

Central University of Punjab

पंजाब केंद्रीय विश्वविद्यालय

SELF STUDY REPORT 2015



VOLUME-III

Evaluative Reports

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1. Centre for Pharmaceutical Sciences and Natural Products

1. Name of the Department

Centre for Pharmaceutical Sciences and Natural Products

2. Year of establishment

2011 as Centre for Chemical and Pharmaceutical Sciences; renamed in 2015.

3. Is the Department part of a School/Faculty of the university?

Yes, School of Basic and Applied Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

Postgraduate courses

M.Pharm.	Medicinal Chemistry
M. Sc.	Medicinal Chemistry
M.Pharm.	Pharmacognosy and Phytochemistry
PG Diploma	Translational Biomedical Research
M.Sc.	Chemical Sciences with specialization in Medicinal Chemistry

Ph.D. programme

M.Pharm.-Ph.D. Integrated	Medicinal Chemistry
Ph.D.	Medicinal Chemistry

5. Interdisciplinary programmes and departments involved

None.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

None

7. Details of programmes discontinued, if any, with reasons

M.Pharm.-Ph.D. programme was discontinued from 2012-13 onwards
M.Sc. Medicinal Chemistry was discontinued from 2015-16 onwards

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

CUPB follows semester system. The university has also adopted Choice Based Credit System from academic session 2015-16.

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

Following courses are offered by this centre in the programmes offered by other centres

S.No.	Courses offered by the centre
1.	Diseases and Medicines
2.	Chemicals of Everyday Life
3.	Spectroscopy in Drug Development and Analysis
Courses taught by the centre to Centre for Chemical Sciences	
1.	Organic Chemistry-1
2.	Spectral Analysis

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	1	1
Associate Professors	2	-	-
Assistant Professors	4	4	4

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Prof. P. Ramarao	Ph.D.	Professor	Pharmacology	35	0
Dr. Raj Kumar	Ph.D.	Assistant Professor	Medicinal chemistry	8	M.Pharm. - 10 M.Sc.-2

					Ph.D (Pursuing)-3
Dr. Vinod Kumar	Ph.D.	Assistant Professor	Organic chemistry	8	M.Pharm. -7 M.Sc.-3 Ph.D (Pursuing)-1
Dr. Vikas Jaitak	Ph.D.	Assistant Professor	Natural product and synthetic chemistry	4	M.Pharm. -9 M.Sc.-3 Ph.D (Pursuing)-1
Dr. Pradeep Kumar	Ph.D.	Assistant Professor	Medicinal chemistry	2	M.Pharm.-2 (Co- Supervisor)

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

None

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

None. All faculties are regular, full time.

14. Programme-wise Student Teacher Ratio

S.No	Programme	Year		No of students	Faculty	Student Teacher Ratio
		From	To			
1	M.Pharm.	2011	2013	08	05	1.6:1
		2012	2014	08	04	2:1
		2013	2015	10	04	2.5:1
		2014	2016	04	04	1:1
		2015	2017	09	05	1.8:1
2	M.Sc.	2011	2013	02	05	0.4:1
		2012	2014	NIL	04	NA
		2013	2015	07	04	2:1
		2014	2016	09	04	2.25:1
		2015	2017	15	05	3:1
3	Ph.D.	2013	2016	03	02	1.5:1
		2015	2019	02	02	1:1

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

S.No.	Designation	Sanctioned*	Filled	Actual
1.	Junior Technical Assistant	-	1	1
2.	Laboratory Attendant	-	1	1

* Non-teaching staff will be recruited after the approval of Cadre Recruitment Rule (CRR) from UGC

16. Research thrust areas as recognized by major funding agencies

External funding (DST, UGC, and MOES) has been received in following areas:

- Drug Design and Synthesis of anticancer and antidiabetic molecules
- Organic chemistry
- Natural product chemistry
- Bio catalysis
- Green chemistry

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

S. No.	Title of the Project	Principle Investigator/ Co-Investigator	Year		Funding Agency	Amount Sanctioned (Rupees)
			From	To		
1.	Design, synthesis and biological screening of novel multi-target inhibitors of tyrosine kinase(s) and topoisomerase-I	Dr. Raj Kumar	2012	2015	DST, Delhi	27 Lacs
2.	Design, synthesis and biological screening of novel heterocycles as inhibitors of dual tyrosine kinase(s) and histone	Dr. Raj Kumar	2014	2016	UGC, Delhi	12.59 Lacs

	deacetylase as potential anticancer agents					
3.	Design, synthesis and in vitro screening of mono-/bis-aminoquinolines as EGFR inhibitors	Dr. Raj Kumar	2014	2016	CUPB Research Seed Money	3 Lacs
4.	Synthesis of bioactive heterocyclic scaffolds using novel green technologies.	Dr. Vinod Kumar	2013	2015	UGC, Delhi	6 Lacs
5.	Design, synthesis and evaluation of combrestatins inspired small molecules as putative tubulin polymerization inhibitors	Dr. Vinod Kumar	2014	2016	CUPB Research Seed Money	3 Lacs
6.	Synthesis of rebaudioside-A: natural substitute for sugar from <i>Stevia rebaudiana</i> (Bertoni)	Dr. Vikas Jaitak	2013	2016	DST, Delhi	25.50 Lacs
7.	Chemical investigation, Ant diabetic and anticancer study of <i>Stevia rebaudiana</i> (Bertoni) through <i>invitro</i> and <i>insilico</i> approach	Dr. Vikas Jaitak	2014	2016	UGC, Delhi	6 Lacs
8.	Studies on phytoestrogens as anticancer agents from <i>Asparagus racemosus</i> (Shatavari) used in breast cancer chemotherapy	Dr. Vikas Jaitak	2014	2016	CUPB Research Seed Money	3 Lacs

2.	Number of paper published in Conferences/ workshops / symposium/ meeting	-	-	-	-	
3.	Monographs	-	-	-	-	
4.	Chapters in books	-	-	-	1	13
5.	Edited books	-	-	-	-	
6.	Books with ISBN with details of publisher	-	01 (ISBN 978-81-921432-9-3), Vishal Publishing Corp.	-	-	
7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)	-	-	-	-	
8.	Citation Index range/Average	0-684 (Total citation-4647)/2 8.37	0-176 (Total citation-1167)/2 3.8	0-46 (Total citation-417)/20. 85	0-56 (Total citation-302)/10. 01	0-76 (Total citation-283)/6.3 3
9.	SNIP	-	-	-	-	
10.	SJR	-	-	-	-	
11.	Impact factor range/average	0-5.04/ 3.14	1.4- 6.36/2.7 8	1.5- 5.5/4.78	0.5- 3.8/1.67	0.3- 3.5/1.87
12.	<i>h</i> -index	36	22	13	10	11

Details of publications of the faculty of all centres are in *Annexure I to V*

23. Details of patents and income generated

Dr. Raj Kumar, Assistant Professor, Centre for Pharmaceutical Sciences and Natural Products is in process of filing one patent and abstract has been approved by PSCST, Chandigarh.

24. Areas of consultancy and income generated

Prof. P. Ramarao

Pfizer Mumbai	Rs. 1,00,000.
M/s JURIGA (Animal House Setup), New Delhi	Rs. 15,000.

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

None

26. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (please specify)**

(a) National committees: Name of the Faculty, Designation & Name of the Committee, Year

Prof. P.Ramarao (Dean Academic Affairs)

- Chairman, Expert Committee to examine the applications for exemption from price control for drugs (DPCO, 95) constituted by the Ministry of Chemical & Fertilizers, Sept. 2004- till date
- Chairman, IDPL Revival Committee, Sept. 2004- Sept. 2005
- Chairman, Sub-group on Pharmacy Education of the working group on technical education for formulation of 11th five year plan under Ministry of HRD, Sept. 2006-
- Chairman, Board of Studies- Pharmacy, AICTE, March 2005- Aug. 2006
- Chairman, Project Review and Steering Group (PSG) of Department of Information Technology, Oct. 2005- till date
- Chairman, Committee for setting up of new Institutes on the lines of NIPER, Dec. 2005- Jan. 2006
- Chairman, Sub Group III on R&D of the Working Group on Drugs & Pharmaceuticals, MCF. 11th Five Year Plan (2007-2012), GoI, June 2006- Sept 2006
- Member, PRDSF, DST, Feb. 2004 – Feb. 2007

- Member, DPRP, DST, Sept 2004- till date
- Member, Investigational New Drug Committee, DCGI, GOI, Sept 2004- till date
- Advisory Member, USP-India, March, 2005
- Member, Working Group on Drugs & Pharmaceuticals, MCF. 11th Five Year Plan (2007-2012), May 2006- till date
- Member, Steering Committee on “Development of Potential Drugs from the Ocean” (Drugs from the Sea), Feb. 2006- till date
- Member, Expert committee of Drugs and Pharmaceutical Research Program, DST. 2007- till date
- Member, Indian Pharmacopoeia Commission, 2007 – till date
- Member, Selection Committee for Faculty Positions of Panjab University (Nominee, Vice President of India), April 2009- March 2011
- Member, Board of Studies in Human Genomics, Panjab University, Chandigarh, April 2009-March 2011
- Member, Board of Studies in Biotechnology, Panjab University, Chandigarh, April 2009- March 2011
- Member, Advisory Committee, Nanotechnology/Biotechnology/ Information Technology, Sri Guru Granth Sahib World University, Fatehgarh, Near Chandigarh, May 2009 – till date
- Organizing Secretary, Indian Pharmacology Society -Annual Conference, November, 2007
- Member, DOP, MCF Committee to review the report of Deloitte April 2009-June 2009

(b) International committees:

NA

(c) Editorial Boards:

NA

Dr. Raj Kumar (Assistant Professor)

National Committee

- Expert Member, BOS, Pharmaceutical Sciences, PTU, Kapurthala

Editorial Board/Reviewers

Editor: Hindawi Publishing Corporation, Associate Editor to Pharmaceutica Analytica Acta, Lead Guest Editor (www.omicsonline.org); **Reviewer:** Med Chem Comm, Bioorganic and Medicinal Chemistry, Bioorganic and Medicinal Chemistry Letters, Food and Chemical Toxicology, European Journal of Medicinal Chemistry, International Journal of Biological Macromolecules, Medicinal Chemistry Research, Journal of Enzyme Inhibition and Medicinal Chemistry, Letters in Drug Design & Discovery, Biomarkers in Cancer, Drug Target Insights, Organic Chemistry Insights

Dr. Vinod Kumar (Assistant Professor)

Editorial Board/Reviewer

Editor: Aperiato Journal of Pharmacology and Drug Designing; **Reviewer:** Journal-Indian Chemical Society

Dr. Vikas Jaitak (Assistant Professor)

Editorial Board/Reviewer

Editor: International Journal of Analytical Chemistry Research, International Journal of Chemical Research, Journal of Medicinal Chemistry Letters, Evidence-Based Complementary and Alternative Medicine, African Journal of Pharmacy and Pharmacology; **Reviewer:** Natural Product Research, Annals of Microbiology, Medicinal Chemistry Research, Journal of Agricultural and Food Chemistry, Grassy aceites, Acta Phyloogie Plantaram, RSC Advances, European Journal of Medicinal Chemistry

(d) Any other (please specify):

Dr. Raj Kumar (Assistant Professor)

- American Chemical Society

- Life membership of IPGA

Dr. Vikas Jaitak (Assistant Professor)

- Lifetime membership of Indian Scientific Analytical Scientists Delhi, India

Dr. Pradeep Kumar (Assistant Professor)

- Lifetime Membership of APTI, India

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

Faculties of the centre participate in orientation programs, refresher courses, workshops and international seminars etc. and interact with various experts visiting the campus.

- Dr. Raj Kumar, Assistant Professor, attended orientation programme at Panjab University Chandigarh, Feb 10- March 09, 2015
- Dr. Raj Kumar, Assistant Professor, attended refresher course at Punjabi University Patiala, May 04- May 23, 2015
- Dr. Vinod Kumar, Assistant Professor, attended orientation programme at Central University of Hyderabad, Jan 8- Feb 4, 2015
- Dr. Vinod Kumar, Assistant Professor, attended refresher course at Kurukshetra University, June 16- July 06, 2015
- Dr. Vikas Jaitak, Assistant Professor, has attended orientation programme at Punjabi University Patiala, June 15-July 11, 2015

28. Student projects

- Percentage of students who have done in-house projects including inter-departmental projects:

100%

- Percentage of students doing projects in collaboration with other universities / industry / institute

0%

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

- Faculty

S. No.	Name of faculty/ Fellows/ Students with designation in centre	Name of the award	Awarding authority	Year and other details
1.	Dr. P Ramarao	Prof. M.L. Schriff's Memorial Award Postdoctoral fellowship	University of Illinois at Chicago, U.S.A	1982
2.	Dr. P Ramarao	Research Fellowship	Harvard University, U.S.A	1987-1989
3.	Dr. P Ramarao	UGC Career Development Award	University Grants Commission	1989-1990
4.	Dr. P. Ramarao	Dr.I.C. Chopra Award	Regional Research Laboratory, Jammu	1995
5.	Dr. P. Ramarao	Dr. G. S. Sidhu Science Lecture	Indian Institute of Chemical Technology	2003
6.	Dr. P. Ramarao	AICOI's Punjab Ratan Award	All India Conference of Intellectuals, Punjab	2005
7.	Dr. P. Ramarao	CDRI Oration Award 2005	Central Drug Research Institute, Lucknow	2005
8.	Dr. P. Ramarao	Mrs P.P.Suryakumari Prize (Gold Medal)	Indian Pharmacological Society (IPS)	2005
9.	Dr. P. Ramarao	Rajbhasha Award	Town official Language Implementation Committee (TOLIC)	2005
10.	Dr. P. Ramarao	ISCB Award for Excellence	Indian Society of Chemists & Biologists	2008
11.	Dr. P. Ramarao	Pharma-Bio Award	CHEMTECH Foundation, Mumbai	2009
12.	Dr. Raj Kumar	Assistant Research Scientist	University of Maryland Baltimore County (UMBC), USA	2007-08
13.	Dr. Vinod Kumar	Postdoc Fellow	Università di Siena, Siena, Italy	2008-09
14.	Dr. Vinod Kumar	Research Officer	University of Bath, BA2 7AY, United	2010-12

			Kingdom	
15.	Dr. Raj Kumar	Young Scientist Award	DST	2011-12
16.	Dr. Vikas Jaitak	Young Scientist Award	DST	2012-13

- Doctoral / post-doctoral fellows

Nil

- Students

S. No.	Name of faculty/ Fellows/ Students with designation in centre	Name of the award	Awarding authority	Year and other details
1.	Mr. Gaurav Joshi	National Level Essay Writing Award	PES, New Delhi	2013
2.	Mr. Arvind Negi	Doctoral Fellowship	Irish Government	2014
3.	Ms. Jimi Alex	Best poster Award	CUPB, Bathinda	2014
4.	Ms. Jimi Alex	Maulana Azad Fellowship	UGC	2014
5.	Mr. Gaurav Joshi	Best Photography Award	CUPB, Bathinda	2014
6.	Mr. Gaurav Joshi	Best poster Award	CUPB, Bathinda	2015
7.	Mr. Bhupinder Kumar	Prof. P Sengupta memorial Award	ICS	2015

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

Nil

31. Code of ethics for research followed by the departments

Centre follows the code of ethics for research as per CUPB on research related ethics.

32. Student profile programme-wise:

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Pharm.-Ph.D. (Medicinal Chemistry) 2011-12	80	4	4	100% (M.Pharm.)	100% (M.Pharm.)
M.Sc. (Medicinal Chemistry) 2011-12	10	0	2	100%	100%
M.Pharm. (Medicinal Chemistry) 2012-13	32	4	4	100%	100%
M.Pharm. (Medicinal Chemistry) 2013-14	206	5	5	Ongoing	Ongoing
M.Sc. (Medicinal Chemistry) 2013-14	44	1	7	Ongoing	Ongoing
M.Pharm. (Medicinal Chemistry) 2014-15	67	2	2	Ongoing	Ongoing
M.Sc. (Medicinal Chemistry) 2014-15	30	4	6	Ongoing	Ongoing
M.Pharm. (Medicinal Chemistry) 2015-16	89	8	01	Ongoing	Ongoing
M.Sc. (Medicinal Chemistry) 2015-16	506 (including Organic, Inorganic and Physical Chemistry)	8	07	Ongoing	Ongoing
Ph.D. 2015-16	39	2	0	Ongoing	NA

33. Diversity of students

Name of the Programme	% of students from the same university	% of students from other universities with in the State	% of students from universities outside the State	% of students from other countries
M.Pharm.-Ph.D	0%	25%	75%	Nil

(Medicinal Chemistry) 2011-12				
M.Sc. (Medicinal Chemistry) 2011-12	0%	100%	0%	Nil
M.Pharm. (Medicinal Chemistry) 2012-13	0%	37.5%	62.5%	Nil
M.Pharm. (Medicinal Chemistry) 2013-14	0%	40%	60%	Nil
M.Sc. (Medicinal Chemistry) 2013-14	0%	85.7%	14.3%	Nil
M.Pharm. (Medicinal Chemistry) 2014-15	0%	60%	40%	Nil
M.Sc. (Medicinal Chemistry) 2014-15	0%	80%	20%	Nil
M.Pharm. (Medicinal Chemistry) 2015-16	0%	11%	89%	Nil
M.Sc. (Medicinal Chemistry) 2015-16	0%	0%	100%	Nil
Ph.D.	100%	0%	0%	Nil

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

S. No.	Name of Students	Year	Qualifying Exam
1	Arvind Negi	2011, 2013	GPAT,GATE
2	Jimi Marin Alex	2012	GPAT
3	Ramit Singla	2012	GPAT

4	Monika Chauhan	2012	GPAT
5	Deependra Kumar	2012	GPAT
6	Vinay Kumar Gupta	2012	GPAT
7	Prakriti Monga	2012	GPAT
8	Yashika Bhalla	2012	GPAT
9	Vijayinder Saini	2012	GPAT
10	Gaurav Joshi	2012	GPAT
11	Mayank	2012	GPAT
12	Gagan	2012	GPAT
13	Ashish Ranjan Dwivedi	2012	GPAT
14	Sheetal	2012	GPAT
15	Anil Rana	2012	GPAT
16	Akanksha Sharma	2011	GPAT
17	Archana Kashyap	2013	GPAT
18	Sapna Kumari	2013	GPAT
19	Jagpreet Singh	2013	GPAT
20	Shivani Sharma	2013	GPAT
21	Bhupinder Kumar	2013	GPAT
22	Pankaj Kumar Singh	2013	GPAT
23	Vivek Prakash	2013	GPAT
24	Manvendra Kumar	2014	GPAT
25	Gaurav Sharma	2014	GPAT
26	Harmeet Kaur	2014	GPAT
27	Jyoti Dandriyal	2014	GPAT
28	Kunal Prakash	2015	GPAT
29	Ankush Thakur	2015	GPAT
30	Subhajit Makar	2015	GPAT
31	Rohit Kumar	2015	GPAT

35. Student progression

Student progression	Percentage against enrolled
UG to PG	0 % (UG course not offered by centre)
PG to M.Phil.	0% (M.Phil. course not offered by centre)
PG to Ph.D.	50%
Ph.D. to Post-Doctoral	0%
Employed	0%
<ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	80%
Entrepreneurs	0%

36. Diversity of staff

Percentage of faculty who are graduates	%
of the same university	0
from other universities within the State	60%
from universities from other States	40%
from universities outside the countries	0

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

None of the faculty from the centre was awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period.

38. Present details of departmental infrastructural facilities with regard to

- a) **Library:** No separate library in the centre. But there is separate book cabin for the centre in the main library
Total e-journals- Approximately 3500
Books available in library for centre- Approximately 1500

b) Internet facilities for staff and students

Centre is connected with high-speed Wi-Fi internet connectivity 24 X 7. Beside this all laboratories are equipped with high speed LAN connection along with printing facilities. Official email ids to all faculty, staff and students have been provided.

- c) **Total number of class rooms:** Two along with a common seminar hall

- d) **Class rooms with ICT facility:** All class rooms have ICT facility

- e) **Students' laboratories:** One

Centre for Pharmaceutical Sciences and Natural Products laboratory is equipped with well-furnished chemical resistant furniture and many sophisticated international standard instruments such as microwave synthesiser, lab wiley grinder, muffle furnace, flash chromatography, rotary evaporators, moisture determination balances, safety control heating plates with stirrer and fast solvent speed extractor, solid peptide synthesizer.

f) Research laboratories: One

Research student at the Centre for Pharmaceutical Sciences and Natural Products laboratory pool resources together for optimal in research achievements in fields of medicinal chemistry. Along with basic and highly sophisticated tools being used in the centre, students also have access to Central Instrumentation Laboratory.

Further software for concluding Docking studies, Homology modelling studies and the software for CADD assisted studies in drug designing have been installed which include Schrodinger, Auto Dock, Molegro, Pymol, ChemDraw 12.0, Sigma Plot, EndNote etc.

