, Saurabh Mahajan (2014), "Survey:Optical Character Recognition Based Techniques using Neural Network" 2nd National Conference on "Emerging Principles & Practices in Computers and Communication Media" "EPPCCM-2014"at Sri Sai College Of Engineering & Technology, Badhani Pathankot May30th -31th, 2014, pp.51.

15.   Details of patents and income generated: NIL

16. Areas of consultancy and income generated   NIL

17. Faculty Recharging strategies
    Annual increments based on appraisal for faculty
    CAS(Career Advancement Scheme) for promotions
    Funding for attending National and International Conferences
    Facility of recommending books for Departmental Library
    Faculty Development Programmes for motivating the faculty
    National and International Conferences

Funding for membership of National/International Societies.

18. Student Projects

Percentage of students who have done in-house projects including inter-departmental: **100%**

Percentage of students doing projects in collaboration with other universities/ industries / institutes: **100%** students go for industrial training in different industries / institutes .

19. Awards recognition received at the national and international level by

Faculty	:	NIL
Doctoral	:	03
Students	:	NIL

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

21. Student Profile Course-wise: Students are admitted on the basis of JEE Mains rank.

Course B.Tech. ECE	Applications Received		Selected		Pass Percentage
	Regular	LEET	Male	Female	Male

22. Diversity of Students

Name of Course B.Tech.	Percentage of students from the college	Percentage of students from the state	Percentage of students from other states	Percentage of students from Othercountries
2009	71	64 (90.14%)	07 (09.85%)	NIL
2010	152	148 (97.36%)	04 (02.63%)	NIL
2011	152	131 (86.18%)	21 (13.81%)	NIL
2012	150	130 (86.66%)	20 (13.00%)	NIL
2013	151	135 (89.40%)	16 (10.59%)	NIL
2014	96	88 (84.48%)	08 (08.33%)	NIL

23. Students cleared competitive examination:

Batch	GATE	CAT
2009-2013:	-	-

2010-2014:	07	03

24. Student progression:

Student progression	Percentage against enrolled			
	Batch 2007-2011	Batch 2008-2012	Batch 2009-2013	Batch 2010-2014
UG to PG	15%	13%	11%	12%
PG to M.Phil.	----	----	----	----
PG to Ph.D.	----	----	----	----
Ph.D. to Post-Doctoral	----	----	----	----
Employed				
● Campus selection	06%	20%	12%	04%
● Other than campus recruitment	08%	23%	17%	07%
Entrepreneurs	----	----	----	----

25. Diversity of staff

Percentage of faculty who are graduates	
of the same university (PTU)	33%
from other universities within the state	67%
from other universities from other states	NIL
from universities outside the country	NIL

26. Number of faculty who were awarded Ph.D., D.Sc., and D. Litt. During the assessment period: **03**

1. Dr. Amarpal Singh
2. Dr. Ajay Kumar
3. Dr. Jaswinder Singh

27. Present details about infrastructural facilities:

a) Library: 78 Books

b) Internet Facilities for Staff and Students: **100** Mbps wired and Wireless connectivity in Staff Rooms, Laboratories and Hostels.

c) Total No of Class Rooms: 03   (01 shared with applied science department)

d) Class Rooms with ICT Facility: 02

e) Student and Research Laboratories:

S.No.	Student Laboratories

1.	Lab Analog Devices & Circuits
2.	Lab Digital Circuit and Logic Design
3.	Lab Object Oriented Programming
4.	Lab Analog Communication Systems
5.	Lab Electronic Measurement &Instrumentation
6.	Lab Signal &Systems using MATLAB/Mentor DSP
7.	Lab Analog Communication Systems
8.	Lab Linear Integrated Circuits
9.	Lab Microprocessors & Micro-Controller
10.	Lab Microwave Engineering
11.	Lab Digital Communication
12.	Lab Digital Signal Processing using MATLAB
13.	Lab VLSI

Software Available in the Department

S. No.	Software Available
1.	Opt SIM
2.	MATLAB
3.	XILINX
4.	Mentor DSP
5.	Optisystem
6.	Mentor Graphics HEP2

Research Laboratories: Central Research Laboratory

28. Number of students of the dept. getting financial assistance from the college: ----

29. Was any need assessment exercise undertaken before the development of new program? If so, highlight the methodology:

Yes, it is done by taking

- Feedback from students (studying as well as pass-out)

- Feedback from Alumni of the Department

- Feedback from Companies in which students get placed

- Feedback from faculty

These feedbacks are taken online from time to time and a committee is formed which analyses these feedbacks which then plans for modification of course or introduction of new course.

30. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize it?

The department takes feedback from faculty and utilizes in
Identifying the academic gaps in the curriculum
Identifying the need in improving the course contents by updating the syllabus
Identifying the need for including new courses in the curriculum
Identifying the pitfalls in the teaching learning process
Strengthening the teaching learning process

b. Students on staff, curriculum as well as teaching-learning evaluation and what is the response of the department to the same?

The department obtains feedback from students on staff, curriculum and teaching-learning evaluation. The questionnaires are given to students at the end of the semester and at the end of the graduate program and various rubrics are being set for various questions and students are evaluated accordingly. Further, the department analyzes the feedback and measures are taken accordingly, some of them are

Encouraging the faculty for skill enhancement programme
Including the new subjects as per the industry demand
Use of new methods in teaching learning process as to develop better understanding of the course contents
Measures to strengthen the Teaching Learning process

c. Alumni and employers on the programmes and what is the response of thedepartment to the same?

The department obtains feedback from Alumni and employers through Alumni Survey and Industry Survey. Further, the department responses in the form of
Conducting various aptitude tests, group discussions for skill enhancement Various technical events are being organized by societies for improving skills of the students

31. List of distinguished Alumni of the Department

S.No.	Name	Batch	Current Designation and Address
1.	<u>Varun Anand</u>	2000	Head of Sales -Telecom, Media-UK&IatTata Consultancy Services London United Kingdom
2.	<u>Abhinav Gupta</u>	2002	Customer Marketing Manager Wellness at Glaxo Smith Kline Consumer HealthcareMumbai Area,

			India
3.	Manish Bhalla	1999	Lead Consultant at Infosys Limited, Chandigarh
4.	Ravish Malhotra	2002	Manager Enterprise Application at Deloitte IndiaGurgaon, Haryana, India
5.	Parminder singh	1999	Customer support Team Leader APAC at ip.accessBengaluru, Karnataka, India
6.	Amandeep Chawla	1998	Senior Computer Scientist at Adobe Systems India Private LimitedNoida Area, India
7.	Vinay Sharma	2002	Senior Manager – Program Managment at FirstRainNew Delhi Area, India
8.	Varun Uppal	1998	Senior Manager at Vodafone IndiaNew Delhi Area, India
9.	Sachin Mahajan	2000	Service Delivery Manager at Nokia NetworksNoida Area, India
10.	Divjot Singh	1999	REGIONAL MARKETING LEADER-MIDDLE EAST INDIA at Alstom Power
11.	Vipul Goyal	2002	Senior Consultant at AccentureMississauga, Ontario, Canada
12.	Harjot Singh	2001	Project Manager, Global Web Marketing at Hitachi Data SystemsSan Francisco Bay Area

32. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts

Date	Name and Designation	Topic
24-9-2013	Sh. Manjit Singh, Manager, HFCL, V & A Ventures	Expert lecture on 4 G Technology and Project Layout Plan in India
21-10-2013	Dr. Dalip Kumar, Sr. Design Engineer,C-DAC, Mohali	Expert lecture on Wireless Sensors and Networks

26-3-2014	Dr. Amod Kumar, Principal Scientist, CSIO, Chandigarh	Expert lecture on Biomedical Instrumentation
02-4-2014	Mrs. Sangeeta Sehgal, QSource International, New Delhi	Expert lecture on Moving from Manufacturing Economy to Innovative Economy
06/02/2014	Representative of SLR Infotech, Chandigarh	Expert lecture on Embedded System
17/02/2014	Representative of WebTek labs pvt Ltd, New Delhi	Expert lecture on "Latest trend in CSE/IT and ECE
18/02/2014	Representative of Techno Campus, Chandigarh	Enhancement Employability skills and become a industry ready professional
24/02/2014	Representative of TCS	Expert Lecture on "Process of recruitment in TCS"
26/02/2014	Representative of T.I.M.E, Amritsar	Competitive exams preparation for students

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

- Use of ICT such as projectors for seminars Presentations on subject topics

- Manual as well as online notes provided to students

- Practical implementation of subject concepts in labs, wherever possible

- Tests, assignments,quizzes and discussions for different subject related topics

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

The department ensures that programme objectives are constantly met and learning outcomes are monitored through the skill enhancement techniques, teaching learning system and career and guidance cell. The Program Education Objectives and Program Outcomes of the department are as follows:

Program Educational Objectives (PEO):
1. To prepare students for successful careers in Indian and multinational industries/companies engaged in thermal systems, manufacturing processes, machine design and the related fields.

2. To develop the ability among students to understand and synthesize data/information and technical concepts for application to product/system/process design.

3. To prepare students to be able to work as part of teams on multidisciplinary projects involving professional ethics and codes of professional practice.

4. To develop the ability among the students for taking research/teaching assignments.

Program Outcomes (PO):

1. Graduates will be able to use the basic knowledge of mathematics and science in engineering and technological applications.
2. Graduates will be able to identify, formulate and solve mechanical engineering problems.
3. Graduates will be able to design and conduct experiments, interpret and analyze data, and report results.
4. Graduates will be able to conceptualize and design the mechanical systems or processes that meet desired specifications and requirements.
5. Graduates will be able to function/participate as a member of the teams engaged min Engineering/Technology laboratories, as well as in multidisciplinary design teams in latest technologies.
6. Graduates will have ability to serve the society with professional ethics.
7. Graduates will be capable of self learning and development.
8. Graduates will have an understanding of the impact of engineering on society and demonstrate awareness of contemporary issues.
9. Graduates will be able to use modern engineering software tools and equipments to solve mechanical engineering problems.
10. Graduate will have the confidence to optimize available engineering resources.
11. Graduates will be able to deliver the engineering fundamentals in effective an innovative ways.
12. Graduates will be able to handle research projects for the development of engineering and technology.

To achieve these following measures are taken by the department:

1. The department ensures the curriculum is designed to meet the program outcomes. The faculty ensures the syllabus is revised and is involved in improving student skills through quizzes, assignments, mini projects, mid-semester test and final major project.

2. The course file is being made by all faculty members for their respective courses and HOD monitors the coverage of syllabus with the help of Course file and sees the academic schedules are intact.

3. The performance of the students is analyzed time to time and slow learners are identified. Special classes are planned for the slow learners called as remedial classes.

4. For every batch of students, one/two faculty members are being allotted as student advisors. These advisers counsel the students periodically (once in a week) and monitor their regularity, also address personal problems if any. They also help in guiding them regarding their future prospects. HOD of the department coordinates the counseling activity and sees that it is being done on a regular basis. Whenever the necessity occurs, the parents are called for and are advised to monitor their wards and take necessary actions.

5. The entire faculty is involved in guiding the students for their project work which helps them in their future professional exposure.

221

35. Highlight the Participation of students and faculty in extension activities Students:

Students

ACADEMIC YEAR 2013-2014

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	IES	1. Chart Making	20-21 march 2014	1st	Minali Bharti	100100421547
		2. Golmol		2nd	Raman	100060412614
				2nd	Annie Sharma	100100421525
2	ISTE	Best student award	2013	Best student award	Sarpreet kaur	100100412923
3	ESTER	Gate mock test	2014	1st	Khilika Mahajan	100100412897
4	ITSC	Fun o Bunanza	2014	1st	Neelinder goraya	100100421554
				1st	Nishkamna Sharma	100100421555
5	PC	Camera ki kahani	2014	1st	Parteek Chadda	100100412911
		Aap or society	2014	1st	Parteek Chadda	100100412911
6	IEI	1.Compo mesh	2014	2nd	Abhishek	100100412914
				3rd	Narinder Singh	100100421549
		2.Apti o fun	2014	3rd	Navenpreet Kaur	100100421553
				3rd	Kanya Mahajan	100100412935
7	LS	1.Busy Brain		3rd	Narinder Singh	100100421549
8	BIOGEN	1.Fusogen	2014	1st	Neelinder goraya	100100421554
				1st	Nishkamna Sharma	100100421555
9	MAD	1. Gidda		2nd	Navdeep Kaur	100100421550

			2014	2nd	Guneet	100100412934
		2. Solo song Punjabi		1st	Amarjyoti	100100412879
		3. Western Group Dance		2nd	Shivani Sharma	100100412926
					Gurleen kaur	100100412893
					Minali Bharti	100100421547
					Raman	100060412614
		4. Group Dance Punjabi		1st	Rubiana	100100421515
					Sandeep Kaur	100100412922
					Guneet	100100412934
		5. BCET got talent		1st	Amarjyoti	100100412879
		6. Solo western singing		1ST	Gaganpal	100100421531
		8. Punjabi Quiz		2nd	Mohit	1180879
		9. Show Stealers		2nd	Gaganpal	100100421531
		10. FIFA GIRLS		2nd	Garima Wadhwa	100100412890
				1st	Arzoo	100100412884
		11. NFS girls		2nd	Garima Wadhwa	100100412890
				1st	Sakshi Luna	100100412920
		12. TEKKEN girls		1st	Sandeep Kaur	100100412922
		13. Counter strike		1ST	Sandeep singh	100100412918
					Manpreet Singh	100100412900
					Shobit kumar	100100412927
		14. Color Carnival		1st	Manav Mehtab Singh	100100412898
					Gurleen kaur	100100412893

					Shivani Sharma	100100412926
		15. Share o market		2nd	Rubiana	100100421515
7	SU CLUB	1. March Past	2014	1st	Rahul Chawla	100100421563
					Nishkamna Sharma	100100421555
					Baljit Singh	100100412886
					Preeti Saini	100100421561
					Poonam Attri	100100421560
					Lovepreet Kaur	100100421543
					Harsimran	100100421535
					Shubdeep	100100421573
					Shiv Kumar Sidhu	1180889
					Sanjeev Kumar	1180887
					Nishant Kishor	100100412902
					Neelinder goraya	100100421554
					Ravi Karda	100100412905
					Parkash Sharma	100100412893
					Sarpreet kaur	100100412923
					Kanchan Parmar	100100421539
					Vannu Rani	100100480258
					Rupinderjit Kaur	1180886
					Hardeeep Singh	100100421533
					Jatinder Bains	1180876
					Harpreet Kaur	1180874