39. List of doctoral, post-doctoral students and Research Associates**a) From the host institution/university**

Ph.D. students: 5 (five), all pursuing

1.	Jimi Marin Alex (F)
2.	Monika Chauhan (F)
3.	Ramit Singla (M)
4.	Gaurav Joshi (M)
5.	Bhupinder Kumar (M)

b) From other institutions/universities

NA

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

M. Pharm. students having valid GPAT score are availing fellowships from UGC, as well as, from AICTE

S. No.	Name of Students	Year	Qualifying Exam	Name of agency
1	Arvind Negi	2011, 2013	GPAT	UGC
2	Jimi Marin Alex	2012	GPAT	UGC
3	Ramit Singla	2012	GPAT	UGC
4	Monika Chauhan	2012	GPAT	UGC
5	Deependra Kumar	2012	GPAT	UGC
6	Vinay Kumar Gupta	2012	GPAT	UGC
7	Prakriti Monga	2012	GPAT	UGC
8	Yashika Bhalla	2012	GPAT	UGC

9	Vijayinder Saini	2012	GPAT	UGC
10	Gaurav joshi	2012	GPAT	UGC
11	Mayank	2012	GPAT	UGC
12	Gagan	2012	GPAT	UGC
13	Ashish Ranjan Dwivedi	2012	GPAT	UGC
14	Sheetal	2012	GPAT	UGC
15	Anil Rana	2012	GPAT	UGC
16	Archana Kashyap	2013	GPAT	AICTE
17	Sapna Kumari	2013	GPAT	AICTE
18	Jagpreet Singh	2013	GPAT	AICTE
19	Shivani Sharma	2013	GPAT	AICTE
20	Bhupinder Kumar	2013	GPAT	AICTE
21	Pankaj Kumar Singh	2013	GPAT	AICTE
22	Vivek Prakash	2013	GPAT	AICTE
23	Manvendra Kumar	2014	GPAT	AICTE
24	Gaurav Sharma	2014	GPAT	AICTE
25	Harmeet Kaur	2014	GPAT	AICTE
26	Jyoti Dandriyal	2014	GPAT	AICTE
27	Kunal Prakash	2015	GPAT	AICTE
28	Ankush Thakur	2015	GPAT	AICTE
29	Subhajit Makar	2015	GPAT	AICTE
30	Rohit Kumar	2015	GPAT	AICTE

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

Yes, need assessment is undertaken before the development of new programmes. While assessing the need to design and develop curriculum, following parameters are kept in mind.

- Vision and mission of CUPB
- Need of the learner
- Societal need
- Regulatory authorities and stakeholders
- Interaction with students, stakeholders

42. Does the department obtain feedback from

- a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes. The courses are discussed in the faculty meeting and appropriate steps taken to further improve the curriculum.

- b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Feedbacks are used for modifications or revisions of the syllabus and teaching learning evaluation

- c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

Centre takes feedback from alumni and employers on the programmes and uses it for the starting of programmes.

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

The alumni of the centre are at early stage of their professional carrier. The following are the well placed students the centre

- Arvind Negi Research scholar in Ireland
- Vinay Kumar Gupta E-Valueserve, Noida
- Prakriti Monga Indo swift, Mohali
- Deependra Inno Data, Noida
- Anil Rana Inno Data, Noida
- Gagandeep Kaur Paraxal, Mohali
- Ramandeep Kaur Mata Sahib Kaur Girls College, Talwandi Sabo

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

S. No	Institution and Department	Name	Lecture	Date	Organizing Department
1.	National Institute of Pharmaceutical Education and Research, Mohali	Prof. Asit K. Chakraborti	Medicinal chemistry education and research: the necessity and pitfalls Enriching the medicinal chemists ‘tool box emerging trend and paradigm shift in discovery chemistry	03/04/14	Centre for Pharmaceutical Sciences and Natural Products

2.	National Institute of Pharmaceutical Education and Research, Mohali	Dr. I. P. Singh	Isolation and structure elucidation of natural products	28/03/14	Centre for Pharmaceutical Sciences and Natural Products
3.	Centre for Pharmacy and Health Research, University of Alberta, Canada	Dr. Atul Bhardwaj	Polysubstituted tetrahydropyrans and nitric oxide releasing prodrugs as safe anti-inflammatory and anti-hypertensive agents: synthesis and in-vitro/in-vivo biological investigations	24/09/12	Centre for Pharmaceutical Sciences and Natural Products

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

Faculties of the centre have adopted following teaching methods for different programmes: class seminars, demonstration, class assignments, story-telling, brain storming and field visits. It is mandatory for all the students to participate in the in-house symposium of the university. The research students are provided opportunity to make oral presentations and poster presentations of their research topic.

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

Programme objectives are continuously monitored by:

- Checking focus on methodology of teaching, evaluation criteria and students feed back
- External evaluation of dissertation/thesis of PG students

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

Participation of students in essay writing, debates, photography, poster-making, poetry recitation, dance, music, painting and traditional dress competitions. Participation in plays on serious issues like female foeticide,

dowry, environmental pollution, etc. by students. Participation in Teacher Day, Hindi Pakhwara, Punjab Day, World Hindi Day, Earth Day, Science Day, National Technology Day, World Cancer Day, First Innovators Day, International Mother Language Day and International Biodiversity Day celebrations, Participation in “Innovators Club”. Active participation by the staff, faculty and the students in “Blood Donation Camp”.

48. Give details of “beyond syllabus scholarly activities” of the department.

Centre has invited following scientists for delivering invited lectures in the field of Medicinal Chemistry, as well as, Natural Product Chemistry

Invited lectures

- Dr. A. K. Saxena, QSAR and Molecular Modelling studies in Anti-histamines (H1), CDRI, Lucknow on May 3, 2011.
- Dr. M. S. Bakshi, Bionanomaterials and their application in nanotoxicology, Wilfrid Laurier University, Canada on August 5, 2011.
- Dr. Atul Bhardwaj, Polysubstituted tetrahydropyrans and nitric oxide releasing prodrugs as safe anti-inflammatory and anti-hypertensive agents: synthesis and in-vitro/in-vivo biological investigations, University of Alberta, Canada on Sep 24, 2012.
- Dr. I. P. Singh, Isolation and Structure Elucidation of Natural Products, NIPER, Mohali on March 28, 2014
- Prof. Asit K. Chakraborti, Medicinal Chemistry Education and Research: the Necessity and Pitfalls. NIPER, Mohali on April 3, 2014
- Prof. Asit K. Chakraborti, Enriching the Medicinal Chemists Tool Box: Emerging Trend and Paradigm Shift in Discovery Chemistry. NIPER, Mohali on April 3, 2014

Students from the centre also participate in activities like quiz, as well as, in workshops.

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

Yes, AICTE.

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

Due to well-equipped individual research laboratories of our centre, availability of major equipment into the Central Instrumentation Lab of the university and hard work of faculty and students; centre has published the latest developments in their respective research work in reputed high impact national/ international journals; and have also presented in the national/ international conferences/ seminars.

The centre has also received research grants from pioneer funding agencies like DST, UGC and MOES. Beside this many research/review papers are being continuously published in various pioneer national and international journals which all speak about excellence of the centre.

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

Strengths:

- Centre is known for its dedicated high quality faculty. The quality of the faculty is evidenced by their services as editorial board members, referees and authors in reputed national and international journals.
- The research programmes of the faculty are supported by grants from different funding agencies.
- Selection of students by rigorous process.
- High quality teaching curriculum of masters programs (M.Sc. as well as M.Pharm), which helps students to prepare for national level competitive examinations and entrance tests.
- Well-equipped laboratory

Weaknesses:

- Inadequate space.
- Insufficient research partnerships
- Low enrolment rate of the students
- Senior positions are vacant (Associate Professors)

Opportunities:

- Free hand to set up research work culture

- Collaboration with other university/institutes
- Funding opportunities from different agencies
- Participating to solve local problems
- Participation in decision making process of the centre

Challenges:

- Getting quality visiting faculty and experts from other institution.
- Development of human resources and university infrastructure.
- Generation of future leaders in pharmaceutical sciences and natural products.
- Placement of students

52. Future plans of the department.

- Starting new programmes such as Pharmacology, Pharmaceutics
- Getting quality visiting faculty and experts from other institutions
- Development of human resource and centre infrastructure
- Centre and industry partnership
- Getting centre for potential excellence

2. Centre for Chemical Sciences

1. Name of the Department

Centre for Chemical Sciences

2. Year of establishment

2015

3. Is the Department part of a School/Faculty of the university?

Yes, School of Basic and Applied Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

M.Sc. Chemical Sciences
 (Organic/Inorganic/Physical/Computational Chemistry)
Ph.D. Chemical Sciences

5. Interdisciplinary programmes and departments involved

Computational chemistry is an interdisciplinary programme with Centre for Computational Sciences.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

None.

7. Details of programmes discontinued, if any, with reasons

NA

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

The University has adopted choice based credit system (CBCS) and it has been implemented in the Centre for Chemical Sciences.

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

The faculty of Centre for Chemical Sciences is involved in the following courses offered by Centre for Pharmaceutical and Natural Products:

S. No.	Name of the course
1	Organic Chemistry-1
2	Inorganic Chemistry-1
3	Physical Chemistry-1
4	Spectral Analysis

The centre has offered the following interdisciplinary courses for the students of other centres:

S. No.	Name of the course
1	Basic Inorganic Chemistry
2	An Introduction to Green and Sustainable Chemistry
3	Nanomaterials: Fabrication and Application
4	Chemistry of Environment

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professors	2	0	0
Assistant Professors	4	4	4

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. Rakesh Kumar	Ph.D.	Assistant Professor	Organic chemistry	3 Yrs	Ph.D. Pursuing 1

Dr. Krishna Kanta Haldar	Ph.D.	Assistant Professor	Inorganic chemistry	2.5 yrs	Nil
Dr. Rajendra Singh Dhayal	Ph.D.	Assistant Professor	Inorganic chemistry	4 Years	Nil
Dr. J. Nagendra Babu	Ph.D.	Assistant Professor	Supramolecular chemistry	6.5 Years	M.Phil: 6 Ph.D. Pursuing: 3 (Co-supervisor)

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

None.

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

All classes are taken by full time, regular Faculty

14. Programme-wise Student Teacher Ratio

S.No	Programme	Year		No of students	Faculty	Student Teacher Ratio
		From	To			
1.	MSc. Chemical Sciences (Org./Inorg./Phys./Computational Chemistry)	2015	2017	15	4	4.75:1
2.	Ph.D. Chemical Sciences	2015	2018	1	4	0.25:1

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

Currently, there is no technical staff with the centre. The non-teaching staff will be recruited after the approval of CRR from UGC.

16. Research thrust areas as recognized by major funding agencies

- Organic/green chemistry
- Inorganic chemistry
- Supramolecular chemistry

- Environmental chemistry

Three of the newly joined faculty have their own research projects funded by various agencies like DST and BARC.

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

S. No.	Title of the Project	Principal Investigator/Co-Investigator	Year		Funding Agency	Amount Sanctioned (Rupees)
			From	To		
1.	Direct C-H bond functionalization of heteroarenes via dehydrative and dehydrogenative coupling strategies.	Dr. Rakesh Kumar (PI)	2014	2017	DST	22 Lacs
2.	Synthesis and characterization of polyhydrido Cu and Ag nanoclusters and their application	Dr. Rajendra Singh Dhayal (PI)	2015	2018	DST	35 Lacs
3.	Synthesis and Evaluation of Callixarene capped quantum dots for sensing of organic analytes	Dr. J. Nagendra Babu (PI)	2012	2015	DST	24.6 lacs
4.	Spatial distribution of uranium and associated water quality parameters in groundwater/drinking water of six districts (Fatehgarh Sahib, Ludhiana, SBS Nagar, Rupnagar, Barnala) of Punjab and one district (Hanumangarh) in Rajasthan, India	Dr. J. Nagendra Babu (Co-I) Along with Dr. Sunil Mittal (PI), Centre for Environmental Science and Technology	2015	2017	BARC	24 lacs
Total grants received						105.6 Lacs

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration

b) International collaboration

Nil

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

Nil

Three of the faculty members of the centre (Dr. Rakesh Kumar, Dr. Rajendra Dhayal and Dr. J. Nagendra Babu) have DST-Fast Track projects.

20. Research facility/centre with

At present, centre shares labs with the Centre for Pharmaceutical and Natural Products which is having excellent research facilities including well-furnished chemical resistant furniture, various instruments such as microwave synthesiser, flash chromatography, rotary evaporators, temperature control heating plates with stirrer and BUCHI speed extractor.

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

Nil

22. Publications:

S.No.	Items	Total Numbers			
		Dr. Rakesh Kumar	Dr. Krishna Kanta Haldar	Dr. Rajendra Singh Dhayal	Dr. J. Nagendra Babu
1.	Number of paper published in peer review journals	21	14	18	17
2.	Number of paper published in Conferences/workshops/symposium/meeting	-	-	-	02
3.	Monographs	-	-	-	-
4.	Chapters in books	-	-	-	-
5.	Edited books	-	-	-	-
6.	Books with ISBN with details of publisher	-	-	-	-

7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)	21	14	18	17
8.	Citation Index/ (Average)	326/ (15.52)	439/ (31.35)	170/ (9.44)	264/ (15.53)
9.	SNIP	-	-	-	-
10.	SJR	-	-	-	-
11.	Impact factor range/ (Average)	0.38- 30.43/ (5.2)	2.15- 8.31/ (5.3)	0.7-13/ (5.6)	0.66- 6.41/(2.6)
12.	<i>h</i> -index	10	10	8	11

Details of publications attached as Annexure-I

23. Details of patents and income generated

Nil.

24. Areas of consultancy and income generated

Nil.

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

Nil

26. Faculty serving in

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

National committees: Name of the Faculty, Designation & Name of the Committee, Year

Dr. Rajendra Singh Dhayal

Reviewer of following journals:

Organometallics, J. Clust. Sci., J. Organomet.Chem., Polyhedron, Indian J. Chem., Sec.A, Inorg.Chem., J. Am. Chem. Soc., Angew. Chem. Int. Ed., Dalton Trans, Chem. -Eur. J.

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

None

28. Student projects

NA

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

- Faculty

S. No.	Name of faculty/ Fellows/Students with designation in centre	Name of the award	Awarding authority	Year and other details
1.	Dr. Rakesh Kumar	Postdoc Fellow	University of Leuven, Belgium	2012-2013
2.	Dr. Krishna Kanta Halدار	Postdoc Fellow	Ben-Gurion University of the Negev, Israel	2013-2014
3.	Dr. Krishna Kanta Halدار	Postdoc Fellow	Indian Association for the Cultivation of Science	2012-2013
4.	Dr. Rajendra Singh Dhayal	Postdoc Fellow	National Dongh Hwa Univ., Hualien, Taiwan	2011-2014

- Students

NA

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

Nil

31. Code of ethics for research followed by the departments

Centre follows the code of ethics for research as per CUPB policy on research related ethics.

32. Student profile programme-wise:

The first batch of students has joined the programme in the Academic year 2015-2016).

Name of the Programme	Applications Received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Sc. Chemical Sciences (Organic/Inorganic/Physical/ Chemistry)	506	10	9	In progress	
Ph.D. Chemical Sciences	21	0	1	In progress	

33. Diversity of students

The First Academic session has started.

Name of the Programme	% of students from the same university	% of students from other universities with in the State	% of students from universities outside the State	% of students from other countries
M.Sc. Chemical Sciences (Organic/Inorganic/ Physical/Chemistry)	0%	21.05%	78.95%	0%
Ph.D. Chemical Sciences	0%	100%	0%	0%

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

Nil

35. Student progression

Nil

36. Diversity of staff

Percentage of faculty who are graduates	%
of the same university	0
from other universities within the State	50%
from universities from other States	50%
from universities outside the countries	0

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

Nil

38. Present details of departmental infrastructural facilities with regard to

a) Library:

At present there is no separate library in the centre, however journal and books can be accessed from the main library of the university.

Number of books (503):

- Organic and Medicinal Chemistry: 430 titles
- Physical Chemistry: 40 titles
- Inorganic Chemistry: 33 titles

Many more books and journals are being continuously added to the library

b) Internet facilities for staff and students

24 hours internet connection and Wi-Fi campus.

c) Total number of class rooms: Two along with a common seminar hall (shared with Centre for Pharmaceutical and Natural Products)

d) Class rooms with ICT facility: available

e) Students' laboratories: One

The centre shares lab with Centre for Pharmaceutical and Natural Product which is having excellent research facilities with well-furnished chemical resistant furniture and many sophisticated international instruments.

f) Research laboratories: One

The centre shares labs with Centre for Pharmaceutical and Natural Products. Moreover, students also have access to Central Instrumentation Laboratory which was created to cater high-end research instrumentation requirements.

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

a) from the host institution/university

Nil

b) from other institutions/universities

Nil

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

Nil

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

As per the general policy of CUPB, the Centre of Chemical Sciences assesses the need while designing and developing curriculum. Following parameters are kept in mind: Vision and mission of CUPB, need of the learner, societal need, directions of regulatory authorities and need of stakeholders. Various groups such as faculty, students, experts and industrial representatives are consulted before the development of curriculum.

42. Does department obtain feedback from Faculty, Students and Alumni

Although the Centre of Chemical Sciences is a newly established centre, however it will involve faculty, students and alumni for the feedback.

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

NA (New Centre)

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

NA (New Centre)

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

First Academic session of the Centre started in August 2015.

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

NA as yet

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

NA (New Centre)

- 48. Give details of “beyond syllabus scholarly activities” of the department.**

The Centre will invite scientists for delivering lectures besides organising various workshops and training programmes.

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

NA

- 50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.**

Newly started centre.

(Worth to mention that three of the faculties of the centre have already received research grants from various funding agencies)

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

Strengths:

- Centre has qualified and experienced faculties.
- The quality of the faculty is evidenced by their publications in highly reputed journals.
- The research work of the faculty members are supported by various funding agencies.
- Comprehensive Curriculum (The PG programmes are designed keeping in view the competitive national and international scenario)

Weaknesses:

- Lack of senior faculty members (Associates and Professor) in the centre
- Lack of space

Opportunities:

- Funding opportunities from different agencies
- Collaboration with other university/institutes
- To address local issues of energy and health
- To establish links with industries for training and consultancy

Challenges:

- To cope up with the industrial and research requirements of the future
- To develop skilled human resources to meet the need of the hour
- To develop industrial collaboration for the placement of students
- To develop infrastructural growth of the centre

52. Future plans of the department.

- To establish Centre of Excellence in Chemistry
- To start new programmes like Analytical Chemistry, Industrial Chemistry etc.
- To develop human resource and centre infrastructure
- To develop centre and industry partnership

3. Center for Animal Sciences

1. Name of the Department

Centre for Animal Sciences

2. Year of establishment

2009 as a part of Center for Biosciences; 2015 as separate Center for Animal Sciences

3. Is the Department part of a School/Faculty of the university?

Yes, School of Basic and Applied Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

M.Sc. Life Sciences
(Specialization in Animal Sciences)

Ph.D. Animal Sciences

Ongoing Biosciences programmes:

M.Sc. Biosciences

M.Sc. Molecular Genetics

M.Phil. Biosciences

M.Phil. – Ph.D. integrated program in Biosciences

5. Interdisciplinary programmes and departments involved

No.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

None

7. Details of programmes discontinued, if any, with reasons

- M.Sc. Biosciences (last batch admitted in 2014-15)
- M.Sc. Molecular Genetics (last batch admitted in 2014-15)
- M.Phil. Biosciences (last batch admitted in 2014-15)
- M.Phil.–Ph.D. integrated program in Biosciences (last batch admitted in 2013-14)

With new nomenclature of the center and introduction of M.Sc. Life Sciences (specialization in Animal Sciences) and Ph.D. in Animal Sciences above mentioned programmes were discontinued.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

Semester and Choice Based Credit System as per UGC guidelines.

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

The faculty of Centre for Animal Sciences is involved in the teaching of core courses offered by centers such as Center for Biochemistry and Microbial Sciences, and Center for Human Genetics and Molecular Medicine.

S.No.	Core Courses	Course Code	Offered to Other Centers
1	Research Methodology	LSS.501	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine, Center for Plant Sciences
2	Biochemistry	LSS.506	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine
3	Animal Physiology	LSS.510	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine
4	Immunology	LSS.512	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine

5	Techniques in Life Sciences	LSS.517	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine, Center for Plant Sciences
6	Molecular Biology	LSS.518	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine
7	Cell Biology	LSS.521	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine
8	Cancer Biology	LSS.568	Center for Biochemistry and Microbial Sciences, Centre for Human Genetics and Molecular Medicine

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professors	1	0	0
Associate Professors	2	0	0
Assistant Professors	4	4	4

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. Anil K. Mantha	Ph.D.	Assistant Professor	Neurosciences	10.7	1 (M.Phil.) 3 (M.Pharm.) 3 (M.Sc.)
Dr. Jyoti Parkash	Ph.D.	Assistant Professor	Neurosciences	7.4	None
Dr. R. K. Chaitanya	Ph.D.	Assistant Professor	Entomology	5	None
Dr. Ajay Kumar	Ph.D.	Assistant Professor	Cancer Biology and Immunology	1.6	None

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

Nil

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

Nil

14. Programme-wise Student Teacher Ratio

Total No. of Students	No. of Students
Ph.D.	6
M.Phil.	6
M.Sc. Biosciences	2
M.Sc. Life Sciences (sp. Animal Sciences)	15
M.Sc. (Total)	17
Total Students	31
Total Teachers	4
Student/Teachers Ratio	7.75 : 1

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

To be appointed after the CRR is approved by the UGC.