					Daljit singh	100100421530
					Nirmal Singh	1180882
					Kanya	100100412935
					Navanpreeet Kaur	100100421553
					Kartik Kanwar	100100421540
					Minali	100100421547
					Ramanpreet Kaur	100060412614
					Guneet Kaur	100100412934
					Rajanbir SIngh	100100412914
					Manavmehtab Singh	100100412898
					Manpreet SIngh	100100412900
					Khilika Mahajan	100100412897
					Arzoo	100100412884
					Sandeep Kaur	100100412922
					Abhishek Ragbotra	100100421521
					Gurleen kaur	100100412893
					Shivani Sharma	100100412926
					Rubiana	100100421515
					Parteek Chadda	100100412911
					Abhishek	100100412894
					Garima Wadhwa	100100412890
					Manjyot Saini	100100421545
					Abhinav Sharma	100100412876

					Amrinder Singh	100100412880
					Pritish Sharma	100100412893
					Kartik Mahajan	100100412896
					Gaurav	100100412891
					Manpreet Kaur	100100412899
					Tania Mahajan	100100412928
					Tania	100100480256
					Rohit Manhas	100100421567
					Amandeep Singh	100100421524
					Rupinder Kaur	100100421569
					Romia	100100421568
					Harninderjit Singh	1180873
					Navneet Rikhi	1180880
					Sahil Gupta	100100412919
					Amarjit	100100412878
					Satinder	100100412924
					Nagma	100100412893
					Parul	100100412901
					Om kanwal	100100412907
		2. Tug of War (mens)		2nd	Abhishek Singh	100100421522
					Palash Gupta	100100421556
					Hardeep singh	100100412893
					Jatinder Bains	1180876

226

				Davinder Kumar	1180870
				Parteek Chadda	100100412911
				Naneet Rikhi	1180880
				Harninderjit Singh	1180873
				Navdeep Shoal	1180881
				Kartik Kanwar	100100421540
				Rohit Manhas	100100421566
				Gurpreet Singh	100100412894
	3. Tug of War (womens)	1st		jyoti	100100421538
				Annie Sharma	100100421525
				Gurleen kaur	100100412893
				Sarpreet kaur	100100412923
	4. Badminton (women singles)	2nd		Annie Sharma	100100421525
	5. Badminton (women doubles)	2nd		Annie Sharma	100100421525
				Gurleen kaur	100100412893
	6. Discuss throw	3rd		Gurpreet Singh	100100412894
	7. High jump	2nd		Vishal Katoch	1180892
	8. 200m	3rd		Nirmal singh	1180882
	9. Javelin throw	3rd		Om karwal	100100412907
	10. Long jump	1ST		Hardeep Singh	100100421533

Professional societies/chapters and organizing engineering events for the

ACADEMIC YEAR 2012-2013

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	APEX	Mind Boggle		1st	Ashima Rana	100100412885
2	ISTE	Sports Villa		2nd	Amarjeet Singh	100100412878
		Robotron		1st	Amarjeet Singh	100100412878
		Group Disscussion		3rd	Divyanshu	100100412889
		Water missile		2nd	Divyanshu	100100412889
		Brain Strain		1st	Divyanshu	100100412889
		See The C		2nd	Garima	100100412890
		We the people		3rd	Gurleen	100100412893
		Techno Collage		2nd	Gurleen	100100412893
		Recylo mania		2nd,	Gaurav	100100412892
		Circuit e mania		3rd	Gaurav Sharma	100100412892
		Experter		1st	Gurleen kaur	100100412893
		Circutie e mania		1st	Gaurav Malhotra	100100412891
		Web Spidey		1st	Kartik Mahajan	100100412896
		Recyclo mania		2nd	Gaurav Malhotra	100100412891
		Test o mad		2nd	Kartik	100100412896
		Bio business mania		2nd	Kunal	100100421515
		Impulse		2nd	Sandeep	100100421922
		Group Discussion		2nd	Minali	100100421547
		See the C		1st	Shantanu	100100412925
		Circuit a mania		2nd	Romia	100100421568
		Tatoo making		1st	Abhinav	100100412876
		Recyclo mania		2nd	Sakshi	100100412920
		Tracologic infusion		1st	Abhinav	100100412876

		Auto darpan		2nd	Abhinav	100100412876
		Recycle mania		2nd	Khilika Mahajan	100100412897
		Bio business mania		1st	Pritish	100100412912
		Circuit e mania		2nd	Khilika mahajan	100100412897
		Water missile		2nd	Pritish	100100412912
		Traco login infusion		1st	Khilika mahajan	100100412897
		Web spidey		2nd	Pritish	100100412912
		Web spidey		1st	Sukhmani	100100421574
		Circuit e manina		3rd	Parkash	100100412908
		See the C		3rd	Parkash	100100412908
				2nd	Sarpreet	100100412923
					Sandeep	100100412922
		Brain Strain		1st	Sahil Gupta	100100412919
		Robotron		1st	Sahil gupta	100100412919
		Tracologin Infusion		2nd	Sarpreet	100100412929
					Kayna	100100412935
		Circuitemania		2nd	Guneet	100100412934
		Circuitemania		2nd	Tammana	100100412933
		impusle		2nd	ramanpreet	100060412614
3.	FAC	Google Doodle		2nd	Arzoo Unvi	100100412884
				1st	Ravi Karda	100100412915
		Quest to Fest		1st	Rajanbir Singh	100100412914
4	PSC	Sohni Gutt		1st	Harpreet	100100412895
		Sohni pagg		1st	Harinderjit	1180873
5	BIOGEN			3RD	Arzoo Unvi	100100412884
					Ravi Karda	100100412915
					Divyanshu Joshi	100100412889

229

					Sarpreet Kaur	100100412923
					Gurleen Kaur	100100412893
					Shivani Sharma	100100412926
					Sahil Gupta	100100412919
					Khilika Mahajan	100100412897
6	IEI	Compo Mesh		2nd	Abhishek	100100421521
		Strike o mem		3rd	Kanchan	100100421539
					Sakshi Sharma	100100412921
		Apti o fun		2nd	Navanpreet	100100421553
		Strikomem		3rd	vishaldeep	100100412931
7	MAD	Electro Maestro	2013	2nd	Yogesh Kumar	100100412932
		Mix Veg	2013	2nd	Shobhit Kumar	100100412927
		Chill X		1st	Amarjeet Singh	100100412878
		Mind Hunt		3rd	Divyanshu	100100412889
					Prachi	100100421516
					Inderjeet	100100421536
					Kartik kanwar	100100421540
		Puzzle		2nd	Ashima Rana	100100412885
		Rangoli		1st	Garima	100100412890
		BCET got talent		3rd	Gurpreet Singh	100100412894
		Poster making		1st	Gaurav Sharma	100100412892
		Text o ham		2nd	Neelinder	100100421554
		Mind Spark		3rd	Nishkamna	100100421555
		Word Ataack		1st	Rahul Chawla	100100421563
		Puzzle		2nd	Ravinder	100100412916
		E;ectro maestro		1st	Rd swamy	100100412913
		Quiz nss			Rd swamy	100100412913

		Mix veg		2nd	Khilika mahajan	100100412897
		Tex o harm		1st	Gurleen kaur	100100412893
		Collage Making		2nd	Gurleen kaur	100100412893
		Brain Champ		2nd	Annie Sharma	100100421525
		Mind Spark		3rd	Rahul Chawla	100100421563
		Blind Game		3rd	Poonam	100100421560
		Group Dance(Western)		2nd	Gurleen Kaur	100100412893
					Shivani Sharma	100100412926
					Sarpreet kaur	100100412923
		BCET got talent		2nd	Kunal	100100421515
				1st	Gagan pal singh	100100421531
				2nd	Sandeep	100100421572
		Lan Gaming		2nd	Gagan pal singh	100100421531
					Beant Singh	100100421527
					Jagjeevanjot	100100421537
		Word attack		3rd	Harsimran Kaur	100100421535
		Impulse		2nd	Abhishekh	100100421522
					Navdeep	100100421551
					Sambhav	100100421571
		Mind Hunt		1st	Rubiana Purewal	100100421517
					Sandeep	100100421572

		Group Dance (bhangra)		2nd	Rubiana	100100421517
					Sakshi Sharma	100100412921
					Sandeep	100100421572
		Word Attack		1st	Shubhdeep	100100421573
		Blind game		1st	Khillika	100100412897
		Penyard war		3rd	Guneet	100100412934
		Fun Event		2nd	Jagjeevan jot	100100421537
		Udaan		3rd	Parul	100100412909
		Rangoli		3rd	Parul	100100412909
		Poster Makiing		1st	Abhinav	100100412876
		Fashion Show			Sakshi Luna	100100412920
		Electro maestro		2nd	Satinder	100100412924
		Collage making		2nd	Shivani Sharma	100100412926
		Blind game		1st	Tanya mahajan	100100412928
		Giddha		1st	Sakshi Sharma	100100412921
		Brain Champ		2nd	Ravinder kaur	100100412916
		Minute to win		2nd	Dilpreet singh	1180871
		Convince and win		2nd	Sahil gupta	100100412919
		Snakes and ladders		2nd	Sahil gupta	100100412919
		Fun o masti		2nd	Sahil gupta	100100412919
		electromaster		1st	Abhinav	100100412876
					parkash	100100412908
8	SU CLUB	March Past	2013	1st	Abhishek Singh	100100412877
					Amarjyoti	100100412879
					Arzoo Unvi	100100412884
					Ashima Rana	100100412885
					Garima	100100412890

232

					Ajay Karan Singh	100100421523
					Harpreet Kaur	100100412895
					Beant Singh	100100421527
					Gaganpal singh	100100421531
					Harsimran	100100421535
					Sukhjeet kaur	100100421519
					Jagjeevanjot	100100421537
					Preet saini	100100421561
					Poonam	100100421560
					Pankaj Sharma	100100421558
					Minali Bharti	100100421547
					Knachan	100100421539
					Parul	100100412909
					Sakshi Luna	100100412920
					Romia	100100421568
					rupinderjit	100100421569
					ravi Karda	100100412915
					ravinder	100100412916
					davinder	1180870
					amandeep	1180867
					ramanpreet	100060412614
					vannu rani	100100480259
					tarandeep	100100480257
					Taniya	100100480256
					Shubhdeep	100100421573
					Shiv sidhu	1180889
					Rupinder	1180886
					Nirmal singh	1180882

233

					Navdeep kaur	1180881
					Naneet rikhi	1180880
					Mohiy kainth	1180879
					Lovedeep	1180877
					Sonia veerta	1180891
					Gulshan Kumar	1180872
					Harinderjit	1180873
					Parkash	100100412908
					sarpreet	100100412923
					sandeep	100100412922
					neha saini	100100412904
					guneet	100100412934
					neha choudhary	100100412903
					Vishaldeep	100100412931
					Sahil gupta	100100412919
		1500 m (boys)		3rd	Baljeet Singh	100100412886
				1st		
		200m(boys)		1st	Nirmal singh	1180882
				1st		
		800m (boys)		3rd	Baljeet Singh	100100412886
		Basket Ball			Gaurav malhotra	100100412891
					Om karwal	
		1500 m				100100412907
		Tug Of war		2ND	Gurpreet Singh	100100412894
					Davinder	1180870
					Lovdeep manhas	

234

					1180877
		Long Jump(boys)		2ND 3RD	Hardeep Singh Sandeep Singh	100100421533 10010012918

		Discuss Throw(girls) Discuss Throw (boys) Badminton (singles) Relay		3rd 3rd 3rd 3rd	Gurleen Kaur Gurpreet Singh Ajay Karan Singgh Annie	100100412893 100100412894 100100421523 100100421525
		400m (girls) Fun event		3rd 1st	Annie Sharma Beant singh	100100421525 100100421527
		400m(girls) 4x100m Triple jump boys Kabbadi		3rd 1st 3rd 3rd 3rd 1st	Jyoti Jyoti Rajanbir singh Davinder	100100421538 100100421538 100100412914 1180870

235

		football			Om karwal	100100412907
					Nirmal Singh	1180882
		Footbal		1st 3rd	Sumit	100100480255
		High jump (boys)			vishal	1180892
9	PTU level participation	1.Inetr College cricket tornament 2. Mime 3. Chess Tournament	2013	2nd 2nd 5th	Yogesh Kumar Kunal Rahul Chawla	100100412932 100100421515 100100421563

ACADEMIC YEAR 2011-2012

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	ISTE	1.we the people		3rd	Daljit singh	100100421547
		2.Lan gaming		1ST	Sandeep singh	100100412918
		3.Sort em up		3rd	Harsimran kaur Amarjyoti Neha choudhary Neha saini	100100412879 100100412903 100100412904

			20-21 oct 2011			
		4. E ppt.		3rd	Sarpreet kaur	100100412923
		5. See the c		3rd	Sarpreet kaur	100100412923
		6. Electroyard		3rd	Sandeep kaur	100100412922
					Vishaldeep kaur	100100412931
		7.Spot the lost		1ST	Garima wadhwa	100100412890
		8.Fun sport		1ST	Sahil Sharma	100100421570
		9.GD		1ST	Gurleen kaur	100100412893
		10. KBG		3RD	Shivani Sharma	100100412926
		11. Brain Strain		3RD	Arzoo unvi	100100412884
2	PSC	1.Khed mere Punjab di		2nd	Ravi karda	100100412915
					Rahul chawla	100100421563
3	IEI	1.Compo mesh		1st	Rajanbir	100100412914
4	LS	1.Youth parliament		1st	Daljit singh	100100421547
					Gurleen kaur	100100412893
		2.Debate		1st	Gurleen kaur	100100412893
					R d swamy	100100412913
					Sarpreet kaur	100100412923

237

		3.HAM		1st	Gurleen kaur	100100412893
5	BIOGEN	1.Fusogen		1st	Sarpreet kaur	100100412923
					Shivani sharma	100100412926
		2. MIND CAZEA		2ND	Arzoo unvi	100100412884
6	MAD	1.Dumakshri	2012	2nd	Shivani Sharma	100100412926
					Sarpreet kaur	100100412923
					Gurleen kaur	100100412893
		2.Pick go hunt		2nd	Arzoo unvi	100100412884
		3. western Group Dance	2012	2nd	Sarpreet kaur	100100412923
		4.BCET mega talent show		1st	Gaganpal	100100421531
		5.Solo western singing		2nd	Gaganpal	100100421531
		6.Words on tips		1st	Sahil gupta	100100412919
7		1.200m		2nd	jyoti	100100421538
		2. 400m relay		3rd	jyoti	100100421538
		3. volleyball		1st	Sumit Harchand	100100412891
		4. kabaddi		1st	Palash gupta	100100480255
					Sumit harchand	
		5.basketball		2nd	Gaurav Malhotra	100100412893
					Sarpreet kaur	100100412926