S.No.	Designation	Sanctioned	Filled	Actual
1.	Laboratory Technician	-	-	-
2.	Junior Technical Assistant	-	-	-
3.	Laboratory Assistant	-	-	-
4.	Laboratory Attendant	-	0.5	0.5

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

- Neurosciences
- DNA damage and repair
- Cancer Biology
- Basic and molecular entomology
- Insect vectors of human diseases

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

a) International Grants:

S. No.	Title of the Project	Principal Investigator/ Co-investigator	Year		Funding Agency	Amount Sanctioned (In Rupees)
			From	To		
1.	APEI/Ref-1's Dual functions countering beta amyloid induced genotoxicity	Dr. Anil K. Mantha	2011	2015	Alzheimer's Association, USA	58 Lacs

b) National Funding:

S. No.	Title of the Project	Principal Investigator/ Co-investigator	Year		Funding Agency	Amount Sanctioned (In Rupees)
			From	To		
1.	Mitochondrial Oxidative stress DNA-Repair in Alzheimer's disease: AP-endonuclease (APE1/Ref1) as a potential therapeutic target	Dr. Anil K. Mantha	2014	2017	DST	46.6 Lacs
2.	Apurinic/aprimidinic endonuclease (APEI) as an anti-cancer therapeutic agent for Glioblastoma therapy	Dr. Anil K. Mantha	2013	2015	UGC	6 Lacs
3.	Elucidation of the role of digestive proteases during <i>Plasmodium</i> transmission in Indian malarial vector, <i>Anopheles stephensi</i>	Dr. R. Krishna Chaitanya	2014	2017	DST-SERB	20 Lacs (to be transferred to CUPB)

18. Inter-institutional collaborative projects and associated grants received

a) National Collaboration:

Nil

b) International Collaboration:

- i. **Dr. Anil K. Mantha** collaborating with Prof. Gianluca Tell, Department of Medical and Biological Sciences, University of Udine, Udine, Italy.
- ii. **Dr. Anil K. Mantha** collaborating with Prof. Regino Perez-Polo, Department of Biochemistry and Molecular Biology, University of Texas Medical Branch, Galveston, Texas, USA.
- iii. **Dr. Anil K. Mantha** collaborating with Prof. Gulio Tagliatela, Mitchell Center for Neurodegenerative Diseases, University of Texas Medical Branch, Galveston, TX, USA.
- iv. **Dr. Jyoti Parkash** collaborating with Dr. Vincent Prevot (Director) Development and Plasticity of Postnatal Brain Jean-Pierre Aubert Research Center INSERM U837, place de Verdun 59045 Lille cedex France (Indo-French grant proposal submitted).

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

Nil

20. Research facility / Centre with:

State recognition:

- Nil

National recognition:

- Nil

International recognition:

- Nil

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

There is no such laboratory at the moment but university is in the process of submitting a proposal for establishing a Centre with Potential for Excellence from UGC, where the Centre for Animal Sciences is a key partner (**1.30 Crores**).

22. Publications:

Table: Description of the research/academic outcome

Sr. No.	Description	Number / Score
1	No. of papers published in peer reviewed journals (national / international):	75
2	Monographs	Nil
3	Chapters in books:	2
4	Edited books:	Nil
5	Books with ISBN with details of publishers:	Nil
6	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database-International SocialSciences Directory, EBSCO host etc.):	58
7	Citation Index– range / average:	67 – 504 / 246.5
8	SNIP:	Dr. AKM: 30.276 Dr. JP: 19.875 Dr. RKC: 9.936 Dr. AK: 10.292
9	SJR:	Dr. AKM: 56.0 Dr. JP: 43.94 Dr. RKC: 10.677 Dr. AK: 12.06
10	Impact Factor– range / average:	0.13 - 17.472 / 67.527
11	<i>h</i> – Index range	4 - 12

Table: Centre-wise list with faculty and Publication Summary (Journals)

S. No.	Name of Faculty	No. of Publications / Total impact factor	h-Index	Citations	Impact Factor Range / Average
1.	Dr. Anil K. Mantha	29 / 99.65	12	504	0.5 - 17.47 / 3.43
2.	Dr. Jyoti Prakash	18 / 110.4	10	335	0.13-13.77 / 6.13
3.	Dr. Rapalli Krishna Chaitanya	10 / 27	4	67	0.59-6.33 / 2.7
4.	Dr. Ajay Kumar	10 / 33.06	5	80	1.784-4.38 / 3.30
Total		67 / 270.11	-	986	0.13-17.47

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

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

Dr. Anil K. Mantha, recognized with Adjunct Assistant Professor ship from the Dept. of Biochemistry and Molecular Biology, University of Texas Medical Branch, Galveston, TX, USA from Sep. 2012 to till date.

26. Faculty serving in**a. National Committees**

Nil

b. International Committees

Nil

c. Editorial Boards

● **Dr. Anil K. Mantha:**

Editorial board member of Jacobs Journal of Bioinformatics and Proteomics, USA

Austin Journal of Proteomics, Bioinformatics & Genomics, USA;

Journal of Cell Science & Molecular Biology

Journal of Biotechnology and Biomaterials (ex-member)

● **Dr. Jyoti Parkash:**

Editorial Board Member for International Journal of Biology, Pharmaceutical and Allied Sciences (IJBPAS)

Editorial Board Member for Journal of Virology and Biotechnology.

d. Any other (please specify):

- Dr. Anil K. Mantha: Life member, Indian Association of Neurosciences; Alzheimer's Association, USA.
- Dr. Jyoti Parkash: French society of Neuroendocrinology
- Dr. Jyoti Parkash: International Society of Neurochemistry
- Dr. Ajay Kumar: Member of European Association of Cancer Research
- Dr. Ajay Kumar: Member of Indian Society of Cell Biology
- Dr. Ajay Kumar: Member of European Academy of Allergology and Clinical Immunology
- Dr. Ajay Kumar: Member of European Federation of Biotechnology
- Dr. R.K. Chaitanya: Reviewer, Current Science Journal

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

The faculty is encouraged to attend the various faculty development programmes;

Table: List of faculty recharge programmes attended by Centre Faculty

Name of the faculty	UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs	Dates	Institution
Dr. Anil K. Mantha	One day National Workshop on Training the Trainers: Water Quality and Health	11.02.15	CUP, Bathinda
Dr. Jyoti Parkash	IBRO training school	June 2006	NUS, Singapore

28. Student projects

- **Percentage of students who have done in-house projects including inter-departmental projects**

S.No.	Programme	Faculty Name	No. of Students	Collaborative Projects
1.	M.Sc. dissertation	Dr. Anil K. Mantha	3 + (2)	1 + (1)
2.	M.Phil./M.Pharm. dissertation	Dr. Anil K. Mantha	4 + (6)	2 + (2)
3.	Ph.D. Supervision	Dr. Anil K. Mantha Dr. Jyoti Prakash	(5) (1)	(3)-

- **Percentage of students doing projects in collaboration with other universities/industry/institute**

Nil

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

- **Faculty**

S. No.	Name of faculty/ Fellows/Students with designation in centre	Name of the award	Awarding authority	Year and other details
1.	Dr. Anil K. Mantha	New Investigator Research Grant	Alzheimer's Association	2011, International Grant, Transferred to CUPB in 2012
2.	Dr. Anil K. Mantha	Young Investigator	Alzheimer's Drug Discovery Foundation (ADDF), USA.	2009
3.	Dr. R. K. Chaitanya	Young Scientist	DST-SERB	2014
4.	Dr. Ajay Kumar	Dr. D.S. Kothari Postdoctoral Fellowship	University Grant Commission, New Delhi	2015

- **Doctoral / post-doctoral fellows:**

Nil

- **Students**

Nil

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

Nil

31. Code of ethics for research followed by the departments

- Every faculty signs a code of university ethics
- **Institutional Bio-Safety Committee (IBSC):** Approval of this committee obtained for ensuring research being carried out on recombinant DNA technology and Genetic Engineering of Animals,

and use of hazardous biomolecules.

- **Institutional Ethics Committee (IEC):** Approval of this committee is obtained for research and experimentation on animals and human samples.
- **Institutional Animal Ethics Committee (IAEC):** Approval of this committee is obtained for research and experimentation on animals.

32. Student profile programme-Year wise:

Year	Name of the Course (refer to question no. 4)	Applications received (2015-16)	Selected		Pass Percentage	
			Male	Female	Male	Female
2015-16	M.Sc. Life Sciences (sp. Animal Sciences)	412	4	11	-	
2015-16	Ph.D. Animal Sciences	20	1	-		-

33. Diversity of students

Year	Name of the Course (refer to question no.4)	% of students from the same University	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
2015-2016	M.Sc. Life Sciences (sp. Animal Sciences)	-	13.33	86.66	-
2015-2016	Ph.D. Animal Sciences	100	-	-	-

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

S. No.	Name of Students	Year	Qualifying Exam	Batch
1.	Shweta Thakur	2012	ICMR-JRF	2010-2011 (Biosciences)
2.	Navrattan Kaur	2013, 2014	ICMR-JRF, UGC NET, GATE	2012-2013 (Biosciences)
3.	Shishir Upadhyay	2014	ICMR-JRF; CSIR-JRF UGC NET	2012-2013 (Biosciences)
4.	Kunj Bihari Gupta	2015	NET, ICMR-JRF	2013-2014 (Biosciences)
5.	Sharan Jyot Kaur	2015	ICMR-JRF	2014-2015 (Biosciences)

- 35. Student progression**

Student progression	Percentage against enrolled
UG to PG	Nil
PG to M.Phil.	Nil
PG to Ph.D.	100 (2015-16 batch)
PG (M.Phil.) to Ph.D.	100 (2010-11, 2012-13 & 2013-14 batches)
Ph.D. to Post-Doctoral	Nil
Employed	Nil
Campus selection	Nil
Other than campus recruitment	Nil
Entrepreneurs	Nil

- 36. Diversity of staff**

Percentage of faculty who are graduates of	
the same University	None
From other universities within the State	25
From Universities from other States	75
From Universities outside the country	None

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

Nil

38. Present details of departmental infrastructural facilities with regard to:

- a. Library:** A central library is available with a total of 1626 books related to the programs offered. Apart from this online journals are subscribed by the university.
- b. Internet facilities for staff and students:** The entire campus is *Wi-Fi* enabled with a dedicated computer center for students. The faculty is given a personal computer with Internet connectivity. There are systems available in the center and are either *Wi-Fi* enabled or connected with internet. The students can access the internet from laptops and the desktops lying in all the laboratories of the center.
- c. Total Number of class-rooms:** 02
- d. Class rooms with ICT facility:** 02
- e. Students laboratories (With internet access):** 01
- f. Research Laboratories (With internet access):** 01

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

	No. of Doctoral Students	
a)	From the host university:	6 + (2)
b)	From other universities:	Nil

40. Number of postgraduate students getting financial assistance from the university.

Course	No. of students
M.Sc.	1
M.Phil.	5
Ph.D.	2

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

The present programmes are designed in order to disseminate education to the people of this region and at par with nationally and internationally recognized universities and institutes. While designing the new course curriculum firstly the thrust area of the region was identified on the basis of needs of region was considered. Secondly, the interest and employability prospects of the course were also considered. The syllabi were prepared according to the CSIR-UGC (NET), and ICMR examinations and these are updated regularly.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

The centre obtains the feedback on curriculum as well as teaching and learning evaluation on regular basis during the departmental meetings and necessary steps are taken to overcome the limitations.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

University takes the feedback from the students in a specially designed Performa on regular basis. The feedback is utilized to improve the teaching and other activities.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

The centre has started M.Sc. and Ph.D. program (Animal Sciences) from 2015. The feedback of alumni and employers on the programme will be utilized in near future.

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

Nil (the senior students are still pursuing the Ph.D. program).

44. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts.

- 1 The university invites various experts from industries to give special lectures on latest additions to scientific equipment and concepts as well as to hold workshops to provide first-hand information to students on handling /application of sophisticated equipment for research.
- 2 Students are given opportunities for improving soft skills and English language. Subject matter expert lectures are also arranged.

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

1. Take about six credit seminar:
 - Besides regular lectures and tutorials, both M.Sc. and Ph.D. programs (starting from August 2015) will be adopting the seminar mode, encouraging interactive student-presentations and discussions. Power point presentations are given by the faculty and the students on a given topic.
2. Library time week- discussion on a chosen topic
 - Group discussions, writing assignments, tutorials, journal clubs and in-class presentations.
 - Internet-based resources, field visits and guest lectures.
 - The master's students carry out a compulsory research project, as part of their programme in 3rd and 4th semester, during which they work in association with the research scholars.
 - It is mandatory for all the students to participate in the in-house symposium of the University.
 - The research students are provided opportunity to make oral presentations and poster presentations on their dissertation research topic.

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

The programme objectives are monitored by checking focus on methodology of teaching, evaluation criteria and student's feedback.

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

- Participation in essay writing, debates, photography, poster-making, poetry recitation, dance, music, painting and traditional dress competitions.
- Participation in plays on serious issues like female foeticide, dowry, environmental pollution, etc. by students.
- One of the students has been on the trip to Mt. Everest in 2015.
- Organization of national and world important days such as Teacher's Day, and participation in Hindi Pakhwara, Punjab Day, World Hindi Day, Earth Day, Science Day, National Technology Day, World Cancer Day, First Innovators Day, International Mother Language Day and International Biodiversity Day celebrations.
- University "Innovators Club".
- Faculty and Students participation in a series of events as a part of "Foundation Day Celebrations".
- Organization of "Annual Sports Meet" and "Sports Day" involving various track/field events, indoor/outdoor games and fun games.
- Active participation by the staff, faculty and the students in "Blood Donation Camp".
- Participation in "Swachh Bharat Abhiyan".
- Participation in Tree plantation drive done in the University main campus (19th July- 15th August, 2015).

48. Give details of “beyond syllabus scholarly activities” of the department.

The beyond syllabus scholarly activities are:

- Departmental non-credit seminars
- Discussion of recent research and review articles published in various international journals of repute.

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

No

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

Although the centre is renamed recently as Center for Animal Sciences, it was formerly a part of the Biosciences. The Centre has well-equipped teaching and research laboratory and major equipment are available in the Central Instrumentation Lab. The Faculty is well trained and the centre has got major grants (1.30 crores). We plan to publish our innovative research work in reputed high impact national and international journals.

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

Strengths

1. Centre for Animal Sciences is known for its dedicated young internationally trained faculty.
2. The quality of the faculty is evidenced by their publications (total no. of publications 75 with an impact factor of 270.11), service as editorial board members referees in reputed national and international journals.
3. Selection and screening of students in the respective programmes (M.Sc. and Ph.D.) by entrance examination followed by an interview (for Ph.D. only).
4. The research programmes of the faculty are supported by Grants from National and International Funding Agencies.
5. Faculty covers wide area of research specialization from neuroscience to cancer biology.

Weakness:

- Lack of senior level faculty members (Professor /Associate Professor).
- Non-availability of Non-teaching supportive staff.
- Lack of intensive Industry / Pharma interaction / partnership because of the new center.
- Inadequate space for the Center in the present city campus.

Opportunities:

1. Department has vibrant and young faculty with international experience and potential to develop new research areas.
2. Collaborative research with nationally and internationally important research groups.
3. Being a Young and growing University, there are no constraints on budget as yet; therefore, the faculty has unhindered access to latest equipment for pursuing their research goals.

Challenges:

- To establish out new well-equipped campus at main campus in village Gudha.
- To generate a workforce of future research entrepreneurs; Scientists, administrators and teachers par excellence.
- To establish the Centre for Animal Sciences as a ‘*Centre of Excellence*’ having state of art the facilities and internationally acclaimed faculty and students.

52. Future plans of the department.

Other activities that are planned

1. An animal holding facility (AHF) at city campus and Animal House at the main campus will be developed.
2. A compostable ICT enabled departmental library will be established.

3. An informatics resource Centre to support -genomics and proteomics work will be established.
4. Short-term modules to train life science graduates/postgraduates for post in industry and paramedical science will be prepared and offered.

4. Centre for Plant Sciences

1. Name of the Department

Centre for Plant Sciences

2. Year of establishment

2009 as a part of Centre for Biosciences; 2015 as separate Centre for Plant Sciences

3. Is the Department part of a School/Faculty of the university?

Yes, School of Basic and Applied Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

M.Sc. Life Sciences with specialization in Plant Sciences
Ph.D. Plant Sciences

5. Interdisciplinary programmes and departments involved

Centre for Plant Sciences also participates in following programmes:

M.Sc.	Biosciences
M.Phil.-Ph.D.	Biosciences
M.Phil .	Biosciences
M.Sc.	Molecular Genetics

6. Courses in collaboration with other universities, industries, foreign institutions

Centre for Plant Sciences has MoU with the Department of Plant Sciences, University of Saskatchewan, Canada for academic collaboration. Professor R. Chibbar, Chair Professor visited CUPB and delivered lectures during June 2015.

7. Details of programmes discontinued, if any, with reasons

None

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

As in the other centres of CUPB, Centre for Plant Sciences follows semester system and Choice Based Credit System. A semester consists of 18 weeks or 90 days of effective teaching as per UGC. Two semesters complete an academic year. CUPB has now shifted to 10 point scale for evaluation as per the guidelines of UGC.

Examination system involves a continuous internal evaluation. Under this system, a student is continuously evaluated for academic performance in a course through assessment of tutorials, practical work, assignments, term paper, field work, seminar (s), periodical tests etc. and an end semester examination.

From academic session 2015-16, Centre for Plant Sciences follows new examination system of CUPB involving surprise quiz, midterm examinations and end term examinations.

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

The faculty of Centre for Plant Science is involved in the teaching of following courses offered by other Centres:

S.No	Core Courses	Course Code	Offered to Other Centres
1	Biochemistry	LSS.504	Centre for Animal Sciences, Biochemistry and microbiology, Human Genetics, Genetic Diseases and Molecular Medicine, Bioinformatics
2	Genetics	LSS.508	Centre for Animal Sciences, Biochemistry and microbiology, Human Genetics, GDMM

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professors	1	1	1
Associate Professors	2	1	1
Assistant Professors	4	4	4

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

S. No.	Name Prof./Dr.	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil./ PG students guided for the last 4 years
1.	Prof. Ashok Dhawan	Ph.D.	Professor	Plant physiology, Tissue culture	38	1 (Ph.D)
2.	Dr. Ramakrishna Wusirika	Ph.D	Associate Professor	Plant-microbe interactions	20	2(Ph.D) 1(M.S)
3.	Dr. Felix Bast	Ph.D.	Assistant Professor	Phylogenetics	4.11	8 (M.Phil.) 3 (M.Sc.)
4.	Dr. Sanjeev Kumar	Ph.D.	Assistant Professor	Stress biology	9.2	9 (M.Phil.) 5 M.Sc.
5.	Dr. Pankaj Bhardwaj	Ph.D.	Assistant Professor	Molecular genetics and genomics	4	5 (M.Phil.) 5 (M.Sc.)
6.	Dr. Vinay Kumar	Ph.D	Assistant Professor	Metabolic engineering	2	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Visiting Professors	
1	Professor R. Chibbar, Chair Professor, Department of Plant Science, University of Saskatchewan, Canada
2	Professor Debashis Banerji, Baba Amte Centre for People's Empowerment, Samaj Pragati Sahayog, Bagli, District Dewas. MP

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

None

14. Programme-wise Student Teacher Ratio

Programme	No. of Students	Teachers	Ratio
Ph.D.	1+15 (Biosciences)	6	2.66:1
M.Sc.	12		2:1

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

The recruitment for technical staff shall be done after the approval of CRR from UGC. Present staff is as below:

S.No.	Designation	Sanctioned	Filled	Actual
1.	Junior Technical Assistant	-	3	3
2.	Laboratory Assistant	-	1	1
3.	Laboratory Attendant	-	1	1

16. Research thrust areas as recognized by major funding agencies

- Plant microbes interaction
- Plant and algal biodiversity
- Molecular stress physiology
- Molecular genetics and genomics
- Plant cell and tissue culture
- Metabolic engineering, functional and applied genomics

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

a) International Grants:

Nil

b) National Funding:

S. No.	Title of the Project	Principal Investigator/ Co-investigator	Year		Funding Agency	Amount Sanctioned (Rs. in Lacs)
			From	To		
1.	Genotoxicity detection in drinking water from Malwa region, Punjab	Dr. Felix Bast	2012	2014	UGC	6.0
2.	Chemical and phylogenetic diversity of seaweeds in Indian	Dr. Felix Bast	2012	2015	DST	35.0

	sub-continent					
3.	Phylogenetic selection of target taxa for anti-proliferative and anti-metastatic marine natural products from sea weeds of Indian coast.	Dr. Felix Bast	2014	2017	Ministry of Earth Sciences	91.0
4.	Investigating the mechanism associated with temperature stress tolerance imposed by non-lethal stress conditions; Understanding metabolic relationship between cold and draught x heat stress in chickpea (<i>Cicerarietinum</i> L.)	Dr. Sanjeev Kumar	2012	2014	UGC	6.0
5.	Analyses of genetic variations and structure of <i>Rhododendron</i> , a rare and endangered tree species in Western Himalayas	Dr. Pankaj Bhardwaj	2013	2016	DST	16.0
6.	Development and characterization of SSR markers providing genome wide coverage and high resolution in <i>Rhododendron arboreum</i>	Dr. Pankaj Bhardwaj	2013	2015	UGC-BSR	6.0
7.	Tracing evolutionary heritage of Indian languages using computational phylogenetics.	Dr. Felix Bast and Dr. Zameerpal Kaur from Centre for Comparative	2015	2017	Indian Council for Social Science Research	7.0

		Literature				
8.	Transcriptomic investigation of active gene networks in hyper-accumulator plant species in response to heavy metal toxicity	Dr. Pankaj Bhardwaj (PI) and Dr. Sanjeev Kumar (Co-PI)	2015	2018	CSIR	20.0
	Total Grants					240.0

18. Inter-institutional collaborative projects and associated grants received

a) **National Collaboration:**

Phylogenetic selection of target taxa for anti-proliferative and anti-metastatic marinenatural products from seaweeds of Indian coast; by **Ministry of Earth Sciences** in collaboration with Central Drug Research Institute, CSIR, Lucknow.

b) **International Collaboration:**

Department of Plant Sciences, University of Sasketchwan

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

None

20. Research facility / centre with

• **State recognition**

None

• **National recognition**

DNA sequencing (ABI Genetic Analyzer 3730XL): The facility is being used by other state universities (GNDU Amritsar).