238

S.NO		EVENTS	DATE OF EVENT	POSITION	NAME	UNIV. R. NO.
	SU CLUB				Gurleen kaur	
					Shivani Sharma	
		6.football		1ST	Nirmal singh	1180882
					Sumit harchand	100100480255
		7. 1500m		1st	Baljit singh	100100412886
		8. 800m		2ND	Baljit singh	100100412886
		9.400m		3RD	Baljit singh	100100412886
8	PTU level participation	1.Inetr College kabaddi tornament	2013	2nd	Yogesh Kumar	100100412932
		2. Inetr College basketball tornament		2nd	Gaurav Malhotra	100100421515
		3. Chess Tournament		5th	Rahul Chawla	100100421563

Professional societies/chapters and organizing engineering events for

ACADEMIC YEAR 2010-2011

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	ISTE	1.Street Play	29-30 sep 2010	3rd	Sarpreet kaur	100100412923
					Gurleen kaur	100100412893
					Sakshi Sharma	100100412921
					Garima	100100412890

					wadhwa	100100412884
					Arzoo unvi	100100412913
					R d swamy	
		2.Face painting (Rayat)	13-14 nov 2010	1ST	Minali bharti	100100421547
		3.Group task	29-30 sep 2010	2ND	Shivani Sharma	100100412926
		4.Mind hunt	7-8 april 2011	3RD	Arzoo unvi	100100412884
2	SAE	1.Mind hunt	2010-2011	2nd	Divyanshu joshi	100100412889
		2.Murder mystery	7-8 april 2011	2nd	Divyanshu joshi	100100412889
				3rd	arzoo unvi	100100412884
3	BIOGEN	1.Trick vision	2010-2011	3rd	Aarzoo unvi	100100412884
		2. Quest o Mystery	2010-2011	4TH	Aarzoo unvi	100100412884
4	MAD	1.Western group dance	15-16 april 2011	2nd	Sarpreet kaur	
					Gurleen kaur	100100412923
					Shivani Sharma	100100412893
						100100412926
		2.Brain strain	15-16 april 2011	2nd	Shobhit Shrivastav	100100412927
		3. Mind cazed	15-16 april 2011	2nd	Arzoo unvi	100100412884

5	SU CLUB	1.Discuss throw(men)	18 march 2011	3rd	Hardeep singh	100100421533
		2. 400m(W)	18 march 2011	2nd	Jyoti	100100421538
		3. 4*100m relay		3rd	Abhishek kumar	100100412877
		4. 800m	18 march 2011	2nd	Poonam attri	100100421560

Publication and awards in inter institute events by students

ACADEMIC YEAR 2009-2010

| S.NO | NAME OF THE COLLEGE | EVENTS | DATE OF EVENT | ACHIEVEMENTS | | |
				POSITION	NAME	UNIV. R. NO.
1	Thapar University Patiala	Aero Modeling Workshop	2009-2010	Participated	Pardeep Kumar	80501108037
					Harmohit saini	80501108018
2	NIIT	National Aptitude Test	02/21/10	Merit Rank(Top 5%)	Karanbir Singh Saluja	80501108023
3.	Thapar University Patiala	Solar Robotics Workshop	10-11 October 2009	Participation	Karanbir Singh Saluja	80501108023
					Harmohit Saini	80501108018

4.	BCET Gurdaspur	Ethical hacking Workshop	3-4, November 2009	Participation	Karanbir Singh Saluja	80501108023
5.	BCET Gurdaspur	Robotics Workshop	1-2 November 2009	Participation	Karanbir Singh Saluja	80501108023
					Naresh Kumar	80501108032
6.	BCET Gurdaspur	ROBOKRITI	18-19 April 2009	2nd	Karanbir Singh Saluja	80501108023
7.	BCET Gurdaspur	Technophillia	18-19 April2011	Participation	Naresh	80501108032

ACADEMIC YEAR 2012-2013 (Batch 2012 ECE)

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	APEX	Nil				
2	ISTE	Robowar	2012-2013	1st	Vinay kumar upender	622/12 619/12
		Street play	2012-2013	1st	Vaishali Salaria	621/12
		Techono mania	2012-2013	1st	Shubham mahajan	609/12
		Brain strain	2012-2013	1st	Sumit kumar Shubham mahajan	612/12 610/12
		Fun Event	2012-2013	1st	Upasana Sharma	618/12
		Smart –o-logic	2012-2013	2nd	Roban Rana	595/12
3	SAE	Nil				

4	FAC	Design-o-mania	2012-2013	2nd	Renu Saroj	590/12
5	*CHES*	*Process –o-mania*	2012-2013	*1st* *1st*	*Roopdeep Kaur* *Ruby saini*	*599/12* *600/12*
6	PSC	Bhangra Boys	2012-2013	2nd 2nd 2nd	Ranbir Singh Ramanpreet singh Shubham mahajan	588/12 587/12 608/12
7	IEI	Nil				
8	PHOENIX	Nil				
9	LS	We the People	2012-2013	`1st	Upasana Sharma	618/12
		Self written poem	2012-2013	1st	Rohan Rana	595/12
10	BIOGEN	Recylomanioa	2012-2013	2nd	Nikhil Saini	565/12
		Treasure Bazar	2012-2013	1st	Rahul syal	
11	MAD	Wireless solo signing	2012-2013	1st	Neeti Vashisht	628/12
12.	NSS	Nil				

Professional societies/chapters and organizing engineering events

ACADEMIC YEAR 2013-2014 (Batch 2012 ECE)

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	APEX	Bollywoodmr Ria	2013-2014	3rd	Ajay Kumar	1237851

				1st	Rajat Sharma	1237931
		Mind Hunt		3rd	Neha Thakur	1237911
2	ISTE	Treasure Bazar	2013-2014	3rd	Chetan Kumar	1237868
			2013-2014	1st	Rahul Sharma	1303550
		Street play		1st	Shubham Mahajan	1237953
				1st	Shubham Mahajan	1237954
				1st	Nikhil Saini	1237913
				1st	Rupali Thakur	1237945
				1st	Priya Salaria	1237921
				1st	Sumit Lakhanpal	1237957
		NFS mostwanted		1st		
				1st	Ruby Saini	1237944
					Roopdeep Kaur	1237943
				2nd	Rajat Sharma	1237931
		Robo War		1st	Upendra Kumar	1237963
		Sensory Buzz	2013-2014	1st	Mahinderpal Singh	1237903
		Puzzelonics	2013-2014	3rd	Kartik Sharma	1237893
		Brain strain	2013-2014	1st	Shubham Mahajan	1237954

		Smart –o-logic	2013-2014	2nd 2nd	Harsheel Hans Rohan Rana	1237887 1237939
		Bhangra	2013-2014	3rd 3rd 3rd 3rd 3rd 3rd	Manpreet Kaur Anjali Fiza Malhi Anisha Kumari Diksha Hans Diksha Sharma	1237905 1237860 1237877 1237859 1237871 1237873
3	SAE	Run for Funl	2013-2014	2nd 2nd	Nikhil Saini Sumit Lakhanpal	1237913 1237957
4	FAC	Nil	2013-2014			
5	CHES	Aa dekhein zara With or Against Process o nama	2013-2014	2nd 1st 1st 1st 1st	Harpreet Singh Nikhil Saini Upasna Sharma Ruby Saini Roopdeep Kaur	542/12 1237913 1237962 1237944 1237943
6	PSC	Nil	2013-2014			
7	IEI	Apti-o- funl puzzleonics	2013-2014	1st 3rd	Abhishek Gupta Shubham mahajan	1237847 1237953
8	PHOENIX	Photo-manial	2013-2014	2nd	Deepak Sharma	1237870