• **International recognition**

None

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

None at the moment.

22. Publications:

S.No.	Description	Number/ Score
1.	No. of papers published in peer reviewed journals (national/international) :	204
2.	Monographs	9
3.	Chapters in books:	32
4.	Edited books:	3
5.	Books with ISBN with details of publishers:	5
6.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database-International Social Sciences Directory, EBSCO host etc.):	-
7.	Citation Index– range/average:	94-3214; 819.5
8.	SNIP:	
9.	SJR:	
10.	Impact Factor– range/average:	0-33.6
11.	Average <i>h</i> - Index	12.0

Table: Centre-wise list with faculty and year Publication Summary (Journals)

Name of Faculty	Papers in Peer Reviewed Journals	Mono - graphs	Chapter in Books	Books with ISBN Nos	Citation Index	Impact Factor (range / index)	h-index
Prof. Ashok Dhawan	59	9	19	2	711	0.5-6.8	11
Dr. Ramakrishna Wusirika	51	-	4	1	3214	0.6-33.6	26
Dr. Felix Bast	40	-	3	2	94	0-3.7	6
Dr. Sanjeev Kumar	28	-	-		616	0-3.5	15
Dr. Pankaj Bhardwaj	11	-	-	-	167	0.45-3.94	7
Dr. Vinay Kumar	15	-	6	-	116	0-5.9	7
	204	9	32	5	4918		72

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

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

Dr. Felix Bast was selected for a workshop in UK. British Phycological Society annual workshop on molecular phylogenetics of seaweeds at Marine Biological Association, Plymouth, United Kingdom 13-15 March, 2013

26. Faculty serving in

a. National Committees:

Dr. A. K. Dhawan:

- Member selection committees for ASRB
- Member of Task Force for Review of Research Grants, DST
- Governors nominee for selections in universities in Punjab
- Examiner for Ph.D. thesis in 8 universities: Delhi University, Panjab University, Kurukshetra University, Pantnagar University, Meerut Univ., Bhopal University, HNB University Srinagar; NDRI
- Member Board of Studies in 4 universities: Kurukshetra University, M.D.U. Rohtak, Bhopal University, H.N. Bahuguna University Srinagar, Garhwal.

b. International Committees:

Dr. A. K. Dhawan is a Member, International Advisory Committee, International Foundation for Sustainable Development in Africa and Asia (IFSDDAA), Germany since 2009

c. Editorial Boards

- Dr. A. K. Dhawan is Editor, Indian Journal for Plant Physiology, New Delhi, 2009 -15
- Dr, Felix Bast is a member of the Editorial board of Journal of Phylogenetics and Evolutionary Biology and Journal of Cell Science & Molecular Biology.

d. Any other (please specify):

- **A. K. Dhawan**
 - Vice- President, Indian Society for Plant Physiology
 - UGC Visiting Fellow, Kurukshetra University, Kurukshetra 2004
 - Member, Scientific Advisory Committee on Biofuels, DBT, Govt of India, New Delhi 2007
 - Principal Investigator, National Biofuels Mission + National Bamboo Mission, DBT, GOI, 2006-10
 - Fellow, Sugar Technologists Association of India
 - President, K. K. Nanda Foundation, Delhi

- Dr. Pankaj Bhardwaj is a member of American Society of Plant Biologists

- Dr. Sanjeev Kumar is a member of
 - International Legume society.
 - American Society of Plant Biologists (Linkedin)
 - Crop improvement society of India

- Dr. Felix Bast is a member of
 - British Phycological Society
 - Phycological Society of America AAAS, USA
 - International Society of Environmental Botanists

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

The faculty is encouraged to attend the various faculty development programmes:

Table: List of faculty recharge programmes attended by Centre Faculty

Name of the faculty	UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs	Dates	Institution
Felix Bast	<ul style="list-style-type: none"> ● Orientation Programme 	08.12.14-05.01.15	ASC- Delhi University

	• National Workshop	11.2.15	CUP, Bathinda
Sanjeev Kumar	• Orientation Programme	08.01.15-01.02.15	ASC – University of Hyderabad
	• National Workshop	11.02.15	CUP, Bathinda.
	• Refresher Course	12.15.15-01.06.15	HRDC, PU, Chandigarh
Pankaj Bhardwaj	• National Workshop	11.02.15	CUP, Bathinda
	• Orientation Programme	29.07.15-25.08.15	HRDC, PU, Chandigarh

28. Student projects

Percentage of students who have done in-house projects including inter-departmental projects

S.No.	Programme	Faculty name	No. of students		Other collaborative projects
			M.Phil. PhD	M.Sc., M.Pharm.	
1.	M.Sc. dissertation	Dr. Ramakrishna Wusirika	-	3 2*	-
		Dr. Felix Bast	-	7	Nil
		Dr. Sanjeev Kumar	-	5	1
		Dr. Pankaj Bhardwaj	-	3	2
2.	M.Phil. dissertation	Dr. Felix Bast	9		Nil
		Dr. Sanjeev Kumar	9		Nil
		Dr. Pankaj Bhardwaj	5		Nil
3.	Ph.D. Supervision	Dr. Ramakrishna Wusirika	6 2*		
		Dr. Felix Bast	4*		Nil
		Dr. Sanjeev Kumar	5*		Nil
		Dr. Pankaj Bhardwaj	5*		Nil

* Currently Supervising

Percentage of students doing projects in collaboration with other universities industry / institute

Nil

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

Professor A. K. Dhawan:

- **Noel Deerr Award**, STAI, Delhi conferred by president **A. P. J. Abdul Kalam**, 2009
- **Distinguished Scientist Award** from Society for Promotion of Plant Science Research, Jaipur, 2009
- **J. J Chinoy Award** from Indian Society for Plant Physiology, New Delhi, 2008
- **Y. S. Murti Memorial Award** from Indian Botanical Society, New Delhi, 2007
- **K. K. Nanda Memorial Award**, Indian Society Plant Physiology, Delhi, 2006
- **Fellow**, Sugar Technologists Association of India, New Delhi, 2003
- **Panel list and Lead Speaker**, World Biotechnology Congress, Chicago, Illinois, USA, 2008
- **Certificate of Appreciation for outstanding contributions**, Univ of California, Davis, USA, 1998
- Secretary, K.K. Nanda Foundation, Delhi 2006-10.
- **Roll of honour** by Haryana Agricultural University 2003
- **Letter of appreciation** from Vice Chancellor CCS HAU, Hisar for period 1997-2002
- Exchange Scientist to Swedish University of Agricultural Sciences, Uppsala (1985); Visiting Researcher at University of California Davis, USA (1998-99, 2002); Visiting Faculty to University of Saskatchewan, Canada (2009). Visited Max Rubner-Institut, Germany, Wageningen University Research, Netherlands (2013).

Dr. Felix Bast, Inspire Faculty Award, DST2012

Dr. Pankaj Bhardwaj, Fast Track Young Scientist Award 2012, DST 2012

Dr. Pankaj Bhardwaj, International travel grant award from DBT and CSIR New Delhi in 2010.

Dr. Sanjeev Kumar, Promising Young Researcher Award, International Legume Society in 2010.

Dr. Sanjeev Kumar, International Travel grant, DST and CSIR New Delhi in 2004.

- **Doctoral / post-doctoral fellows**

Nil

- **Students**

Nil

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

S. No.	Name of events	Title	Organized by	Funding
1.	Fascination of Plants Day	Fascination of Plants Day	Central University of Punjab	Central University of Punjab

31. Code of ethics for research followed by the departments

Every faculty signs a code of ethics with the university. Apart from this the Centre participates in:

- **Institutional Biosafety Committee:** Approval of this committee obtained for ensuring research being carried out on recombinant DNA technology and use of hazardous biomolecules.

32. Student profile programme-Year wise:

Year	Name of the Course (refer to question no.4)	Applications received	Selected		Pass Percentage	
			Male	Female	Male	Female
2015-16	M.Sc. Life Sciences with specialization in Plant Sciences	319	4	8	-	-
2015-16	Ph.D	11	1			

33. Diversity of students

Year	Name of the Course (refer to question no.4)	% of students From the same University	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
2015-16	M.Sc. Life Sciences with specialization in Plant Sciences	0	16.6	83.3	0
2015-16	Ph.D	0	0	100	0

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

As the Centre for Plant Sciences was a part of Biosciences; following students qualified NET, SET, GATE and other competitive examinations in last 4 years.

S. No.	Name of Student	Batch	Achievement
1.	Pushendra Singh	2013	CSIR NET
2.	Prateek Sharma	2010	CSIR NET, ICAR-NET, SLET
3.	Shweta Thakur	2010-11	ICMR JRF 2012
4.	Mohd Zahiid	2010-11	ICMR JRF 2011
5.	Devendra Meena	2010-11	CSIR JRF (June 2011)
6.	Abhimanu Kumar	2010-11	CSIR JRF (2011)
7.	Rajiv Kumar	2010-11	CSIR JRF (2011)
8.	Sarabjeet Kour Sudan	2011-12	DBT JRF 2012
9.	Aijaz Ahmad John	2011-12	CSIR JRF (June 2012) CSIR NET (Dec.-2012)
10.	Navgeet	2011-12	CSIR UGC NET (Dec-2012) GATE 2012 & 2013
11.	Satej Bhushan	2011-12	CSIR UGC NET (Dec. 2012)
12.	Navrattan Kaur	2012-13	ICMR JRF (2012) GATE-2012 CSIR-NET 2013
13.	Amandeep	2012-13	DST INSPIRE 2012, GATE 2013
14.	Rashmi Saini	2012-13	GATE 2012, ICMR-JRF 2013
15.	Shishir Upadhayay	2012-13	GATE 2012. CSIR-NET 2013 ICMR-JRF 2014 (15 th Rank)

			CSIR-JRF 2014
16.	Balraj Singh Gill	2011-12	CSIR-NET 2011, MANF 2011, GATE 2011
17.	Richa Mehra	2012-13	GATE 2012, CSIR-NET 2013 ICMR-JRF 2014 (37 th Rank)
18.	Renu	2012-13	GATE 2013, ICAR-NET March 2014, ICAR-NET June 2014 CSIR-NET 2014
19.	Sapna Thakur	2012-13	GATE 2013, ICAR SRF 2012 ICMR-JRF 2013, ICAR-NET June 2014
20.	Shruti Chaudhary	2012-13	CSIR-UGC-JRF 2013, ICMR-JRF 2013
21.	Raooof Ahmad Najar	2012-13	ICAR-NET March 2014
22.	Pushpendu Kundu	2013-14	ICAR-NET March 2014
23.	Aasim Majeed	2013-14	CSIR JRF 2014 (54 rank)
24.	Kunj Bihari Gupta	2013-14	ICMR JRF 2015, CSIR-NET 2014
25.	Arindam Adhikary	2012-13	ICAR-NET June 2014
26.	Rashpal Kumar	2013-14	UGC-NET, RGNF 2015
27.	Sharanjot Kaur	2014-15	ICMR JRF 2015

35. Student progression

Student progression	Percentage against enrolled
UG to PG	0
PG to M.Phil.	1 (14.28)
PG (M.Phil.) to Ph.D.	18 (43%)
Ph.D. to Post-Doctoral	0
Employed	3
Campus selection	0
Other than campus recruitment	3
Entrepreneurs	0

36. Diversity of staff

Percentage of faculty who are graduates of	
the same university	None
from other universities within the state	4 (33%)
from universities from other states	1 (50%)
from universities outside the country	1 (16%)

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

All were Ph.D. at the time of appointment

38. Present details of departmental infrastructural facilities with regard to:

- a) **Library:** A central library is available.
- b) **Internet facilities for staff and students:** The entire campus is *Wi-Fi* enabled with a dedicated computer centre for students. The faculty is given a personal computer with Internet connectivity. The students can access the internet from laptops and the desktops lying in all the laboratories of the Centres
- c) **Total Number of class-rooms:** **02**
- d) **Class rooms with ICT facility:** **02**
- e) **Students laboratories (with internet access):** **03**
- f) **Research laboratories (with internet access):** **03**

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

	No. of Doctoral Students
a)	From the host university: 0
b)	From other universities: 1

40. Number of postgraduate students getting financial assistance from the university.

Course	No. of students
M.Sc.	0
Ph.D.	1

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

The present program is designed in order to disseminate education to the people of this region and at par with nationally and internationally recognized universities and institutes. While designing the new programme, firstly the thrust areas of the region were identified on the basis of needs of region. The interest and employment prospects of the course were also considered. The syllabi are prepared according to the CSIR UGC NET examination and these

are updated regularly.

42. Does the department obtain feedback from

- a. Faculty on curriculum as well as teaching-learning-evaluation?
If yes, how does the department utilize the feedback?**

New centre, but it is planned to take feedback from faculty

- b. Students on staff, curriculum and teaching-learning-evaluation
and how does the department utilize the feedback?**

New centre, but it is planned to take feedback from staff

- c. Alumni and employers on the programmes offered and how
does the department utilize the feedback?**

New centre, but it is planned to take feedback from alumni and employers

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

The first batch has started in August 2015.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

1. Experts from academia and industry are invited to give special lectures on latest concepts and additions to scientific equipment, as well as, to hold workshops to provide first-hand information to students on handling /application of sophisticated equipment for research.
2. Students are given special lectures on improving soft skills and English language to improve their academic performance.

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

- Besides regular lectures and tutorials, centre adopts the seminar mode, encouraging interactive student-presentations and discussions.
- Group discussions, assignments, tutorials, journal clubs and in-class presentations.
- Field visits
- The master's students have to carry out a compulsory research

project, as part of their programme in 3rd and 4th semester, during which they work in association with the research scholars.

- It is essential to participate in the in-house symposium of the university. The research students are provided opportunity to make oral presentations and poster presentations on their dissertation research topic.

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

The objective of the M.Sc. Life Sciences is to professionally train the students with knowledge of subjects and provide them enough hands on experience.

The program objectives are monitored by checking focus on methodology of teaching, evaluation criteria, and student's feedback.

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

Centre for Biosciences was the biggest centre in the university therefore there was maximum participation in the university activities as mentioned below:

- Participated in essay writing, debates, poster making, photography, poetry recitation, dance, music, painting and traditional dress competitions. Students have actively participated in the national level essay-writing and poster-making competitions.
- Participated in plays on serious issues like female foeticide, dowry, environmental pollution, etc. by students.
- Organized Teacher Day, and participated in Hindi Pakhwara, Punjab Day, World Hindi Day, Earth Day, Science Day, National Technology Day, World Cancer Day, First Innovators Day, International Mother Language Day and International Biodiversity Day celebrations.
- Screening of documentary films; Punjabi art film "Attu Khoji" was screened to create an interest in meaningful cinema. A live performance by actor Mr. Samuel John was also given at City Campus of the University.
- "Innovators Club" Started. First Innovators Day lectures conducted and students motivated.
- Faculty and students participation in a series of events as a part of "Foundation Day Celebrations".
- Organization of "Annual Sports Meet" and "Sports Day" involving various track/field events, indoor/outdoor games and fun games.
- Active participation by the staff, faculty and the students in "Blood Donation Camp".

- Participation in “Swachh Bharat Abhiyan” conducted from 2nd-30th October, 2014. All staff, faculty and students of the university actively participated in the campaign.

48. Give details of “beyond syllabus scholarly activities” of the department.

Guest Lectures are organized frequently by the centre:

- **Prof. Ravi N. Chibber**, Chair Professor, Department of Plant Sciences, University of Saskatchewan, Canada and Visiting Professor, Centre for Plant Sciences delivered lectures in June 2015.
- **Dr. S.C. Sharma** Scientist NBRI delivered a lecture on *Bougainvillea*.
- **Dr. A.K. Saxena**, Director, Central Drug Research Institute, Lucknow, delivered a lecture on “QSAR and Molecular Modelling Studies in Antihistamines (H1) on May 3, 2011.
- **Mr. P.C. Hota**, IAS (Retd.), Former Chairman, Union Public Service Commission, delivered a lecture on “Challenges of 21stCentury” on May 28, 2011.
- **Prof. Naresh Kochher**, U.G.C. Emeritus Fellow, Department of Botany, Panjab University, Chandigarh, delivered lecture on “Seismicity in North Western Himalaya” and “Importance of Radon as Precursor and Chemical Quality of Good Water in Parts of SW Punjab in Relation to Incidence of Cancer” on November 18, 2011.
- **Dr. R.K. Tuli**, Executive Director, National Agricultural-Food Biotechnology Institute (NABI), Mohali, talked about facilities at NABI Mohali and benefits of collaboration between NABI and CUPB, March 28, 2013.
- **Dr. B.M. Gandhi**, Former Advisor, Department of Biotechnology, Ministry of Sciences and Technology, Govt. Of India, New Delhi; delivered a lecture on “Funding Opportunities and Effective Grant Writing” on May 29, 2013.
- First Innovators Day lectures were presented by **Prof. J.S. Hundal**, Director, Giani Zail Singh, PTU Campus, Bathinda and **Prof. R.K. Tuli**, Former Director, NABI, Mohali, on January 17, 2014.
- **Prof. A.K. Malhotra**, Former Head, Department of Nuclear Medicine and PET, AIIMS, New Delhi,
- National Workshop on Training the trainers: water quality and Health, February 11, 2015.
- Debates, panel discussions, quiz, virtual lectures, workshops, interaction with other organizations is a common feature.
- A visit to Science City Kapurthala Punjab was organised as a part of education tour.

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

No

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

The microflora of Bathinda has been comprehensively studied which is depicting the soil health of this region.

Dr. Felix Bast has found two new species of bloom forming endemic marine green algae, endophytic green algae for the first time in Indian Ocean, Also elaborated the blood rain phenomenon caused by spores of sub-areal green microalgae, described phylogeography of Tulsi for the first time in Indian Subcontinent.

Efforts are being made on the conservation of the endangered plants species and their diversity.

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

Strengths:

1. The quality of Faculty: The average *h*-index of faculty is 12.0, which is more than double the average of CUPB faculty. Citation index is 4918 and impact points 486, the highest in any centre The quality of the faculty is further evidenced by their high impact international publications, service as editorial board members referees in reputed national and international journals, authoring of books in many reputed publication houses.
2. A quality teaching curriculum of M.Sc. as well as Ph.D. programmes, targeted to prepare students as future researchers as also for national level competitive examinations.
3. Plant tissue culture, PGPR bacterial culture, and walk in growth chambers, green-house facility and with trained staff.
4. The research programmes of the faculty are supported by grants from national and international funding agencies.
5. Faculty covers wide area of research specialization from plant diversity, stress biology to genomics.

Weakness:

Lack of intensive Industry/ Pharma interaction/ partnership.

Opportunities:

1. Department has vibrant and young faculty with international experience and potential to develop new research areas.
2. Collaborative research with nationally and internationally important research groups.
3. Being a Young and growing university, there are no constraints on budget as yet. Therefore, the faculty has unhindered access to latest equipment for pursuing their research goals.

Challenges:

1. Establishment of new well-equipped centre.
2. To generate a workforce of future research scientists, entrepreneurs, administrators and teachers par excellence.
3. Establishing Centre for Plant Sciences as Centre of Excellence in life science having state of art facilities and internationally acclaimed faculty.

52. Future plans of the department.

The following activities are planned:

1. Experimental area to grow crops and other plant species with facilities of raising plants under controlled condition (in phytotron) field laboratories and controlled temperature storage will be developed.
2. To establish lead botanical garden, heritage park and herbal garden in the main campus.
3. An informatics resource centre to support -genomics and proteomics work will be established.
4. Short term modules to train life science graduates/postgraduates for on hand training relevant to industry will be prepared.

5. Centre for Human Genetics and Molecular Medicine

1. Name of the Department

Centre for Human Genetics and Molecular Medicine

2. Year of establishment

Centre for Human Genetics and Centre for Genetic Diseases and Molecular Medicine were established in 2011 and 2013, respectively. In 2015, these two Centres were merged to create the Centre for Human Genetics and Molecular Medicine.

3. Is the Department part of a School/Faculty of the university?

Yes, School of Health Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc. D.Litt., etc.)

Postgraduate course:

- M. Sc. Human Genetics
- M. Sc. Genetic Diseases and Molecular Medicine
- M. Sc. Life Sciences with specialization Human Genetics
- M. Sc. Life Sciences with specialization Molecular Medicine

Ph.D. programme:

- Ph.D. Human Genetics
- Ph.D. Molecular Medicine

5. Interdisciplinary programmes and departments involved

None

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

None.

7. Details of programmes discontinued, if any, with reasons

None of the programmes has been discontinued.

8. Examination System:

CUPB follows semester system. The university has also adopted Choice Based Credit System from 2015 onwards. The centre follows the same system.

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

The faculty of the centre teaches many courses in the other centres as follows:

In the Centre for Biosciences

M.Sc.

- Immunology
- Bioethics and Biosafety
- Developmental Genetics
- Recombinant DNA Technology
- Cancer Biology

In the Centre of Animal Sciences; Centre for Plant Sciences; Centre for Computational Sciences; Centre for Biochemistry and Microbial Sciences

M. Sc. Life Sciences

- Cell Biology
- Genetics
- Biostatistics
- Biochemistry- Practical
- Cell Biology-Practical
- Genetics-Practical
- Biostatistics-Practical

In the Centre for Pharmaceutical Sciences and Natural Products

M. Pharm.

- Basics of Cancer Biology

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

	Sanctioned	Filled	Actual (including CAS &MPS)
Professor	1	0	0

Associate Professor	2	1	1
Assistant Professor	4	6*	6

*Two Assistant Professors against vacant posts

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

Name	Qualification	Specialization	No. of Years of Experience	No. of Ph.D. students guided for the last 4 years
Dr. Anjana Munshi, Associate Professor	M.Phil., Ph.D.	Medical genetics, Molecular biology, Stroke and epilepsy genetics and pharmacogenetics, Hemoglobinopathies	20	Ph.D. Awarded:03 Ph.D. Pursuing:05 Co-guide:3 (Ph.D in progress)
Dr. Preeti Khetarpal, Assistant Professor	Ph.D.	Population genetics and Medical genetics	5	Ph.D. Pursuing:01
Dr. Sandeep Singh, Assistant Professor	MSc. PhD	Cancer biology	5	PhD Pursuing: 1 Co-guide:2 M.Pharm. : 10 (as co-supervisor)
Dr. Monisha Dhiman, Assistant Professor	M.Sc., M.Phil, Ph.D.	Cancer immunology and Oncology	9	Ph.D Pursuing: 4 M.Phil: 1 1 (thesis submitted) 2 (registered)
Dr. Harish Chandra, Assistant Professor	MSc., Ph.D.	Cancer biology and Molecular oncology	10	Ph.D. Pursuing: 1
Dr. Sabyasachi Senapati, Assistant Professor	M.Sc., M.Phil, Ph.D.	Complex disease genetics, High-throughput genomics, Genetic epidemiology and Population genetics.	1.5	Nil
Dr. Neeraj Kumar, Assistant Professor	M.Sc., Ph.D.	Biochemistry, Molecular biology, Genetics and genomics	5.3	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

The centre is in the process of identifying the visiting faculty.

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

All classes are taken by full time, regular Faculty.

14. Programme-wise Student Teacher Ratio

S.No.	Programme	Student Teacher Ratio
1	M.Sc. Human Genetics	6:7
2	M.Sc. Genetic Diseases and Molecular Medicine	6:7
3	M.Sc. Life sciences with specialization Human Genetics	13:7
4	M.Sc. Life Sciences with specialization Molecular Medicine	15:7
5.	Ph.D. Programme	

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

S. No.	Designation	Sanctioned*	Filled	Actual
1.	Laboratory Assistant		1	1
2.	Data Entry Operator		1	1

16. Research thrust areas as recognized by major funding agencies

- Birth defects
- Haemoglobinopathies
- Genetic basis of infertility
- Bioinformatics, structural biology
- Cancer biology
- Chemotherapy induced toxicity
- Signaling pathways during Inflammation and oxidative stress in various human diseases.

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

Table: Details of the ongoing projects

S. No.	Title of the Project	Principle Investigator	Year		Name of the funding agency	Total Grants received (Rs)
			From	To		
1	Amelioration of the severity of β thalassemia by modifier genes.	Dr. Anjana Munshi	2013	2016	DBT, New Delhi	36.80 lacs
2.	The prevalence of thalassemia and mutation spectrum associated with the disease in Malwa region of Punjab.	Dr. Anjana Munshi	2014	2016	RSM-CUPB	3 lacs
3.	Insilico screening of all functional genes in the human genome for the detection of deleterious SNPs for association studies.	Dr. Anjana Munshi	2015	2017	ICMR, New Delhi	33 Lacs
4.	Genetic investigations among Indian children with Silver Russell Syndrome (SRS)	Dr. Preeti Khetarpal	2014	2016	UGC-BSR	6 lacs
5.	Cytogenetic investigations in couples of primary infertility from Malwa region of Punjab, North-West India.	Dr. Preeti Khetarpal	2014	2016	RSM-CUPB	3 lacs

6.	Genotoxicity of the pesticides used in Bathinda region	Dr Sandeep Singh	2013	2015	UGC	6 lacs
7.	Functional evaluation of presence of miRNAs inside the mitochondria of breast cancer cell lines.	Dr Sandeep Singh	2014	2017	DST	42 lacs
8.	Investigation of anticancer potential of <i>Citrullus colocynthis</i> extract	Dr Sandeep Singh	2014	2016	CUPB-Research Seed Money	3 lacs
9.	Cardio-toxicity of the chemotherapeutic drugs	Dr. Monisha Dhiman	2013	2016	DST	22 lacs
10.	Molecular mechanisms of pollen-mediated stress in human epithelial lung cell line.	Dr. Monisha Dhiman	2014	2016	CUPB-Research Seed Money	3 lacs
11.	Proteasomal mediated regulation of pro-metastasis protein Toca-1 in breast cancer	Dr. Harish Chandra	2014	2016	CUPB-Research Seed Money	3 lacs

S. No.	Title of the Project	Principle Investigator/Co-Investigator	Year		Funding Agency	Amount Sanctioned (In Rupees)
			From	To		
1	A comprehensive study towards identification, characterization, scaffold based synthesis and	PI: Dr Harish Holla (Chemical and Pharmaceutical sciences) Co-PI: Dr.	2013	2016	DST	37 lacs

	anticancer Screening of Novel, Promising Furanopyranones and Pyrans from the Medicinal Plant <i>Orthosiphon diffusus</i> .	Sandeep Singh				
2	Mitochondrial oxidative DNA Damage-repair in Alzheimer's disease: AP-endonuclease (APE1/Ref-1) as a potential therapeutic target.	PI: Dr Anil K Mantha, Centre for Animal Sciences Co-PI: Dr. Monisha Dhiman	2014	2017	DST	46 lacs

the current centre is Centre for Human Genetics and Molecular Medicine

*the current centre is Centre for Animal Sciences

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration

- “Genetic investigations among Indian Children with Silver Russell Syndrome” in collaboration with Dr. Inusha Panigrahi, Associate Professor, Genetic-Metabolic Unit, Dept. of Pediatrics, Advanced Pediatric Centre, PGIMER, Chandigarh. Grant of 6 lacs has been released.
- “Identification of breast cancer gene alterations and effect on gene expression in breast cancer patients from the Malwa region of Punjab” in collaboration with Dr. Raja Paramjeet Singh Banipal, Associate Professor, Department of Radiotherapy, Guru Gobind Singh Medical College Hospital, Faridkot. Punjab has been submitted to ICMR. Concept proposal has been accepted and full proposal submitted.
- “Amelioration of the severity of β thalassemia by modifier genes” in collaboration with Prof A Jyothy, Director,

Institute of Genetics and Hospital for Genetic Diseases, Osmania University, Hyderabad. Grant of 36.80 Lacs has been released.

- The centre works in collaboration with clinicians of civil hospital, Bathinda and Civil hospital Talwandi Sabo, for various birth defects and infertility related disorders.

b) International collaboration

Faculty from the centre are collaborating with following international scientists in NIH, CONICET funded grants and are involved in publishing research articles together:

- Prof. Nisha J Garg, Dept. of Microbiology and Immunology, University of Texas Medical Branch, Galveston, TX, USA.
- Dr. Maria Paola Zago, Instituto de Patologia Experimental, UNSa –CONICET, Salta, Argentina
- Prof. Juan C. Vázquez-Chagoyán Centro de Investigación y Estudios Avanzados, Universidad Autónoma de Estado de México, Toluca, México

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

The centre will be applying for these grants in future.

20. Research facility / centre with

- **state recognition**
- **national recognition**
- **international recognition**

None

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

None

22. Publications (for details please see Annex I):

Publications	Dr. Anjana Munshi	Dr. Preeti Khetarpal	Dr. Sabyasachi Senapati	Dr. Neeraj Kumar
Number of papers published in peer reviewed journals (national/international)	80	3	6	4
Monographs	0	0	-	-
Chapter in Books	11	1	-	-
Edited Books	1	0	-	-
Books with ISBN with details of publishers	978-953-51-0564-0, Intech Publishers, Europe		-	-
Number listed in International Database (For <i>e.g.</i> Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	75	1	-	4
Citation Index-range (average)	0-60 (5)	1-6 (3)	3-304 (59)	2 to 5 (2.75)
SNIP	-	-	-	-
SJR	-	-	-	-
Impact Factor-range (average)	0-7(3.886)	0-2 (1)	3.5-29.6 (10.3)	0.87 to 6.43 (3.34)
h-index	13	1	4	2

Publications	Dr. Sandeep Singh	Dr. Monisha Dhiman	Dr. Harish Chander
Number of papers published in peer reviewed journals (national/international)	16	21	16
Monographs	-	-	-
Chapter in Books	-	3	-
Edited Books	-	-	-

Books with ISBN with details of publishers	-	-	-
Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	16	24	15
Citation Index-range/average	0-33(6)	4-48(13.5)	0-70(14.9)
SNIP	-	-	-
SJR	-	-	-
Impact Factor-range/average	1.5– 22.2(4.7)	2-15(4)	1-9(4.1)
h-index	6	11	11

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

The centre is planning to offer molecular diagnostic service and counselling for the patients affected with genetic disorders in near future which will be a source of income for the centre.

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

- Dr. Anjana Munshi was a Visiting Professor, King Saud University, Riyadh, Saudi Arabia, 2011-2012

26. Faculty serving in

- a) **National committees:** Name of the Faculty, Designation & Name of the Committee, Year
 - Dr. Anjana Munshi, Indian Society of Human Genetics, Executive council member, 2015.
- b) **International committees:** Name of the Faculty, Designation & Name of the Committee, Year
 - Dr. Anjana Munshi, Life member, Third world organization for women scientists.
 - Dr. Anjana Munshi, Member, World Stroke Rights Bill

- c) **Editorial Boards:** Name of the Faculty, Designation & Name of the Committee, Year

National Committees	Editorial boards
Dr. Monisha Dhiman	Journal of Cell Science & Molecular Biology
Dr. Sandeep Singh	International Journal of Endocrinology (Special issues).

- d) **Any other (please specify):** Name of the Faculty, Designation & Name of the Committee, Year

The faculty members of the centre are serving in various committees of CUPB.

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

Name of the Faculty	Faculty recharging strategy	Date and Place
Dr. Anjana Munshi	Workshop on Fluorescent <i>in situ</i> Hybridization (FISH) techniques conducted at Centre for Human Genetics, CUP, Bathinda organized by DSS Imagetech Pvt. Ltd.	25 th Sept-26 th Sept, 2014 at CUPB
Dr. Preeti Khetarpal	Training on Cytogenetic techniques (preparation of culture media, setting up of lymphocyte culture, harvesting of the culture, slide preparation, G-banding of chromosomes, identification of chromosomes using landmarks and karyotyping using applied Imaging system)	2 nd Dec, 2013 to 11 th Dec, 2013 at Department of Human Genetics, Guru Nanak Dev University, Amritsar
	Workshop on Fluorescent <i>in situ</i> Hybridization (FISH) techniques conducted at Centre for Human Genetics, CUP, Bathinda organized by DSS	25 th Sept-26 th Sept, 2014 at CUPB

	Imagetech Pvt. Ltd.	
	Hands-on workshop on molecular Biotechnology and Bioinformatics	1 st June, 2015 to 5 th June 2015 at International centre for Stem cells, Cancer and Biotechnology (ICSCCB), Pune
	Orientation programme at UGC-Human Resource Development Centre (HRDC)	15 th June, 2015 to 11 th July, 2015 at Punjabi University, Patiala.
Dr. Sandeep Singh	Workshop on Fluorescent <i>in situ</i> Hybridization (FISH) techniques conducted at Centre for Human Genetics, CUP, Bathinda organized by DSS Imagetech Pvt. Ltd.	25 th Sept-26 th Sept, 2014 at CUPB
	Orientation programme at UGC-Human Resource Development Centre (HRDC)	15 th June, 2015 to 11 th July, 2015 at Punjabi University, Patiala.
Dr. Monisha Dhiman	Workshop on Fluorescent <i>in situ</i> Hybridization (FISH) techniques conducted at Centre for Human Genetics, CUP, Bathinda organized by DSS Imagetech Pvt. Ltd.	25 th Sept-26 th Sept, 2014 at CUPB
	Orientation programme at UGC-Human Resource Development Centre (HRDC)	15 th June, 2015 to 11 th July, 2015 at Punjabi University, Patiala.
Dr. Harish Chander	Workshop on Fluorescent <i>in situ</i> Hybridization (FISH) techniques conducted at Centre for Human Genetics, CUP, Bathinda organized by DSS Imagetech Pvt. Ltd.	25 th Sept-26 th Sept, 2014 at CUPB
	Orientation programme at UGC-Human Resource Development Centre (HRDC)	15 th June, 2015 to 11 th July, 2015 at Punjabi University, Patiala.

28. Student projects

- **Percentage of students who have done in-house projects including inter-departmental projects**

100 %. All the students of postgraduate programmes are carrying out M.Sc. dissertation work in the centre.

- **Percentage of students doing projects in collaboration with other universities industry / institute**

Two Ph.D. students are working on various aspects of breast cancer. 6 M.Sc. (Human Genetics) students are working on blood disorders, infertility and birth defects. The projects are in collaboration with Civil Hospital Bathinda.

The faculty of the centre is involved in supervising the students from the other centres and institutes such as:

- Dr. Monisha Dhiman supervised three projects of M.Sc. students and one M.Phil. students from Centre for Bioscience.
- Dr. Sandeep Singh supervised four M.Sc. student projects from Centre for Biosciences.
- Dr. Sandeep Singh, Co-PI for Ph.D. scholar in Centre for Environment Science and Technology.
- Dr. Sandeep Singh, Co-PI for M. Pharm. scholars (10) in Centre for Pharmaceutical Sciences and Natural Product.

Ongoing projects where the faculty from centre is involved:

- Five M. Pharm students from Centre for Pharmaceutical Sciences and Natural products are working with Dr. Sandeep Singh (Co-PI).
- One M.Sc. student from Centre for Biosciences working with Dr. Monisha Dhiman (Co-PI).
- One M. Phil-PhD students from Centre for Biosciences working with Dr. Monisha Dhiman (Co-PI).
- One PhD student from Centre for Bioscience working with Dr. Monisha Dhiman(Co-PI)
- One PhD student from Centre for Environmental Sciences working with Dr. Sandeep Singh (Co-PI)

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

S. No.	Name of faculty	Name of the award	Awarding authority	Year and other details
1.	Dr. Anjana Munshi	Excellent review paper	Journal of Genetics and Genomics	2014 A bonus of rmb 3000 and a medal
2.	Dr. Anjana Munshi	Executive Council Member	Indian Society of Human Genetics	2015
3.	Dr. Monisha Dhiman	Young Scientist Award	DST	2013
4.	Dr. Sandeep Singh	Young Scientist Award	Punjab Academy of Sciences	2015
5.	Dr. Neeraj Kumar	Awarded Dr. D. S. Kothari Post Doc Fellowship (DSKPDF),	University Grant Commission (UGC)	2011
6.	Dr. Harish Chander	Doctoral Scientist	American Society of Clinical Oncology	2013

Invited Lectures by Dr. Anjana Munshi:

“Genetic basis of Stroke” on 8th November, 2014 in NeuroUpdate-2014 meeting at IICB (Indian Institute of Chemical Biology) Jadavpur, Kolkata.

Other recognitions:

- Dr. Anjana Munshi, Life Member, Third World Organization for Women Scientists, since 2005
- Dr. Anjana Munshi, Member, World Stroke Rights Bill since 2013

Invited Lectures by Dr. Preeti Khetarpal:

- “Design and Trademark Registration” on 23rd August, 2014 in Patent Awareness Workshop organized by PSCST, Chandigarh in IET Bhaddal, Ropar.

- “Introduction with IPRs” and “Patent system in India” in Workshop on Advanced Research Methodology, Statistics and Patents in UGC-Academic Staff College, GNDU, Amritsar on 27th Sept, 2014.
- “Molecular Insights into Primordial Dwarfism” on 6th Feb, 2015 in a conference DNA Diagnostics 2015 at PGIMER, Chandigarh.
- “Introduction with IPRs w.r.t. Industries” on 2nd Sept, 2015 in IPR Sensitization Workshop organized by IPFC, PSCST, Chandigarh, at Civil Lines Club, Bathinda.

Invited lectures by Dr Sandeep Singh:

- “1st North states conference on anatomy of ageing: the need of focused research” held on August 25, 2012 at Department of Anatomy, Desh Bhagat Dental College & Hospital, Sri Muktsar Sahib. The title of the talk was “Cancer: relationship with ageing and free radicals.

Invited lectures by Dr Monisha Dhiman:

- “Doxorubicin-induced Toxicity in Cardiomyocytes” at International Symposium on Current Advances in Radiobiology, Stem Cells and Cancer Research at JNU, New Delhi, India on February 19-21, 2015.
- “Oxidative Stress induced Innate Immune Responses of A549 Lung Carcinoma Cells” at 5th International Conference on Stem Cells and Cancer (ICSCC-2014): Proliferation, Differentiation, and Apoptosis in JNU Convention Centre, New Delhi, India on November 8-10, 2014
- “Prickly Poppy Pollen Induced Stress in Human Lung Carcinoma A549 Cells” 4th Biennial International Conference on 'New Developments in Drug Discovery from Natural Products and Traditional Medicines' DDNPTM at NIPER, SAS Nagar, India, 22-25, November, 2014

Invited lectures by Dr. Harish Chander:

- “New Avenues in Breast Cancer” Association of Pharmaceutical teachers of India (APTI) 22nd-23rd August, 2014. Kurukshetra University, Haryana
- “Breast cancer Treatment and Mutations in Tumour Suppressor p53” Association of Pharmaceutical teachers of India (APTI) 3rd-4th August, 2014. Rayat Bahra University, Hoshiarpur, Punjab

Doctoral / post-doctoral fellows

None

Students

S. No.	Name of Student	Name of the award	Awarding authority	Year and other details
1.	Abhilash, M.Sc. IInd semester Student	Silver medal	CUPB	2015, 400 m race during annual sports meet of the University
2.	Abhilash, M.Sc. IInd semester Student	Silver medal	CUPB	2015, 400m relay race during annual sports meet of the University
3.	Rajinder Kumar M.Sc. IInd semester Student	2nd prize in poster presentation	Rayat Bahara Institute of Engineering and Biotechnology Hoshiarpur	2014, “Herceptin: Future in adjuvant breast cancer therapy”.
4.	Pargat Singh	2nd prize	CUPB	2015, Solo singing competition during cultural events of the university Foundation Day
5.	Gurjant Singh	2nd prize	CUPB	2015, Poem recitation competition during cultural events of the university Foundation Day
6.	Jagseen Kaur	2nd prize Silver Medal	CUPB	2015, Solo Dance competition during cultural events of the university Foundation Day 2015, 100 m race during annual sports meet of the University

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

Table: Workshop organized by the centre

S. No.	Name of events	Title	Organized by	Funding
1.	Workshop	Workshop on Fluorescent in situ Hybridization (FISH) technique (25 th Sept-26 th Sept 2014)	Centre for Human Genetics and DSS Imagetech	DSS Imagetech Pvt Ltd.
2.	World Cancer Day Symposia	Recent Trends in Cancer Therapy Feb 4, 2014	GDMM	CUPB
3.	One Day Symposium	Recent Trends in Molecular Medicine Dec 5, 2014	GDMM	CUPB

31. Code of ethics for research followed by the departments

All the research projects running in the centre use human samples like blood, therefore the ethical guidelines of ICMR, New Delhi are being followed strictly.

- The university has Institutional Ethics Committee (IEC), research involving use of human/biological samples is approved by the committee prior to the start of the work. Centre strictly follows the protocols and procedures approved by IEC.
- The university has Institutional Biosafety Committee to regulate the proper disposal of laboratory waste and other hazardous waste.

32. Student profile programme-wise:

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Sc. Human Genetics	22	3	5	In progress	

(2014-15)				
M.Sc. Genetic diseases and Molecular Medicine (2014-15)	19	6	3	In progress
M. Sc. Life Sciences with specialization Human Genetics	449	1	12	In progress
M. Sc. Life Sciences with specialization Molecular Medicine	333	6	9	In progress
Ph.D. Human Genetics	24	1	2	In progress
Ph.D. Molecular Medicine	15	2	1	In progress

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Sc. Human Genetics	0	66.5	33.5	0
M.Sc. Genetic Diseases and Molecular Medicine	0	78	22	0
M. Sc. Life Sciences with specialization Human Genetics	0	0	100	0
M. Sc. Life Sciences with specialization Molecular Medicine	0	0	100	0
Ph.D. Human Genetics	50	50	0	0
Ph.D. Molecular Medicine	0	33	67	0

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

Since we have started with our first batch in 2014, students will be appearing in such tests in near future.

35. Student progression

Not Applicable

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	0
from other universities within the state	0
from universities from other states	100
from universities outside the country	0

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

All the faculty members had obtained Ph.D. before taking the current positions in the university

38. Present details of departmental infrastructural facilities with regard to

a) Library :

There is no separate departmental library. However, following books and journals are available in the central library for the use of staff and students of the centre:

Number of books (1298):

- Research Methodology Books: 147 titles
- Biology, Physiology, Biochemistry: 753 titles
- Genetics and Evolution: 146 titles
- Ecology: 132 titles
- Mammals: 37 titles
- Medicine & health, Human anatomy and Physiology: 79 titles
- Gynecology, obstetrics, Pediatrics, Geriatrics: 4 titles

Encyclopaedias:

- Encyclopedia of Genetics: 4 Volumes
- Encyclopedia of Genetics, Genomics, Proteomics & Informatics: 2 Volumes
- Encyclopedia – Medical, Genomics & Proteomics: 2 Volumes

Journals:

- Hard copy-15titles
- Online journals: more than 680 titles

- b) Internet facilities for staff and students: 24 hours internet connection, High Speed Internet Connectivity with 1Gbps speed and Wi-Fi campus.
- c) Total number of class rooms: Two
- d) Class rooms with ICT facility :Two
- e) Students’ laboratories : One
- f) Research laboratories : One

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

a) From the host institution/university

Doctoral

Human Genetics: 2

Molecular Medicine: 2

Post-doctoral students and Research Associates:

None

b) from other institutions/universities

Doctoral:

Human Genetics: 2

Molecular Medicine: 1

Post-doctoral students and Research Associates: None

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

M.Sc. Human Genetics: 3

M.Sc. Genetic Disease and Molecular Medicine: 2

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

The M.Sc. Life Sciences with specialization Human Genetics has been started taking into consideration the following parameters:

- To offer the students an exposure to a broad array of clinical genetic diseases, provide the appropriate skills needed for genetics evaluation and genetic counselling, develop an appreciation of the utilization and interpretation of genetics tests, and to foster the development of basic sciences research.
- As the details of the human genome unfold, the variety of opportunities for people with degrees and training in human genetics is continuing to expand. There are opportunities in basic and clinical research, in medical professions, and in interdisciplinary fields, such as patent law. The genetics workforce is not sufficient even now, and demand continues to increase. As genetic testing becomes more commonplace, and a part of many routine medical evaluations, more laboratory geneticists will be needed to perform the tests, and clinicians and counsellors will be needed to interpret and explain the results to individuals and families.