			Jhooth or Sach		2nd	Roopdeep Kaur	1237943
9	LS		Text-o-Ham	2013-2014	2nd	Garima Bhargava	1237879
			Self written poem	2013-2014	1st	Rohan Rana	1237939
			Group task	2013-2014	1st	Neha Thakur	1237911
					1st	Sumit lakhanpal	1237957
10	BIOGEN		Next Sherlock Holme	2013-2014	2nd	Shubham Mahajan	1237954
			Treasure Bazar	2013-2014	1st	Fiza Malhi	1237877
					1st	Amiteshwar virdi	1237856
					3rd	Diksha hans	1237871
					1st	Navneet Kaur	1237908
					1st	Rahul Syal	1237937
					2nd	shubham	1237952
			Recylomanix Yaarian		2nd	Nikhil Saini	1237913
					1st	Ruby Saini	1237944
11	MAD		Dum-Aakshri Emotional atychar	2013-2014	2nd	Manpreet Kaur	1237905
					2nd	Garima Bhargava	1237879
					1st	Diksha Sharma	1237873
					1st	Fiza malhi	1237877
					1st	Anisha Kumari	1237859
					1st	Amiteshwar Virdi	1237856
					1st	Diksha Hans	1237871
					1st	Navneet Kaur	1237908

				1st	Rahul Syal	1237937
				2nd	Ayush bisaria	1237864
				2nd	Diksha sharma	1237873
				2nd	Balpreet Kaur	1237866
		Funtoosh		1st	Sunidhi Sharma	1239958
				1st	Upasna sharma	1237962
12.	NSS	Presence of mind	2013-2014	3rd	Deepak sharma	1237870
13	Photography		2013-2014	1st	Sandeep Kumar	1303555
				2nd	Diksha Sharma	1237872
				2nd	Balpreet Kaur	1237866
				2nd	Rajat Sharma	1237931
				1st	Vaishali Saliria	1237964
				2nd	Upasna sharma	1237962
				2nd	Renu saroj	1237965
				1st	Vishali Sharma	1237968
14	ESTER	Gate Mocktest	2013-2014	2nd	Rajinder Singh	1303552
				3rd	Harish Bhatti	1237694
				3rd	Aditya	1303536
				3rd	Kuldeep	1237895
		Brain Tambola		1st	Dikshant Mahajan	1237874
				1st	Lovekesh mahajan	1237898
				2nd	Ashish Bhardwaj	1237862

					2nd	Harpreet Singh	542/12
			Apto-quiz		3rd	Ashish Kumar	1237863
					1st	Ashish Kumar	1237863
			Sensory Buzz		2nd	Harsheel hans	1237887
					2nd	Lovekesh Mahajan	1237898
					1st	Anand Raj	1237858
15	SU(sports)		Tug of War	2013-2014	2nd	Maninder Kaur	1303545
					2nd	Manpreet Kaur	1237905
					2nd	Balpreet Kaur	1237877
					2nd	Sunidhi Sharma	1239958
					2nd	Vaishali Saliaria	1237964
					2nd	Neha Thakur	1237911
			Shouc-o-market choco- B	2013-2014	2nd	Amrita	1237857
			Discuss Throw	2013-2014	1st	Anjali	1237860
			Shotput	2013-2014	2nd	Anjali	1237860
					3rd	Sunidhi Sharma	1239958
			Badminton(doubles)	2013-2014	1st	Anjali	1237860
					1st	Sunidhi Sharma	1239958
					1st	Nidhi Rawat	1237912

			Football	2013-2014	1st	Amiteshwar Virdi	1237856
			Kabaddi	2013-2014	2nd	Lovepreet Singh	1237900
					2nd	Kunwarpal Singh	1237891
					2nd	Mandeep Singh	1237904
					2nd	Gurpreet Singh	1237883
					2nd	Lovedeep Singh	1237897
					2nd	Rohan Rana	1237939
			1500 Mt.	2013-2014	2nd	Gurpreet Singh	1237883
			100 mt.		3rd	Ayush Bisaria	1237864
			400*400mt.		1st	Vaishali salaria	1237964
			200mt.		3rd	Vaishali saliaria	1237964
			1500mt.(PTU level)		**3rd**	**Vaishali Salria**	**1237964**
			800 mt.		2nd	Rahul Singh	1237926
			400 mt.		2nd	Rahul Singh	1237926
					3rd	Prabhjeet singh	1237920
					2nd	Pawan Singh	1237919
			4*100mt relay		2nd	Prabhjeet Singh	1237920
					2nd	Rohan rana	1237939
					2nd	Pawan singh	1237919
			800mt.		3rd	Rahul Kumar	1237925
			Tripple jump	2013-2014	1st	Vashali salaria	1237964
					1st	Rahul singh	1237926

249

		Long Jump		2nd	Prabhjeet Singh	1237920
					Rahul Singh	
				2nd		1237926
		Jevlin Throw	2013-2014	2nd	Supreet kaur	1237961
		Vollyball	2013-2014	1st	Yogesh Thakur	1237969
				1st	Sunidhi Sharma	1239958
				1st	Vaishali saiaria	1237964
				1st	Shivam Mahajan	1237950
				1st	Rahul Singh	1237926
				1st	Rajat	1237928

ACADEMIC YEAR 2012-2013

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	APEX	Nil				
2	ISTE	Robowar	2012-2013	1st	Vinay kumar	622/12
					upender	619/12
		Street play	2012-2013	1st	Vaishali Salaria	621/12
		Techono mania	2012-2013	1st	Shubham mahajan	609/12
		Brain strain	2012-2013	1st	Sumit kumar	612/12
					Shubham mahajan	610/12
		Fun Event	2012-2013	1st	Upasana Sharma	618/12
		Smart –o-	2012-2013	2nd	Roban Rana	595/12

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	POSITION	NAME	UNIV. R. NO.
		logic				
3	SAE	Nil				
4	FAC	Design-o-mania	2012-2013	2nd	Renu Saroj	590/12
5	*CHES*	*Pechan Kaun*	2012-2013	*2nd*	*Renu Saroj*	*590/12*
				2nd	*Priya Salaria*	*576/12*
6	PSC	Bhangra Boys	2012-2013	2nd	Ranbir Singh	588/12
				2nd	Ramanpreet singh	587/12
				2nd	Shubham mahajan	608/12
7	IEI	Nil				
8	PHOENIX	Nil				
9	LS	We the People	2012-2013	`1st	Upasana Sharma	618/12
		Self written poem	2012-2013	1st	Rohan Rana	595/12
10	BIOGEN	Recylomanioa	2012-2013	2nd	Nikhil Saini	565/12
		Treasure Bazar	2012-2013	1st	Rahul syal	
11	MAD	Wireless solo signing	2012-2013	1st	Neeti Vashisht	628/12
12.	NSS	Nil				

ACADEMIC YEAR 2012-2013

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.