The M.Sc. Life Sciences with specialization Molecular Medicine has been started taking into consideration the following parameters:

- With a mission to offer high quality teaching and research programmes in several areas of molecular biology the Centre is offering most sought specialized research oriented M.Sc. Molecular Medicine course, which is offered by very few institutes and universities in India.
- The course was designed so as to enable the students to achieve success in molecular medicine and to face the challenges in their career. Through the operation of the grants the research productivity has enhanced and it has also resulted in the establishment of state-of-the-art equipment facilities with a mission to offer basic diagnostic, genetic and proteome profile of various genetic disorders.

42. Does the department obtain feedback from

**a. Faculty on curriculum as well as teaching-learning-evaluation?
If yes, how does the department utilize the feedback?**

The centre obtains the feedback on curriculum as well as teaching learning evaluation on regular basis during the departmental meetings. The syllabus was drafted first time by the faculty in association with two external experts from Department of Human Genetics, Guru Nanak Dev University, Amritsar, in February, 2014. The Curriculum was modified again in November, 2014 during the first board of studies meeting with external expert from Panjab University, Chandigarh.

**b. Students on staff, curriculum and teaching-learning-evaluation
and how does the department utilize the feedback?**

University takes the feedback from the students in a specially designed Performa on regular basis. The feedback is utilized to improve the teaching and other activities.

**c. Alumni and employers on the programmes offered and how
does the department utilize the feedback?**

The centre has started M.Sc programmes from 2014. The feedback of alumni and employers on the programme will be utilized in near future.

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

Since the centre is a newly established centre and its first batch of M.Sc. Human Genetics and Molecular Medicine has started in 2014. Therefore, at present there are no alumni.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

- A two days Workshop on Fluorescent Hybridization *in situ* technique in collaboration with DSS Imagetech Pvt. Ltd was conducted for the students to get exposed to this high throughput technique (25th Sept-26th Sept 2014). Special lectures were delivered by the experts in the field and hands on training was also given.

- One day symposia on “**Recent Trends in Cancer Therapy**” was organized to mark the “World Cancer Day” on 4 February, 2014. Following experts delivered lectures:
 - Chief Guest **Prof. A K Malhotra**, former head of the Dept. of Nuclear Medicine & PET at the All India Institute of Medical Sciences (AIIMS), New Delhi. “Positron Emission Tomography”.
 - **Dr. J. S. Sekhon**, Fortis, Ludhiana, “Advances in Targeted Therapies in Cancer”.
 - **Dr. Neeta Kang**, CMC Ludhiana, “Integrated Approach in Cancer Diagnosis and Therapy.
 - **Dr. Rajesh Vashishta**, Max Hospital, Bathinda “Prevention and Early Detection Of cancer”.
 - **Dr. Manjit Singh Bal**, Professor & Head, Dept. Of Pathology, Govt. Medical College Rajindra Hospital Patiala “Cancer Registry in Punjab”.

- One day symposium on “Recent Trends in Molecular Medicine” on 5th December, 2014. The speakers were:
 - **Dr. Anand Bachhawat**, Dean, IISER, Mohali, ER Stress, Apoptosis and Glutathione degradationconnecting the dots
 - **Prof. Rakesh Tyagi**, Special Centre for Molecular Medicine, JNU, New Delhi. Cellular Transcriptional Memory: Nuclear Receptors as Epigenetic Marks.
 - **Dr. M.K. Mahajan**, Advanced Cancer Diagnostic, Treatment& Research Center, Bathinda. Understanding cancer-A Paradigm Shift
 - **Dr. Suman Dhar**, Special Centre for Molecular Medicine, JNU, New Delhi. Unique properties of DNA replication and cell cycle regulation in human malaria parasite Plasmodium falciparum

- **Dr. Javed N Agrewala, IMTECH, Chandigarh.** Challenges and solutions for a rational vaccine design for TB-endemic regions.

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

A variety of teaching strategies are adopted by the teachers in the centre to enhance level of knowledge in the students. The faculty uses the multimedia, which is a combination of various digital media types such as text, images, audio and video or presentation to convey information to the students.

The most effective methods used in the centre are:

- **Informal discussions:** First lecture is used by the teacher to assess the levels of the students by having informal discussions where students talk about their hobbies, interests, previous instruction, strengths, and weaknesses. Students generally enjoy talking about themselves and having their teacher get to know them well, as it makes them feel special, which helps the teachers to choose their teaching method.
- **Notes and tutorials:** Additional notes and tutorials are given for some recent techniques and trends and to make some particular concept clear.
- **MCQs for practice:** Students are given MCQ type of test for practice to prepare them for the national level competitive examinations.
- **Discussion of research papers:** To orient the student towards the research, research papers related to the course work and their applications are discussed.
- **Quiz:** Organizing quiz is another exciting way of learning in the centre.
- **Videos:** Teaching is not just about memorizing the facts, there are some cases when facts need to be understood and visualized for proper understanding. In our centre we teach some concepts just by showing some videos in order to facilitate better understanding.
- **Problem solving teaching:** It is an important part of the curriculum. The students are given some responsibility for their own learning and can take personal action to solve problems and discuss

alternatives in the class. This provides students with opportunities to use their acquired knowledge in meaningful and real-life activities.

- The students are taken to the nearby hospitals for their exposure to collect clinical details and other demographic details from the patients affected with genetic disorders with the help of a trained clinician.
- The specific case reports on various genetic disorders are routinely discussed with the students supported by animations and documentaries.

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

The programme objectives are met with and the learning outcomes are monitored by

- Surprise tests and assignments are given to the students to monitor the learning outcomes.
- The students are asked to prepare specific topics to be presented during weekly seminars conducted by the centre.

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

The students and faculty of the centre has participated in various extension activities organized by the university as follows:

- Swatch Bharat Abhiyan,
- National Education Day celebrations,
- International student day celebrations,
- Celebrations of great Hindi and Tamil poet Subramanian Swami and
- Good Governance day
- Rashtriya Ekta Dives
- Foundation Day Lecture Series
- Foundation Day Celebrations

- Blood Donation Camp

48. Give details of “beyond syllabus scholarly activities” of the department.

The beyond syllabus scholarly activities are:

- Departmental non-credit seminars
- Discussion of recent research published in various international journal of repute
- Journal club: The journal club has been established which primarily consists of student presentations of peer-reviewed journal articles. Students critically review recent refereed publications in the fields of genetics, molecular medicine, advanced techniques.

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

Not applicable

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

The centre is a newly established and has received funds from various funding agencies. New knowledge will be generated in the due course of time. Although the centre is just a year old but due to well-equipped teaching and research laboratories and availability of major equipment in the Central Instrumentation Lab of the university and well trained faculty, the centre has got major grants (>1.5 crores).

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

Strengths:

- A blend of young and experienced faculty.
- Internationally trained faculty
- Laboratories with good research facilities for students.
- Unity in cultural diversity of faculty and students.

Weaknesses:

- Lack of supporting staff.

Opportunities:

- The centre could emerge as a genetic diagnosis, screening and counselling centre in this region since no such facilities are available in this region of Punjab.
- The course shall provide postgraduate students with background in advanced academic and laboratory research training in modern cellular and molecular medicine, with emphasis on the interface between the basic and clinical aspects of the subject.
- The trained professionals can pursue attractive careers world-wide in academia, hospitals, genetic testing laboratories, industry, the public sector and non-governmental organizations.

Challenges:

- To kick start the projects in the newly established laboratories.
- To equip the laboratories with the advanced technology.
- To attract good and motivated students
- To produce trained manpower who could become an asset in this field.

52. Future plans of the department.

- The centre has identified specific research areas like pharmacogenetics; molecular basis of various human cancer; haemoglobinopathies; cytogenetic and molecular basis of infertility; chromosomal abnormalities and gene associated with birth defects. The research has been initiated in these areas and will continue in future as well.
- Centre plans to foster research in the field of molecular and cell biology with a direct application to understand, prevent and cure the human genetic diseases.
- The centre is planning to offer genetic diagnosis and counselling for common genetic disorders prevalent in the area in near future.

- The centre is planning to carry out door to door survey in certain rural areas to establish the prevalence of various genetic disorders in these areas.
- To establish a repository for sample collection pertaining to genetic diseases prevalent in Malwa region of Punjab.
- To carry out research related to chimeric biomolecules as therapeutics and SNP, genomic and proteomic profiling of genetic diseases

The centre aims to accomplish its goal through innovative and collaborative basic and clinical research programme.

6. Centre for Biochemistry and Microbial Sciences

1. Name of the Department

Centre for Biochemistry and Microbial Sciences

2. Year of establishment

2009 as a part of Centre for Biosciences; 2015 as separate Centre

3. Is the Department part of a School/Faculty of the university?

Yes, School of Basic and Applied Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

M.Sc.	Life Sciences with specialization in Biochemistry
M.Sc.	Life Sciences with specialization in Microbiology
Ph.D.	Biochemistry
Ph.D.	Microbiology

5. Interdisciplinary programmes and departments involved

Both the M.Sc. programmes offered by the centre are interdisciplinary and the students can choose elective courses from the centres for Plant Sciences, Animal Sciences, Human Genetics and Molecular Medicine. The centre offer courses to the students from the centres for Plant Sciences, Animal Sciences, Human Genetics and Molecular Medicine.

The centre also participates in M. Sc./M. Phil. and Ph.D. Biosciences programmes together with centres for Plant Sciences, Animal Sciences and Human Genetics and Molecular Medicine.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

Newly Established Centre

7. Details of programmes discontinued, if any, with reasons

Newly Established Centre

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

Semester and Choice Based Credit System.

Semester and choice based Credit system is followed by the university. A semester consists of 18 weeks or 90 days of effective teaching and two semesters complete an academic session.

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

The faculty of Centre for Biochemistry and Microbial Sciences is involved in the teaching of following core courses for other departments:

S.No.	Core Courses	Course Code	Offered to other Centres
1	Biochemistry	CPS.515	Centre for Chemical Sciences (Medicinal Chemistry), Centre for Plant Sciences, Centre for Animal Sciences, Centre for Human Genetics, and Genetic Diseases and Molecular Medicine
2	General Biochemistry, Clinical Biochemistry; Plant Biochemistry	BSS.504 and BSS505; LSS559 and LSS560; LSS665 and LSS656	Centre for Chemical Sciences (Medicinal Chemistry), Centre for Plant Sciences, Centre for Animal Sciences, Centre for Human Genetics, and Genetic Diseases and Molecular Medicine
3	Microbiology, Industrial Microbiology	LSS604 and LSS605; LSS565 and LSS566	Centre for Plant Sciences, Centre for Animal Sciences, Centre for Human Genetics and Molecular Medicine
4	Environmental Microbiology; Metabolism	LSS655 and LSS658 LSS563 and LSS564	Centre for Plant Sciences, Centre for Animal Sciences, Centre for Human Genetics and Molecular Medicine

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	2*	2
Associate Professor	2	0	0
Assistant Professor	4	2	2

*One additional professor against the post of Associate Professor

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

S. No.	Name Prof./Dr.	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil./PG students guided in last 4 years
1.	Prof. R. G. Saini	Ph.D.	Invited Professor	Genetics of host-parasite interactions	44	5
2	Prof. Praveen Sharma	Ph.D.	Invited Professor	Molecular biology, Microbial ecology, Environmental microbiology	35	10
3.	Dr. Aklank Jain	Ph.D.	Assistant Professor	Biochemistry/Cancer biology	10 years	6
4.	Dr. Shashank Kumar	Ph.D.	Assistant Professor	Biochemistry/Cancer biology	9 months	Nil
5.	Dr. Somesh Baranwal	Ph.D.	DBT Ramalingaswami Re-entry Fellow	Zoology/Cancer biology	10 Years 8 months	Nil

12. List of senior visiting fellows, adjunct faculty, emeritus professors

Prof. Debashis Banerji, Baba Amte Centre for People’s Empowerment, Samaj Pragati Sahayog, Bagli, District Dewas. MP is a Visiting Professor to the centre.

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

None

14. Programme-wise Student Teacher Ratio

Total No. of Students	No. of Students
Ph.D.	2
M.Sc. Life Sciences with specialization in Biochemistry	16
M.Sc. Life Sciences with specialization in Microbiology	11
Total Students	29
Total Teachers	5
Student/Teachers Ratio	5.8:1

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

Newly establish centre, No such staff appointed as yet.

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

- Cancer Biology
- Plant Metabolism
- Plant microbe interactions
- Microbial Ecology, Environmental Microbiology

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

a) International Grants:

Nil

b) National Funding:

Sr.No.	Title of the project	Principal Investigator/ Co-investigator	Year		Funding Agency	Amount Sanctioned (Rupees in Lacs)
			From	To		
1.	miRNA profiling for cancers (under transfer to Central University of Punjab)	Dr. Aklank Jain	2012	2017	Department of Science and Technology, Government of India	83.0
2.	Identification of potential circulatory miRNA as novel biomarkers for lung cancer (under transfer to Central University of Punjab)	Dr. Aklank Jain	2015	2018	Indian Council of Medical Research	32.7
3.	Elucidating the role of miRNAs in head and neck cancer	Dr. Aklank Jain	2015	2018	Department of Biotechnology, Government of India	24.96
4.	Role of integrin binding protein kindlin in colon cancer progression	Dr. Somesh Baranwal	2015	2020	Ministry of Science and Technology	82.0

18. Inter-institutional collaborative projects and associated grants received**a) National Collaboration:**

Nil

b) International Collaboration:

Nil

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

Nil

20. Research facilities

This is a new Centre which came up after break up from the well-established Centre for Biosciences. Being a split up from the erstwhile Centre for Biosciences, following facilities are available for research:

- Animal Cell Culture Laboratory
- 2-Dimensional Gel Electrophoresis
- Walk-in Growth Chambers and Cold room facility (RT, 4°C, -10°C, -40°C)
- All other facilities like Automated Karotyping System, High Speed Cooling Centrifuges, Ultra Low Deep Freezers, Gel Documentation Systems, Western Blotting Units, CO₂ and BOD incubators, Ice making machines, More than 50 high end microscopes, RT-PCR, Gradient PCR, Milli Q water purification system, Autoclaves etc.

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

Newly established centre

22. Publications:

Table: Description of the research/academic outcome

Sr. No.	Description	Number/ Score
1.	No. of papers published in peer reviewed journals (national/international) :	300
2.	Monographs	0
3.	Chapters in books:	15
4.	Edited books:	1
5.	Books with ISBN with details of publishers:	-
6.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database-International Social Sciences Directory, EBSCO host etc.):	306
7.	Citation Index– range/average:	2371
8.	SNIP:	-
9.	SJR:	-
10.	Impact Factor– range/index:	0.04-16.716
11.	<i>h</i> - Index	9-19

Table: Centre-wise list of faculty and year Publications Summary (Journals)

S. No.	Name of Faculty	No. of Publications	h-Index	Citations	Impact Factor Range/Average
1.	Prof. R.G. Saini	132	19	203	0.227-3.79
2.	Prof. Praveen Sharma	94	11	480	0.146-9.015
3.	Dr. Aklank Jain	19	13	495	0.500-9.12
4.	Dr. Shashank Kumar	28	11	392	0.04-2.88
5.	Dr Somesh Baranwal	27	9	501	2.595-16.761
	Total	300	63	2371	0.04-16.761

23. Details of patents and income generated

Newly established centre

24. Areas of consultancy and income generated

Newly established centre

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

Newly established centre

26. Faculty serving in**a. National Committees:**

Prof. R.G. Saini, serving as a member UGC committee to work out road map of research for UGC next 10 years.

b. International Committees:

NIL

c. Editorial Boards

- Prof. R. G. Saini, editorial board member of Indian Journal of Genetics and Plant Breeding.

- Dr. Aklank Jain is a member of the editorial board of International Journal of Molecular Biology.
- Dr. Shashank Kumar is editorial board member of following journals:
 - i. British Journal of Medicine and Medical Research
 - ii. American Journal of Pharmacology and Pharmacotherapeutics
 - iii. SOJ Biochemistry
 - iv. Pharmacologia
 - v. World Journal of Pharmaceutical Sciences
 - vi. Donnish Journal of Medicinal Plant Research
 - vii. British Biomedical Bulletin
 - viii. Innovare Journal of Sciences
 - ix. Journal of Scientific Research and Studies
 - x. Journal of Dentistry, Medicine and Medical Sciences,
 - xi. Journal of Critical Reviews
 - xii. International Journal of Pharmacy and Pharmaceutical Sciences
 - xiii. International Annals of Ethnomedicine
 - xiv. World Journal of Clinical Pharmacology, Microbiology and Toxicology
 - xv. American Journal of Drug Delivery and Therapeutics
 - xvi. Mintage Journal of Pharmaceutical and Medical Sciences
 - xvii. American Journal of Ethnomedicine
 - xviii. Journal of Medical and Biological Science Research
 - xix. Science Observer
 - xx. Journal of Pharmaceutical and Biological Sciences

d. Any other (please specify):

- Prof. R. G. Saini is a fellow of Indian Society of Genetics and Plant Breeding.
- Prof. Praveen Sharma
Associate Editor for Indian Journal of Microbiology published by Springer Verlag
Life Member Association of Microbiologist of India (AMI)
Member of Canadian Society of Microbiology
Member of Canadian Society for Biosystems Engineering, MB, Canada

- Dr. Aklank Jain:
Life member, Indian Association of Cancer Research;
Life member of Indian Science Congress
- Dr. Shashank Kumar is a member/Life member of
Indian Science Congress Association, India
Asian Council of Science Editor, Dubai, UAE
Publication Integrity & Ethics, London
Indian Academy of Biomedical Sciences Society, India
Italo-Latin American Society of Ethnomedicine
- Dr. Somesh Baranwal is a member of
American Association for Cancer Research
Sigma XI Scientific Society

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

The faculty is encouraged to attend various faculty development programmes.

28. Student projects

Percentage of students who have done in-house projects including inter-departmental projects.

NIL: Newly established centre

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

- Faculty

Sr. No.	Name of faculty/ Fellows/Students with designation in centre	Name of the award	Awarding authority	Year and other details
1.	Prof. R. G. Saini	Visiting Scientist to University of Sydney, Australia	Australian Centre for International Agricultural Research (ACIAR)	1986-1987, Under a PAU-ICAR-ACIAR collaborative project
2.	Prof. R. G. Saini	National Fellow	Indian Council of Agricultural Research	1995

3.	Dr. Aklank Jain	Ramanujan fellowship	Department of Science and Technology	2012
4.	Dr. Aklank Jain	International Travel grant	Council of Scientific and Industrial Research	2002
9.	Dr.Somesh Baranwal	Ramanalinga Swami Re-Entry Fellowship	Department of Biotechnology	2015-2020

- **Doctoral/post-doctoral fellows:**

Nil

- **Students:**

Nil

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

New Centre, no such activity taken up as yet

31. Code of ethics for research followed by the department

- Every faculty signs a code of ethics and apart from this the university has different committees which handle the ethical issues related to research and development.
- **Institutional Biosafety Committee:** Approval of this committee is obtained for carrying out research on recombinant DNA technology, genetic engineering of animals, plants and use of hazardous biomolecules.
- **Institutional Ethics Committee:** Approval of this committee is obtained for research and experimentation on animal and human samples.

32. Student profile programme -Year wise:

The first batch of students has joined the programme in the Academic year 2015-2016).

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
PhD Biochemistry	36	NIL	2	Newly Established Centre	
PhD Microbiology		NIL	NIL		
M.Sc. Life Sciences with Biochemistry Specialization	435	5	11		
M.Sc. Life Sciences with Microbiology Specialization	384	3	8		

33. Diversity of students

Year	Name of the Course (refer to question no.4)	% of students From the same university	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
2015-16	M.Sc. Biochemistry	Nil	37.5	62.5	None
2105-16	M.Sc. Microbiology	Nil	37	63	None

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

Newly established centre

35. Student progression

Newly established centre

36. Diversity of staff

Percentage of faculty who are graduates of	
The same university	None
From other universities within the State	1
From universities from other States	3
From universities outside the country	1

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

Nil

38. Present details of departmental infrastructural facilities with regard to:

- a. **Library:** A central library is available with a total of 25070 books, 378 DVDs and 9105 print and online journals subscribed.
- b. **Internet facilities for staff and students:** The entire campus is Wi-Fi enabled with a dedicated computer centre for students.
- c. **Total Number of class-rooms:** **02**
- d. **Class rooms with ICT facility:** **02**
- e. **Students laboratories (with internet access):** **01**
- f. **Research Laboratories (with internet access):** **01**

39. List of doctoral, post-doctoral students and research associates

Biochemistry:

	No. of Doctoral Students
a)	02

Microbiology:

	No. of Doctoral Students
a)	None

40. Number of postgraduate students getting financial assistance from the university.

Nil, but one PhD student admitted in the discipline of Biochemistry will get university fellowship of Rs 8,000 per month.

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

The present programmes are designed in order to provide education to the people of this region at par with nationally and internationally recognized universities and institutions. While designing the new programme and course curriculum, the thrust area of the region was identified on the basis of needs of the region was considered. The future prospects and job opportunities of the students was also considered. The syllabi were prepared according to the CSIR-UGC NET examination.

42. Does the department obtain feedback from students

Yes

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

Newly established centre

44. Give details of student enrichment programmes (special lectures/workshops/seminars) involving external experts.

Newly established centre

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

- It is proposed to have group discussions, giving library assignments, holding tutorials, discussions in journal clubs and class room presentations.
- Internet-based resources, field visits and guest lectures.
- The master's students shall carry out a compulsory dissertation research project as part of their programme in 3rd and 4th semester.

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

- The objective of the M.Sc. Life Sciences programme with specialization in Biochemistry and Microbial Sciences is to professionally train the students in their subject domain and provide them hands on experience to make them professionally competent and employable. The learning outcome of students will be monitored on regular basis to ensure the fulfilment of the objectives.
- The success of student in competitive examinations will be the criteria to monitor the learning outcome.

Further, the fulfilment of programme will be assessed through student feedback by following strategies given below:

- Personal interaction and discussions with teachers, outside experts and students.
- Producing faculty and academic issues in Departmental Committee meetings.

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

Newly established centre

48. Give details of “beyond syllabus scholarly activities” of the department.

New centre established in 2015 only. However it is proposed to call experts for special lectures, screening of videos on advanced laboratory techniques, arranging workshops and conferences.

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

Not yet

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

The centre is established in this academic session and has received funds (more than 2 crores) from various funding agencies like DST, DBT, ICMR (fund transfer in process). The centre is running diversified courses like basic biochemistry and applied enzymology for basic and applied knowledge of the students.

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

Strengths

- Centre for Biochemistry and Microbial Sciences has dedicated trained faculty with wide international experience. The quality of the faculty is evidenced by their publications, contribution as editorial board members and referees for reputed national and international journals and authoring books for reputed publication houses. Selection and screening of students in the respective programmes is through entrance examination followed by a stringent interview.
- High quality teaching curriculum of Masters programs which help the student to prepare for national level competitive examinations and entrance tests.
- The research programmes of the faculty have been supported by Grants from National Funding Agencies like Department of Biotechnology and Ministry of Science and Technology.
- Faculty is working on areas of research which are priority for the state and country on the whole including cancer biology.

Weakness:

- Lack of intensive Industry-academic interaction/partnership.
- Laboratory space is presently limited but enough space will be available with next two years.

Opportunities:

- The vibrant and young faculty of the centre with international experience has the potential to develop the Centre for Biochemistry and Microbial Sciences as an advanced centre.
- Collaborative research with nationally and internationally important research group is possible in view of the global importance of research area being followed by the faculty.
- Being a young and growing university, there are no financial constraints as yet, therefore, the faculty has unhindered access to latest equipment for pursuing their research goals.

Challenges:

- Establishment of well-equipped state of the art teaching and research infra structure.
- Generation of a workforce of future researchers, entrepreneurs, administrators and teachers par excellence.

52. Future plans of the department.

- Development of animal house.
- Develop much of experimental area to raise plants and create facilities for experiments under controlled conditions.
- Establishment of a resource rich departmental library.
- Establishment of an Informatics Resource Centre to support proteomics.

7. Centre for Computational Sciences

1. Name of the Department:

Centre for Computational Sciences

2. Year of establishment:

2013

3. Is the Department part of a School/Faculty of the university?

Yes, School of Basic and Applied Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):

PhD Computational Sciences (Computational Chemistry)
PhD Computational Sciences (Bioinformatics)

5. Interdisciplinary programmes and departments involved:

M. Sc. Chemistry (Computational Chemistry)
Centres involved: Computational Sciences and Chemistry

M. Sc. Physics (Computational Physics)
Centres involved: Computational Sciences and Physics

M. Sc. Life Sciences with specialization in Bioinformatics
Centres involved: Computational Sciences and Human Genetics and Molecular Medicine

6. Courses in collaboration with other universities, industries, foreign institutions, etc.:

Nil

7. Details of programmes discontinued, if any, with reasons:

Nil

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System: Semester and Choice Based Credit System (Semester)

Semester and Choice based credit system is being followed. Core courses, optional courses and interdisciplinary courses offered by the centre.

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

- Dr. Kousik Giri Teach PHY.503: Statistical Mechanics (CPMS)
- Dr. Kousik Giri Teach PHY.514: Statistical Mechanics (CPMS)
- Dr. Kousik Giri Teach PHY.702: Statistics and Computer Applications (CPMS)
- Dr. Kousik Giri Lab. PHY.752: Computer Laboratory (CPMS)
- Dr. Kousik Giri Teach PCS.510: Basic of Drug Action and Drug Discovery (CCPS)
- Dr. Kousik Giri Teach GEO.504; Computer Applications and Statistics
- Dr. Kousik Giri Teach PHY.602: Statistics and Computer Applications (CPMS)
- Dr. Kousik Giri Lab. PHY.652: Computer Laboratory (CPMS)
- Dr. Mahesh Kulharia Teach BSS.512; Computational Biology and Bioinformatics
- Dr. Mahesh Kulharia Teach HGE.512; Computational Biology and Bioinformatics
- Dr. Mahesh Kulharia Teach MGE.512; Computational Biology and Bioinformatics
- Dr. Mahesh Kulharia Teach GDM.510; Advanced Bioinformatics
- Dr. Mahesh Kulharia Teach LSS.506; Biochemistry
- Dr. Purshottam Sharma Teach PHY.502; Research Methodology

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professor	2	0	0
Assistant Professor	4	2	2

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./M.Phil. students guided for the last 4 years
Dr Kousik Giri	M. Sc., Ph. D.	Assistant Professor	Theoretical and computational chemistry-reaction dynamics	8	Nil
Dr Mahesh Kulharia	M. Sc., Ph.D.	Assistant Professor	Computational interactomics	7	Nil
Dr Purshotam Sharma	M. Sc.(hons), Ph. D.	DST Inspire Faculty	Computational chemistry	4	1 currently enrolled

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

Nil

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

Nil

14. Programme-wise Student Teacher Ratio:

M.Sc. Life Science (Bioinformatics)	4:1
M.Sc. Chemistry (Computational Chemistry)	2:1
M.Sc. Physics (Computational Physics)	5:2
Ph.D. Computational Sciences	1:1

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

As and when CRR shall be approved the positions shall be filled as per university rules.

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

- Computational Chemistry-Reaction Dynamics
- Protein-protein interaction
- RNA folding dynamics
- DNA Damage and Repair Processes

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

S. No.	Title of the Project	Principle Investigator/Co-Investigator	Year		Funding Agency	Amount Sanctioned (In Rupees)
			From	To		
1	Arsenate and arsenite reaction kinetics with ferric hydroxide using quantum chemical calculations	Dr. Kousik Giri	2015	2017	UGC, New-Delhi	6 lacs
2	Theoretical study of the molecular mechanism(s) of arsenic toxicity	Dr. Kousik Giri	2015	2018	SERB, DST, New-Delhi	~ 25 lacs
3	Carcinogenic DNA lesions due to ochratoxin A and aristolochic acid: structure, mutagenicity and repair	Dr. Purshotam Sharma	2015	2020	DST-Inspire, New-Delhi	35 lacs
4	To develop a support vector machine tool for identification of unique protein-protein interaction sites with lowest cross reactivity potential	Dr. Mahesh Kulharia	2012	2015	UGC	Rs. 6.73 Lacs
5	Targeting <i>Mycobacterium marinum</i> mel2 locus with drug like compounds: its implications	Dr. Mahesh Kulharia	2012	2015	DBT	Rs. 42.15 Lacs

	for <i>in vitro</i> host cell interaction					
6	Development of novel scoring function for prediction of protein-protein interaction affinity	Dr. Mahesh Kulharia		2014-2016	CUP, Bathinda	Rs 2.91 Lacs

18. Inter-institutional collaborative projects and associated grants received:

Nil

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

Nil

20. Research facility / centre with:

Nil

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

Nil

22. Publications:

Name	Number of peer reviewed journals	Number of book(s)/chapters in book(s)	Citation index range	Impact factor range	Cumulative IF	Average IF	<i>h</i> -index
Dr Kousik Giri	10	0	0-55	1.7-3.142	26.02	2.60	7
Dr. Mahesh Kulharia	11	0	1-62	0.5-12.113	34.70	3.15	4
Dr Purshotam Sharma	29	2	0-31	1.22-9.2	120.7	3.89	10

23. Details of patents and income generated:

Nil

24. Areas of consultancy and income generated:

Nil

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

Nil

26. Faculty serving in:

1. National committees:

Nil

2. International committees:

Nil

3. Editorial Boards:

Nil

4. Any other (please specify):

Nil

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

- Dr Kousik Giri-presented poster and attended-Theoretical Chemistry Symposium 2014-Organized by NCL-Pune and IISER Pune-December 18-21, 2014
- Dr. Kousik Giri attended Orientation Course from 12th May to 8th June 2015 organized by University of Rajasthan
- Dr. Mahesh Kulharia attended Special Winter School organized by University of Rajasthan, 13 December to 3rd January 2015

28. Student projects

N/A

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

Nil

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

Nil

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

University's code of ethics is being followed in the centre.

32. Student profile programme-wise:

Year	Name of the Course (refer to question no.4)	Applications received	Selected		Pass Percentage	
			Male	Female	Male	Female
2015-16	M.Sc. Life Sciences (Bioinformatics)	150	5	7	Ongoing programmes	
2015-16	M.Sc. Chemistry (Computational Chemistry)	506	1	3		
2015-16	M.Sc. Physics (Computational Physics)	658	3	2		
2015-16	Ph.D. Computational Sciences	22	1	2		

33. Diversity of students:

Year	Name of the Course (refer to question no.4)	% of students From the same University	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
2015-16	M.Sc. Life Sciences (Bioinformatics)	0	8.3	91.7	0
2015-16	M.Sc. Chemistry (Computational Chemistry)	0	25	75	0
2015-16	M.Sc. Physics (Computational Physics)	0	40	60	0

2015-16	Ph.D. Computational Sciences	66	33	33	0
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- 34. How many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.**

New centre

- 35. Student progression.**

New centre

- 36. Diversity of staff**

Percentage of faculty who are graduates of	
the same university	0
from other universities within the State from	0
universities from other States from	100
universities outside the country	0

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

Nil

- 38. Present details of departmental infrastructural facilities with regard to**

- a) Library

Books	552
Journals	59

- b) Internet facilities for staff and students : Available

- c) Total number of class rooms: One

- d) Class rooms with ICT facility : One

- e) Students' laboratories : One

- f) Research laboratories: One

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

Doctoral: Three
Post-Doctoral: Nil
Research Associates: Nil

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

Nil

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

Yes. New programmes are developed after rigorous discussion among faculty members and various experts and a clear case for need to start the programme.

42. Does the department obtain feedback from

- a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, the suggestions and recommendations of all the faculty members are taken into account, while framing the syllabi and modifications therein.

- b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

New centre

- c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

New centre

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

New centre

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

New centre

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

- Delivery of lectures and teaching using ICT multimedia and green/white board.
- Question – answer (interactive) method
- Seminar presentations by students
- Tutorial classes
- Group activities
- Class seminar

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

Meeting the programme (research aptitude development) objectives

1. By carrying out research on critical research problems in fundamental science, material science, life science and environmental science through large-scale simulations and large-scale data analyses.
2. By providing the interdisciplinary training for the scientists who wish to derive and apply complex mathematical models for the simulation of structures and processes in nature, technology, economy and society.
3. By building a focused research group in Computational Chemistry. Computational Chemistry involves the application of chemical, mathematical and computing skills to provide solutions to interesting problems in interdisciplinary areas such as those in chemical, biological and material sciences. Thus, the major theme pursued by the centre within this discipline is to utilize computational methods to analyse and predict electronic and structural properties of molecular systems, model chemical reactions and gain knowledge of chemical systems without use of costly chemistry laboratory equipment.
4. By establishing research group(s) for studying the chemistry involved in biological systems. Specifically, focus is placed on

utilizing chemical and computational knowledge to analyse structural properties of biological macromolecules, and to understand the mechanistic aspects of critical biochemical reactions involved in biological systems.

Monitoring of learning outcomes

1. Class Assignment
Surprise test/ quiz
2. Group discussion

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

New centre

48. Give details of “beyond syllabus scholarly activities” of the department.

New centre

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

Not yet

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

The Centre has been involved in modelling chemical reactions, studying reaction dynamics, analysing biomacromolecular structures and computer aided drug design using computational methods.

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

Strengths:

- Dedicated and disciplined faculty specialized in emerging research areas.
- Faculty involved on basic, applied and interdisciplinary areas of experimental research.
- Interdisciplinary programmes.

- Continuous reframing of syllabi in context with latest development in the subject.
- Participation of faculty/students in national and international conferences/seminars.

Weaknesses:

- Non availability of senior faculty.
- Insufficient number of class rooms and faculty for the growing strength of students.
- Insufficient building and infrastructure facility.

Opportunities:

- Interdisciplinary nature of programmes
- Research work of the existing faculty

Challenges:

- To attract good and motivated students and faculty.
- To set up relevant experimental facilities for high quality research.
- To develop more frontier areas of research of interdisciplinary nature.

52. Future plans of the department.

Currently the centre is interested to investigate/study some emerging fields like renewable energy (understanding methanol synthesis from CO₂), molecular reactions catalysed by surface, the rich and diverse chemistry that occurs throughout the universe means astrochemistry and understanding arsenic carcinogenicity.

8. Centre for Environmental Science and Technology

1. Name of the Department:

Centre for Environmental Science and Technology

2. Year of establishment:

2009

3. Is the Department part of a School/ Faculty of the University?

Yes, School of Environment and Earth Sciences

4. Names of Programmes/Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters Integrated Ph.D., etc.):

M.Sc.	Environmental Science and Technology
M.Phil. Ph.D. Integrated	Environmental Science and Technology
M.Phil.	Environmental Science and Technology

5. Interdisciplinary programmes and departments involved.

Nil

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

The Centre for Environmental Science and Technology collaborated with Indian Space Research Organization, Bangalore and Indian Institute of Remote Sensing, Dehradun in the following programme

- 13th Outreach Programme on ‘Basics of Remote Sensing, GIS and GPS’
- 14th Outreach Program on ‘Applications of Remote Sensing and GIS for Natural Resources’
- The following Guest lectures and Video lectures was arranged as a part of 13th and 14th Outreach Programme curriculum

(a) ‘Application Potential of Indian Remote Sensing Satellites’ delivered by The Director, IIRS.

(b) ‘Indian Regional Navigation Satellite System (IRNSS) and GPS Aided & GEO Augmented Navigation (GAGAN)’

- Two day training programme on Rolta Geomatica software was organized by the centre for Environmental Science and Technology for the students and faculty

7. Details of programmes discontinued, if any, with reasons:

Nil

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

CUPB follows semester pattern and choice based credit system. The students are evaluated throughout the semester through three continuous assessment tests, surprise tests, term papers, assignments and presentations etc. The student’s attendance also carries mark. The total internal assessment marks account for 50% and final end semester is marked for 50%. From the academic session 2015-16, CUPB has shifted to new examination pattern comprising of surprise quiz, mid term tests and end term tests. The university follows an absolute grading system. A credit seminar is made compulsory every semester. The students of EVST are given an elective course in humanities also.

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

The faculty of the EVST teach courses offered by other centres as below:

1. Centre for Biosciences: BSS 509 Ecology and Environment, BSS 559 Environmental Biology
2. Centre for Chemical and Pharmaceutical Sciences: CPS 509, PCS 509 Physical medicinal chemistry
3. Centre for Environmental Law: Science for Humanities
4. Centre for Human Genetics and Molecular Medicine: HDMM 512 Energy and Environment.

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professors	01	1*+1	1*+1
Associate Professors	02	NIL	NIL
Assistant Professors	04	04	04

*Vice Chancellor of the university

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

Name	Qualification	Designation	Specialization	Experience (in years)	No. of Ph.D/ M.Phil. student guided in last 4 years	
					M.Phil.	Ph.D.
Prof. R.K. Kohli	Ph.D.	Vice Chancellor, CUPB	Ecology, physiology, forestry, conservation, Environment	39 years and 9 months	1	13+4*
Prof R.C. Sharma	Ph.D.	Centre Coordinator	Plant physiology, plant pathology and seed technology	34 years and 3 months	1	03*
Dr. Sunil Mittal	Ph.D.	Assistant Professor	Water pollution and waste water management, Plant based bio herbicides	6 years and 5 months	10+1*	04*
Dr. Dhanya M.S.	Ph.D.	Assistant Professor	Environmental microbiology, Biomass and bioenergy - biofuel, Waste management	4 years and 5 months	3+5*	03*
Dr. Yogalakshmi K.N.	Ph.D.	Assistant Professor	Biological wastewater treatment,	6 years and 2 months	4+3*	05*

			Membrane technologies, Membrane bioreactors (MBR), Environmental microbiology			
Dr. Puneeta Pandey	Ph.D.	Assistant Professor	Environmental chemistry, Geographic information system (GIS), Remote sensing, Air and water pollution	4 years and 5 months	4+2*	1*

* Under guidance

12. List of senior visiting fellows, adjunct faculty, emeritus professors:

Nil

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

Nil

14. Programme-wise Student Teacher Ratio :

Average student teacher ratio for the last five years

M.Phil-Ph.D. Integrated programme: 2.838:1

M.Phil.: 1.02:1

M.Sc.: 1.032:1

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

S.	Designation	Sanctioned	Fille	Actual
1.	Junior Technical Assistant	01	01	01
2.	Lab attendant	01	01	01

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

The thrust areas recognized by the funding agencies include

- Environmental monitoring (air, water, soil)
- Remediation of organic pollutants (pesticides, herbicides, PAHs), Heavy metals (Uranium, Arsenic) in soil and water using micro-organisms, biosensors and nanoparticles.
- Wastewater treatment, waste management, biomass burning, waste-to-energy conversion and wetland monitoring.

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

S. No.	Title of the Project	Principle Investigation/ Co-investigation Year	Year		Funding Agency	Amount Sanctioned (In Lakhs)
			From	to		
1	Alien Invasive species JC Bose Fellowship	Prof. R.K. Kohli	2012	2017	DST	68.0
2	Bioherbicidal potential of immobilized (encapsulated/entrapped) formulations of essential oil from leaves of plant <i>Callistemon viminalis</i>	Dr. Sunil Mittal	2012	2015	DST Fast Track	29.69
3	Fluorimetric estimation of uranium and its source apportionment in groundwater of Bathinda district in Punjab'	Dr. Yogalakshmi K.N.	2012	2014	UGC Startup Grant	6.0
4	Assessment of chlorpyrifos in non-Bt cotton Soil of Talwandi Sabo,	Dr. Dhanya M.S.	2012	2014	UGC Startup Grant	6.0

	Bathinda and the effect of amendments and organic matter on chlorpyrifos degradation.					
5	Effect of arsenic toxicity and its accumulation potential in <i>Oryza sativa</i> L. varieties grown in Malwa region of Punjab	Dr. Sunil Mittal	2012	2014	UGC Startup Grant	6.0
6	Assessment of organochlorine pesticide residues in groundwater and soil of Bathinda district, Punjab	Dr. Puneeta Pandey	Sanction money yet to be released		UGC Startup Grant	6.0
7	Assessment of urban heat island formation and its relationship with aerosols in Bathinda	Dr. Puneeta Pandey	2014		CUPB – RSM	3.0
8	Investigations on the potential of agro-wastes for the production of ecofriendly products	Dr. Dhanya M S	2014		CUPB – RSM	3.0
9	Microbial electrolysis cell for integrated landfill leachate treatment and biohydrogen production	Dr. Yogalakshmi K N	2014		CUPB – RSM	3.0
10	Spatial distribution of uranium and associated water quality parameters in groundwater/ drinking water resources of five districts of Punjab (Fazilka, Muktsar, Mohali, Sangrur and	Dr. Yogalakshmi K N	Dec 2014	Dec 2016	BRNS	24.49

	Patiala)					
11	Spatial distribution of uranium and associated water quality parameters in groundwater/ drinking water of five Districts (Fatehgarh Sahib, Ludhiana, Barnala, Nawanshar, Rupnagar) of Punjab and Hanumangarh in Rajasthan	Dr. Sunil Mittal	Dec 2014	Dec 2016	BRNS	24.49
Total amount sanctioned						111.67

18. Inter-institutional collaborative projects and associated grants received

a. National collaboration:

None

b. International collaborations

None

c. Industry collaboration

The students of the centre undergo training in industries such as National Fertilizers limited and Guru Nanak Dev Power plant, Bathinda as part of their curriculum

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

Nil

20. Research facility / centre with :

In a short span the Centre for EVST has earned national recognition for its work. A grant for “Centre for Excellence” with the theme “Environment and Health” is being prepared in collaboration with Centre for Human Genetics and Molecular Medicine and Centre for Pharmaceutical Sciences.

A major proposal on ‘Cities and Climate Change’ in collaboration with Centre for Plant Sciences, Centre for Biochemistry and Microbial Sciences, Centre for Education and Centre for Economic Studies has been submitted to International Development and Research Centre (IDRC), Canada.