1	APEX	Mind hunt	2012-2013	2nd	Ashish Bhardwaj	1237862
				2nd	Ashish Kumar	1237863
2	ISTE	Street Play	2012-2013	1st	Deepak Sharma	1237870
3	SAE	Nil				
4.	FAC	Nil				
5	CHES	Pen yard wars	2012-2013	2nd	Deepak Sharma	1237870
6	PSC	Nil				
7	IEI	Nil				
8	IES	Nil				
9	LS	Snap your Mind	2012-2013	2nd	Diksha Sharma	1237873
10	BIOGEN	Boom-chikka wao waoo	2012-2013	2nd	Deepak Sharma	1237870
					Karandeep	1237892
11	MAD	Nil				
12.	NSS	Blood Donation Camp	2012-13	Blood Donation	Harpreet	1237886
14.	Annual Athletic Meet	Football	2012-13	2nd	Amiteshwar	1237856

ACADEMIC YEAR 2013-2014

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	Apex	Nil				

2	ISTE	Nil			
3	SAE	Nil			
4	FAC	Nil			
5	*CHES*	*Brain Tambolo*	2013-2014	2nd 2nd	*Harpreet Singh* *Ashish Bhardwaj*	*1237886* *1237862*
6	PSC	Nil			
7	IEI	Nil			
8	IES	FB Contest	2013-2014	2nd	Deepak Sharma	1237870
9	LS	Text-o-hem	2013-2014	`2nd 3rd	Garima Ayush	1237879 1236864
10	BIOGEN	Treasure Bazaar	2013-2014	1st 1st 1st 3rd	Fiza Malhi Navneet kaur Amiteshwar Diksha Hans	1237877 1237908 1237856 1237871
		FBI	2013-14	3rd	Deepak Sharma	1237870
11	MAD	Emotional Atayachar	2013-14	1st 1st 1st 1st 1st 2nd 2nd	Navneet Kaur Fiza malhi Diksha hans Amiteshwar Anisha Diksha Sharma Ayush	1237809 1237877 1237871 1237856 1237859 1237873 1237864
		Damakshri	2013-14	1st 1st	Fiza Malhi Diksha Sharma	1237877 1237873

				1st	Navneet kaur	1237908
				2nd	Garima	1237879
				2nd	Manpreet kaur	1237905
12	Ester	Apti		1st	Ashish kumar	1237863
13.	NSS	Presence of Mind	2013-14	3rd	Deepak Sharma	1237870
14	Sports	Discuss throw	2013-2014	1st	Anjali	1237860
		Shortput throw		2nd	Anjali	
		Badminton(W)	2013-14	1st	Anjali	1237860
		100m Race	2013-14	3rd	Ayush	1237864
		TUG OF WAR	2013-14	2ND	Anjali	1237860
		Football	2013-14	1st	Amiteshwar	1237856

ACADEMIC YEAR 2012-2013

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	APEX	Nil				
2	ISTE	Robowar	2012-2013	1st	Vinay kumar upender	622/12 619/12
		Street play	2012-2013	1st	Vaishali Salaria	621/12
		Techono mania	2012-2013	1st	Shubham mahajan	609/12
		Brain strain	2012-2013	1st	Sumit kumar Shubham mahajan	612/12 610/12
		Fun Event	2012-2013	1st	Upasana Sharma	618/12

		Smart –o-logic	2012-2013	2nd	Roban Rana	595/12
3	SAE	Nil				
4	FAC	Design-o-mania	2012-2013	2nd	Renu Saroj	590/12
5	*CHES*	*Pechan Kaun*	2012-2013	*2nd*	*Renu Saroj*	*590/12*
				2nd	*Priya Salaria*	*576/12*
6	PSC	Bhangra Boys	2012-2013	2nd	Ranbir Singh	588/12
				2nd	Ramanpreet singh	587/12
				2nd	Shubham mahajan	608/12
7	IEI	Nil				
8	PHOENIX	Nil				
9	LS	We the People	2012-2013	`1st	Upasana Sharma	618/12
		Self written poem	2012-2013	1st	Rohan Rana	595/12
10	BIOGEN	Recylomanioa	2012-2013	2nd	Nikhil Saini	565/12
		Treasure Bazar	2012-2013	1st	Rahul syal	
11	MAD	Wireless solo signing	2012-2013	1st	Neeti Vashisht	628/12
12.	NSS	Nil				

Professional societies/chapters and organizing engineering events for

ACADEMIC YEAR 2012-2013

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	APEX	Mind hunt	2012-2013	2nd	Ashish Bhardwaj	1237862
				2nd	Ashish Kumar	1237863
2	ISTE	Street Play	2012-2013	1st	Deepak Sharma	1237870
3	SAE	Nil				
4.	FAC	Nil				
5	CHES	Pen yard wars	2012-2013	2nd	Deepak Sharma	1237870
6	PSC	Nil				
7	IEI	Nil				
8	IES	Nil				
9	LS	Snap your Mind	2012-2013	2nd	Diksha Sharma	1237873
10	BIOGEN	Boom-chikka wao waoo	2012-2013	2nd	Deepak Sharma	1237870
					Karandeep	1237892
11	MAD	Nil				
12.	NSS	Blood Donation Camp	2012-13	Blood Donation	Harpreet	1237886
14.	Annual Athletic Meet	Football	2012-13	2nd	Amiteshwar	1237856

Professional societies/chapters and organizing engineering events for

ACADEMIC YEAR 2013-2014

S.NO	NAME OF THE SOCIETY/CHAPTER	EVENTS	DATE OF EVENT	ACHIEVEMENTS		
				POSITION	NAME	UNIV. R. NO.
1	Apex	Nil				
2	ISTE	Nil				
3	SAE	Nil				
4	FAC	Nil				
5	*CHES*	*Brain Tambolo*	2013-2014	*2nd*	*Harpreet Singh*	*1237886*
				2nd	*Ashish Bhardwaj*	*1237862*
6	PSC	Nil				
7	IEI	Nil				
8	IES	FB Contest	2013-2014	2nd	Deepak Sharma	1237870
9	LS	Text-o-hem	2013-2014	`2nd	Garima	1237879
				3rd	Ayush	1236864
10	BIOGEN	Treasure Bazaar	2013-2014	1st	Fiza Malhi	1237877
				1st	Navneet kaur	1237908
				1st	Amiteshwar	1237856
				3rd	Diksha Hans	1237871
		FBI	2013-14	3rd	Deepak Sharma	1237870
11	MAD	Emotional Atayachar	2013-14	1st	Navneet Kaur	1237809
				1st	Fiza malhi	1237877
				1st	Diksha hans	1237871

				1st	Amiteshwar	1237856
				1st	Anisha	1237859
				2nd	Diksha Sharma	1237873
				2nd	Ayush	1237864
		Damakshri	2013-14	1st	Fiza Malhi	1237877
				1st	Diksha Sharma	1237873
				1st	Navneet kaur	1237908
				2nd	Garima	1237879
				2nd	Manpreet kaur	1237905
12	Ester	Apti		1st	Ashish kumar	1237863
13.	NSS	Presence of Mind	2013-14	3rd	Deepak Sharma	1237870
14	Sports	Discuss throw	2013-2014	1st	Anjali	1237860
		Shortput throw		2nd	Anjali	
		Badminton(W)	2013-14	1st	Anjali	1237860
		100m Race	2013-14	3rd	Ayush	1237864
		TUG OF WAR	2013-14	2ND	Anjali	1237860
		Football	2013-14	1st	Amiteshwar	1237856

36. Beyond syllabus scholarly activities of the department

- Content Beyond syllabus topics are sometimes taken by faculty to provide the students with additional information.

- Projects are assigned to students in labs in addition to practical suggested in syllabus.

- Educational tours are conducted for students.

- Classes for weaker students are held to improve the performance of students. Various technical events are conducted for improving technical skills of students

37. State Whether the Programme/ department is accredited / graded by other agencies. Give details.

Applied for NBA accreditation under Tier-1

38. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths: 1. Well Qualified and Experienced Facult and Staff

2. Department is accredited by National Board of Accreditation (NBA).

3. Faculty has good number of reputed International/National Journal and Conferences

including .

4. Well equipped labs for students.

5. Good placement of students.

Weaknesses:

1. Less number of permanent faculty members.
2. Lack of good consultancy projects.

Challenges: 1. To maintain good academic record of the students.

2. To start Post Graduation Courses in new areas.

3. To enhance the interpersonal and technical skills of students.

4. To bring more research projects from various funding agencies.

39. Future plans of the department:

1. To increase the intake of students for UG.
2. Start full time post graduation courses in the department.

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. North-West/1-2454978403/2015/EOA   Date: 30-Apr-2015

To,
The Principal Secretary (Technical),
Govt. of Punjab.,
Room No 223, 2nd Floor, Sector-9,
Chandigarh-160009

Sub: Extension of approval for the academic year 2015-16

Ref: Application of the Institution for Extension of approval for the academic year 2015-16

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions) Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards, procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	North-West	Application Id	1-2454978403
		Permanent Id	1-6098731
Name of the Institute	BEANT COLLEGE OF ENGINEERING & TECHNOLOGY,GURDASPUR	Institute Address	POST BOX NO. 13, VILLAGE BARIAR, GURDASPUR, GURDASPUR, Punjab, 143521
Name of the Society/Trust	BEANT COLLEGE OF ENGINEERING & TECHNOLOGY,GURDASPUR	Society/Trust Address	POST BOX NO. 13, VILLAGE BARIAR,GURDASPUR,GURDASPUR,Punjab,143521
Institute Type	Government		

Opted for change from Women to Co-ed	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2015-16

Application Number: 1-2454978403*

Page **1** of **4**

Note: This is a Computer generated Letter of Approval.No signature is required.

Letter Printed On:1 May 2015

Printed By : AE1733091

260

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Application Id: 1-2454978403			Course	Full/Part Time	Affiliating Body	Intake 2014-15	Intake Approved for 15-16	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	The Punjab State Board of Technical Education and Industrial Training , Chandigarh	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	ELECTRONICS & COMMUNICATION ENGG	FULL TIME	The Punjab State Board of Technical Education and Industrial Training , Chandigarh	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	DIPLOMA	MECHANICAL ENGINEERING	FULL TIME	The Punjab State Board of Technical Education and Industrial Training , Chandigarh	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	THERMAL ENGINEERING	FULL TIME	Punjab Technical University, Jalandhar	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	BIOTECHNOLOGY	FULL TIME	Punjab Technical University, Jalandhar	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CHEMICAL ENGINEERING	FULL TIME	Punjab Technical University, Jalandhar	30	30	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Punjab Technical University, Jalandhar	120	120	NA	NA	NA

Note: This is a Computer generated Letter of Approval.No signature is required.   Letter Printed On:1 May 2015

Printed By : AE1733091   261

All India Council for Technical Education

(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Application Id: 1-2454978403			Course	Full/Part Time	Affiliating Body	Intake 2014-15	Intake Approved for 15-16	NRI Approval status	PIO Approval status	Foreign Collaboration Approval status
Program	Shift	Level								
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUA TE	ELECTRONICS & COMMUNICATION ENGG	FULL TIME	Punjab Technical University, Jalandhar	120	120	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUA TE	INFORMATION TECHNOLOGY	FULL TIME	Punjab Technical University, Jalandhar	60	60	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUA TE	MECHANICAL ENGINEERING	FULL TIME	Punjab Technical University, Jalandhar	90	90	NA	NA	NA

Note: Validity of the course details may be verified at www.aicte-india.org>departments>approvals

The above mentioned approval is subject to the condition that BEANT COLLEGE OF ENGINEERING & TECHNOLOGY,GURDASPUR shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Dr. Avinash S Pant
Actg Chairman, AICTE

Note: This is a Computer generated Letter of Approval.No signature is required.

Letter Printed On:1 May 2015

Printed By : AE1733091

262

All India Council for Technical Education
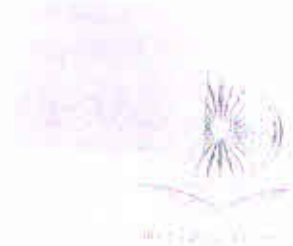(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

Copy to:

1. **The Regional Officer,**
    All India Council for Technical Education
    Plot No. 1A, 5ᵗʰ Floor, DTE(Pb..) Building,
    Dakshin Mark, Sector 36-A, Chandigarh-160 036

2. **The Director Of Technical Education,**
    Punjab

3. **The Registrar,**
    Punjab Technical University, Jalandhar

4. **The Principal / Director,**
    BEANT COLLEGE OF ENGINEERING & TECHNOLOGY,GURDASPUR
    POST BOX NO. 13, VILLAGE BARIAR,
    GURDASPUR,GURDASPUR,
    Punjab,143521

5. **The Secretary / Chairman,**
    BEANT COLLEGE OF ENGINEERING & TECHNOLOGY,GURDASPUR
    POST BOX NO. 13, VILLAGE BARIAR,
    GURDASPUR,GURDASPUR,
    Punjab,143521

6. **Guard File(AICTE)**

Application Number: 1-2454978403*   Page **4** of **4**

Note: This is a Computer generated Letter of Approval.No signature is required.   Letter Printed On:1 May 2015

Printed By : AE1733091   263

रिह\
nju Singh

ज सचिव\
int Secretary

विश्वविद्यालय अनुदान आयोग

बहादुर शाह जफर मार्ग,\
नई दिल्ली-110 002 (भारत)

UNIVERSITY GRANTS COMMISSION

Bahadur Shah Zafar Marg\
New Delhi-110 002 (INDIA)

BY SPEED POST

No F. 22-1/2014(AC)

June, 2014

[1 9 JUN 2014

The Registrar,\
Punjab Technical University,\
Jalandhar-Kapurthala Highway,\
Near Science City,\
Kapurthala – 144 601

Sub:- Conferment of Fresh Autonomous Status to Beant College of Engineering and Technology, Gurdaspur – 143 521 affiliated to Punjab Technical University, Jalandhar.

Sir/Madam,

This has reference to the proposal dated 10.02.2012 submitted by Beant College of Engineering and Technology, Gurdaspur – 143 521 affiliated to Punjab Technical University, Jalandhar under the UGC scheme for conferment of fresh autonomous status and subsequent visit of the UGC Expert committee to consider the proposal on 25th and 26th April, 2014.

The report of the aforesaid Joint UGC Expert Committee was placed before the Standing Committee constituted for the purposes by the Commission to look into the Expert Committee reports for conferment of fresh autonomous status and extension of autonomy to colleges before its recommendations are placed before the Commission for its final approval.

The recommendations of the Standing Committee were placed before the Commission at its meeting held on 13.06.2014. The Commission, after taking due consideration of the recommendations of the Standing Committee, agreed to grant autonomous status to Beant College of Engineering and Technology, Gurdaspur – 143 521 under the UGC autonomous colleges scheme for a period of six year w.e.f. the academic year i.e. 2014-2015 to 2019-2020.

The Punjab Technical University, Kapurthala, may now go ahead and issue necessary orders in this regard by endorsing a copy of the same to this office for our records. The admissible grant under this scheme will be released to the College as per its eligibility, according to the norms as laid down in the XII Plan Guidelines for Autonomous Colleges by the Joint Secretary, (NRCB), University Grants Commission, 35, Feroz Shah Road, Mandi House New Delhi-110 001.

Yours faithfully,

(MANJU SINGH)

264