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

None

22. Publications:

Number of papers published in peer reviewed journals (national / international) :	281
Monographs:	-
Chapters in Books :	23
Edited Books :	12
Books with ISBN with details of publishers:	1
Number listed in International Database (For <i>e.g.</i> Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	
Citation Index – range / average :	2582 citation, 540 average
SNIP :	142
SJR :	142
Impact Factor – range /average:	0 - 6.76
h-index (SCOPUS)	1-32

**Table: Centre-wise list of faculty and year Publications Summary
(Journals)**

Name	Number of peer reviewed journals	Number of book(s)/chapters in book(s)	Citation index range	Impact factor range	Cumulative IF	Average IF	h-index
Prof. R K Kohli	162	15	1-294	0.047-6.982	211.445	1.28	32
Prof. RC Sharma	81	-	-	-	-	-	-
Dr Sunil Mittal	17	2	0-61	0-6.409	32.26	1.89	7
Dr. Yogalakshmi K N	4	-	2-34	0.626 – 4.494	10.789	1.348	2
Dr.Dhanya MS	12	5	2-15	1.61-1.74	3.35	0.28	1
Dr. Puneeta Pandey	5	-	4-15	0.84-4.099	12.98	1.298	1

23. Details of patents and income generated:

Nil

24. Areas of consultancy and income generated:

Nil

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

Nil

26. Faculty serving in

a. National committees:

Prof. R. K. Kohli

- Member, Expert Group Conservation and Management of Natural Resources” 2008-2011, of MoEF, New Delhi
- Member, Programme Advisory Committees (PACs) in Life Sciences under SERB of DST, New Delhi
- Member, Plant Science Research Committee of CSIR, New Delhi 2015-18.
- Permanent Member, Technical Advisory Committee, Centre of Plant Biotechnology, Haryana
- Chairman Committee on R & D Projects of Haryana State Council for Science and Technology
- Member, Board of Directors of NIMBUA Greenfields (Pb) Ltd for Hazardous Waste Management for Punjab & Chd.
- Member of the Jury for scientific competitions for Haryana, Punjab and UT Chandigarh
- Served as Consultant for Himachal Pradesh High Court, Shimla for Environmental Problems due to stone Crushers
- For several years had been the Science Quiz master & Organizer for the State of Haryana and UT Chandigarh

b. International committees:

Prof. R. K. Kohli

- Chair/Coordinator, IUFRO Working Party on Invasive Ecology (2006-15) and Multipurpose Inventories (2000-2010)

c. Editorial Boards:

Prof. R. K. Kohli

- Journal of Crop Improvement, Taylor & Francis, NY, USA
- World Journal of Agricultural & Environmental Sciences, USA
- Asian Ecology Section of the journal of ESA committee, USA
- Journal of Plant Archives, India
- Indian Journal of Tree Sciences

Dr. Puneeta Pandey

- International Journal of Biological and Medical Sciences, Catalyst Publishers

d. Any other (please specify):

Reviewers of the following journals

Prof. R. K. Kohli, Professor

- Weed Technology (USA),
- Weed Science (USA)
- Weed Research (UK),
- Annals of Applied Biology (UK),
- Journal of Applied Sciences (USA)
- Journal of Environmental Biology (SCI India),
- Journal of Biological Sciences (USA), ,
- African Journal of Agricultural Research (Africa)
- Canadian Journal of Plant Sciences
- Biological Invasion (USA)
- Journal of Chemical Ecology, (USA)
- Journal of Medicinal Plant Research

Dr. Sunil Mittal, Assistant Professor

- Biosensor and Bioelectronics, Elsevier
- Desalination and Water Treatment

Dr. Yogalakshmi K N, Assistant Professor

- Applied Microbiology and Biotechnology
- Bioresource Technology, Elsevier
- Environmental Pollution and Research
- International Journal of Environment and Applied research
- Journal of Environmental Biology

- International Water Association - conferences

Dr. Puneeta Pandey, Assistant Professor

- Atmospheric Research, Elsevier
- Journal of Energy and Power Engineering, David Publishing
- Agricultural Science Research Journal (ASRJ), International Research Journals Publications
- African Journal of Pharmacy and Pharmacology (AJPP), Academic Journals Publications

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

The faculty members of the centre frequently attend refresher courses, orientation programmes, workshops, seminars, invited lectures etc. Some are mentioned below:

Dr. Sunil Mittal

- Orientation program at Punjabi University, Patiala (December 1-27, 2014)

Dr. Dhanya M.S.

- Hands on Analytical and Molecular Techniques: Biochemical conversion Technologies for Advanced Biofuel (Feb, 2013) at Sardar Swaran Singh National Institute of Renewable Energy, Kapurthala
- IIRS 14th Outreach Programme on ‘Applications of Remote Sensing and GIS for Natural Resources’, sponsored by NNRMS, Department of Space, Government of India, January - March, 2015 at Central University of Punjab, Bathinda.

Dr. Yogalakshmi K.N.:

- IWA International conference on ‘Odors and Air Emissions Jointly Held with 10th Conference on Biofiltration for Air Pollution Control’ held at San Francisco, March 2013.
- One -week training programme on GIS (ArcGIS 10.1) by ESRI, India at Central University of Punjab, Bathinda (Oct-Nov, 2013)

- IIRS 13th Outreach Programme on ‘Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System’, sponsored by NNRMS, Department of Space, Government of India, August - November, 2014 at Central University of Punjab, Bathinda.
- IIRS 14th Outreach Programme on ‘Applications of Remote Sensing and GIS for Natural Resources’, sponsored by NNRMS, Department of Space, Government of India, January - March, 2015 at Central University of Punjab, Bathinda.
- Orientation Programme at UGC-HRD centre at University of Madras from 14th May to 10th June 2015.

Dr. Puneeta Pandey:

- Co-ordinator for IIRS 14th Outreach Programme on ‘Applications of Remote Sensing and GIS for Natural Resources’, sponsored by NNRMS, Department of Space, Government of India, January- March, 2015 at Central University of Punjab, Bathinda.
- Co-ordinator for IIRS 13th Outreach Programme on ‘Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System’, sponsored by NNRMS, Department of Space, Government of India, August- November, 2014 at Central University of Punjab, Bathinda.
- One -week training programme on GIS (ArcGIS 10.1) by ESRI, India at Central University of Punjab, Bathinda (Oct-Nov, 2013)
- Participated in BRNS-AEACI Sixth School on Analytical Chemistry (SAC-6) held at Analytical Chemistry Division, BARC, Mumbai, during May, 2013

28. Student projects

- **percentage of students who have done in-house projects including inter-departmental projects**

100%

- percentage of students doing projects in collaboration with other universities

Nil

- industry / institute

46%

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

a Faculty

S. No.	Name of faculty/ Fellows/ Students with designation in centre	Name of the award/ recognition	Awarding authority	Year and other details
1.	Prof R.K. Kohli	• JC Bose National Fellowship	Government of India	2012
		• Fellow, Indian National Science Academy		
		• Fellow of National Academy of Agricultural Sciences		
		• Fellow, Indian Academy of Sciences		
		• Fellow, National Academy of Sciences		
		• Haryana Vigyan Ratna Award	Government of Haryana	2008-09
		• Chairman of the State Expert Appraisal Committee	Ministry of Environment	2009
• Recipient of UGC honorarium of Rs15000 for being fellow of 2 academies	UGC	Till retirement		

	<ul style="list-style-type: none"> • Awarded SAARC Chair Bangladesh 	Chittagong University	2007-08
	<ul style="list-style-type: none"> • Adjunct Professor 	Chinese Academy of Sciences, China	2007-09
	<ul style="list-style-type: none"> • Punjab Rattan Award for Environment Science and Education 		2007-08
	<ul style="list-style-type: none"> • Dr K.K. Nanda Memorial Oration Lecture Award 	Dopoli Maharashtra	2007
	<ul style="list-style-type: none"> • Certified Senior Ecologist(Highest global Accreditation) 	Board of Professional Certification, ESA, USA	2005-15
	<ul style="list-style-type: none"> • B.P. Pal National Environment Fellowship Award 	Union Ministry of Environment & Forests (highest award)	2001
	<ul style="list-style-type: none"> • Nanda Memorial National Young Scientist Gold Medal Award for Research in Forestry 		1988
	<ul style="list-style-type: none"> • Vijay Shree Award, New Delhi 		2006
	<ul style="list-style-type: none"> • National Visiting Associateship 	UGC India	
	<ul style="list-style-type: none"> • Gregor Mendel Medal awarded 	Brno, Czechoslovakia.	1979
	<ul style="list-style-type: none"> • UNESCO-WHO Post-doctoral Fellowship 	Institute of Experimental Botany, Praha, Czechoslovakia	1978-79
	<ul style="list-style-type: none"> • Second Best Research Paper 	<i>Hindi Award by CSIR</i>	1998
	<ul style="list-style-type: none"> • First Friday Forum Award for creativity in 		2010

		Environment		
2.	Prof. R.C. Sharma	• Best Research Paper Award	Indian Society of Seed Technology	1999
		• Best Research Paper Award	Indian Society of Seed Technology	2003
		• Best Research Paper Award (MJ Narsimhan Zonal Level Academic Award)	Indian Phytopathological Society	2010
		• Best Research Paper Award (MJ Narsimhan Medal Award)	Indian Phytopathological Society	2011
		• Best Poster presentation award	Indian Phytopathological Society	2006
		• Best Poster award	Indian Society of Plant Pathologists	2007
		• Best Poster award	Indian Society of Plant Pathologists	2009
		• Best Poster award	Punjab Science Academy	2009
3. 3	Dr. Yogalakshmi K N	• Invited talk in Indo-US Workshop on Water Quality and Sustainability	IIT Madras	2013
		• UGC-CPEES travel grant to attend International conference ICENV, Malaysia	UGC	2006
4.	Dr. Puneeta Pandey	• Woman Scientist Award	Society for Environment and Development, SED India	2011

b Students- Many students of the department have received Research Fellowships and Awards

S. No.	Name of faculty/ Fellows/ Students with designation in centre	Name of the award	Awarding authority	Year and other details
1	Anamika Das	UGC-RGNF	UGC	2011
2	Jaskiran Kaur	UGC-MANF	UGC	2011
3	Gurpreet Kaur	UGC-MANF	UGC	2011
4	Rishikesh Singh	UGC-JRF/NET	UGC	2012
5	Disha Mishra	UGC-JRF/NET	UGC	2012
6	Amita Bhatti	UGC-RGNF	UGC	2012
7	Harman Kaur	DST-INSPIRE	UGC	2013
8	Amit Kumar	UGC-JRF/NET	UGC	2013 , 2013
9	ShashiRanjan	UGC-JRF/NET	UGC	2013
10	Amita Bhatti	Overseas Fellowship for SC	UGC	2014
11	Gajendra Singh Vishwakarma	DST Project JRF	DST	2012
12	Gini Rani	UGC-RGNF	UGC	2015

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

S. No.	Name of events	Title	Organized by	Funding
1	National Seminar	Environment and Health	Central University of Punjab	University funding
2	Biodiversity day celebrations	International day for Biodiversity	Central University of Punjab	Punjab Biodiversity Board

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

The centre follows all the declared policies and ethics of CUPB and in addition implements the following:

- The centre takes care of the safe handling/disposal of hazardous and bio-wastes.
- Research pertaining to human samples requires the approval of Institutional ethics committee.
- Each faculty commits to work for environmental issues.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
Integrated M.Phil-Ph.D.(2009)	13	1	3	100	100
Integrated M.Phil-Ph.D.(2010)	73	3	5	33.33	100
Integrated M.Phil-Ph.D.(2011)	114	3	4	100	100
M.Sc(2011)	19	1	2	100	100
Integrated M.Phil-Ph.D.(2012)	129	2	4	100	75
M.Sc(2012)	45	1	2	100	50
Integrated M.Phil-Ph.D.(2013)	220	7	4	100	50
M.Sc.(2013)	92	-	04	-	75
M.Phil.(2014)	26	03	03	-	-
M.Sc.(2014)	29	03	04	-	-
M.Sc. (2015)	316	06	07	-	-
Ph.D. (2015)	26	01	01	-	-

33. Diversity of students

Name of the programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the state	% of students from universities outside the state	% of students from other countries
M.Phil. (2009-2014)	0	21	79	0
M.Sc. (2011-2014)	0	66	33	0
Ph.D. (2015)	50	0	50	0

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

38% of the students have qualified national and state level eligibility tests.

S. No.	Name of Students/Registration No.	Year	Qualifying Exam
1.	UpmaVaid	2012, 2013	UGC-NET
2.	Anamika Das	2012	UGC-NET

3.	Gajendra Singh Vishwakarma	2012	UGC-NET
4.	NandiniGautam	2012	UGC-NET
5.	Gurpreet Kaur	2012	UGC-NET
6.	Rishikesh Singh	2012	UGC-JRF/NET
7.	Disha Mishra	2012	UGC-JRF/NET
8.	Annu Sharma	2012	UGC-NET
9.	Amita Bhatti	2012	GATE, CSIR-NET
10.	GhulamNabiNajar	2013	ARS-NET
11.	Amit Kumar	2013 , 2013	ARS-NET, UGC-JRF/NET
12.	ShashiRanjan	2013	UGC-JRF/NET
13.	Navneet Kaur	2012	UGC-NET
14.	Gini Rani	2013	UGC-NET
15.	Vijay Jaswal	2014	ARS-NET
16.	Vijay Jaswal	2015	UGC-NET

35. Student progression

Student progression	Percentage against enrolled
UG to PG	NIL
PG to M.Phil.	NIL
PG to Ph.D.	58%
Ph.D. to Post-Doctoral	NIL
Employed	
Campus selection	NIL
Other than campus recruitment	67% (M.Sc)
Entrepreneurs	NIL

36. Diversity of staff

Percentage of faculty who are graduate	Total Number
of the same university	Nil
from other universities within the State	01 (16.67%)
from universities from other States from	05 (83.33%)
universities outside the country	Nil

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

Two faculties (Dr. Dhanya M.S. -2011; Dr. Puneeta Pandey-2012) were awarded Ph.D. during the assessment period.

38. Present details of departmental infrastructural facilities with regard to

a)	Library	1623 and 197 ejournals
b)	Internet facilities for staff and students:	High Speed Internet Connectivity with 1Gbps speed and Wi-Fi campus
c)	Total number of class rooms	02
d)	Class rooms with ICT facility	01
e)	Students’ laboratories	Nil
f)	Research laboratories	03

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

a) from the host institution/university

	Names
Doctoral	<ol style="list-style-type: none"> 1. Anamika Das 2. Gajender Singh Vishwakarma 3. Upma Vaid 4. Manohari Rathi 5. Jaskiran Kaur 6. Gurpreet Kaur 7. Shilpa Nag 8. Nandini Gautam 9. Rabindra Kumar 10. Jatinder Singh Randhawa 11. Archana Kumari 12. Gh. Nabi Najjar 13. Ravishankar 14. Ritu Kamboj 15. Gursharan Kaur 16. Leena 17. Amit Kumar 18. Sheetal Dubey
Post Doctoral	Nil
Research Associates	Nil

b) from other institutions/universities : NIL

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

90%

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

In recent years, several cancer cases have been reported in Punjab, mainly in Bathinda which was referred to as the ‘Cancer Belt of India’ by leading tabloids and media houses. This necessitated the inception of the Centre for Environmental Science and Technology in the university, to focus on the role and impact of environmental pollution in cancer. Thus the primary need for starting courses in the centre was social and national need. In addition, environmental science as a subject is gaining importance throughout the world. Many regulatory bodies, industries and government bodies need experts from the subject for monitoring and policy formulation. Keeping in view the regional issues and the university mandate, the M.Phil. and M.Sc. programmes were started in Environmental Science and Technology.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, the feedback is obtained from the faculty of the Centre and departmental meetings with Dean Academic Affairs are held at regular intervals to discuss individual as well as common issues pertaining to the centre.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes. The feedback forms are reviewed by the Dean Academic Affairs. Each faculty is informed individually about the outcomes of the feedback form. The faculty is advised on his/her strengths and weaknesses with special emphasis on the areas that require improvement.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

None. Since the university is just 6 years old and the first batch students are in their final year of Ph.D., no alumni are present.

43. List the distinguished alumni of the department (maximum 10):

Nil

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Date	Speaker		Topic
15 November, 2014	Dr. R.K. Tuli	Former Executive Director, National Agricultural-Food Biotechnology Institute (NABI), Mohali	Biology in Changing World
13 November, 2014	Prof. S. C. Sharma	Senior Vice President, International Society of Environmental Botanists, CSIR-National Botanical Research Institute, Lucknow	Bio-aesthetic Planning for Healthy and Happy Life
21 October, 2014	Prof. M. Shamsher Ali	President, Educational Quality Assurance Foundation (EQAF), Bangladesh. Founder Vice Chancellor, Southeast University, Bangladesh	How to make Science and Mathematics Education more Attractive
28 March, 2014	Dr. Inder Pal Singh	Associate Professor, Department of Natural Products, NIPER, Mohali	Isolation and structure elucidation of natural products
17 January, 2014	Prof. R. K. Tuli,	Former Director, National Agri-food Biotechnology Institute, Mohali	Various programmes undertaken at global level to encourage the innovations world over
17 January, 2014	Prof. J. S. Hundal,	Director, Giani Zail Singh, Punjab Technical University Campus, Bathinda	Innovations and technology development should not be at the cost of environment
1 November , 2013	Dr. Satnam Singh Ladhar,	Joint Director (Environment), Punjab State Council for Science and Technology	Those countries are considered developed who have an abundance of natural resources
1 November , 2013	Prof. M. S. Kang	Former Vice Chancellor, Punjab Agricultural University, Ludhiana	The importance of technology in agriculture and how new technologies being used in agriculture in advanced countries of the

			world can pave way for future prosperity of Punjab
29 May, 2013	Dr. B.M. Gandhi	Former Advisor, Department of Biotechnology, Ministry of Sciences and Technology, Govt. Of India, New Delhi	Funding Opportunities and Effective Grant Writing
22 May, 2013	Dr. S. S. Bir	Professor Emeritus, Eminent Botanist, Punjabi University, Patiala	Inaugural address (International Biodiversity Day)
22 May, 2013	Prof. D. S. rar	Former Scientist, International Rice Research Institute, Philippines	Utilization of Genetic Resources for Increasing Productivity and Sustainability of Crops
22 May, 2013	Prof. P. K. Joshi,	Department of Natural Resources, TERI University	Biodiversity: That Sustains Life
22 May, 2013	Prof. Pushpinder Jai Rup	Former Professor, Department of Zoology, Guru Nanak Dev University	Biodiversity and Insects
28 March, 2013	Dr. R.K. Tuli,	Executive Director, National Agricultural-Food Biotechnology Institute (NABI), Mohali	facilities at NABI Mohali and benefits of collaboration between NABI and CUPB
25 June, 2010	Dr. P. S. Ahuja,	Director, Institute of Himalayan Bioresource Technology, Palampur	Conservation and Genetic Improvement of Plant

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

- Both conventional and modern technologies (ICT, Projector) are utilized for classroom teaching.
- Practicals- hands-on experience for various laboratory instruments for the respective courses is done.
- Seminars- credit as well as non-credit seminars delivered by the students in all the semesters of their M.Sc. and M.Phil. programme.
- Primary data collection by ground based studies and field sampling for practical classes and dissertation.

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

Continuous internal evaluation throughout the semester, surprise tests, seminars, presentations on term papers helps ensure that programme objectives are met and the learning outcomes are monitored.

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

- Earth Day Celebrations, 2013, 2014, 2015
- Biodiversity Day celebration: May, 2013
- Innovators Club
- Visit to Biodiversity Express, Science City

48. Give details of “beyond syllabus scholarly activities” of the department.

- 13th Outreach Programme organized by Indian Space Research Organization, Bangalore and Indian Institute of Remote Sensing, Dehradun using A-View software.
- 14th Outreach Programme organized by Indian Space Research Organization, Bangalore and Indian Institute of Remote Sensing, Dehradun using A-View software.
- Visit to Biodiversity Express, Science City
- Following guest lectures were organized as part of beyond syllabus scholarly activities

Date	Speaker		Topic
26.09.2012	Dr. C.P. Kaushik	Guru Jambheshwar University for Science and Technology, Hisar	Protecting our atmosphere for Generations to come
21.12.2012	Dr. A. K. Sangal	ISRO, Ahmedabad	Absolute Motion of the Earth in the Universe
27.11.2012	Dr. Babu Ram	Member Secretary, Punjab Pollution Control Board	Environmental Issues and their Management
18.11.2011	Dr. Naresh	U.G.C. Emeritus	Seismicity in North Western

	Kochar	Fellow, Department of Botany, Panjab University, Chandigarh	Himalaya - Importance of Radon as Precursor and Chemical Quality of Good Water in Parts of SW Punjab in Relation to Incidence of Cancer - November 18, 2011.
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49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

No

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

The centre has published 281 research papers of high impact.

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

Strengths:

- Highly qualified faculty
- The student-faculty interaction is very cordial and effective with round-the-clock guidance and suggestions.
- Well structured comprehensive curriculum prepared with the inputs of the external experts
- Well equipped environmental science laboratories with modern equipments for analysis of physico-chemical and biological parameters of water, wastewater, soil and solid waste.

Weaknesses

- The Centre also lacks adequate support staff for laboratory and office attendants.
- No collaborative efforts/projects have been engaged with the industrial and academic community for knowledge sharing and mutual advancement.

Opportunities

- Our faculty has expertise in diverse fields of environmental sciences which can be leveraged to receive project grants from various funding agencies
- Well equipped laboratory and expertise of the faculty will open up new avenues in industrial consultancy
- To establish an Environmental Impact Assessment (EIA) unit as part of the centre to provide environmental management services to industries and companies.
- The centre could help local farmers make informed decisions related to crop selection, soil nutrient analysis and fertilizer selection etc to improve the quality of yield.
- The location of the centre would reduce the dependency on major agricultural institutes and other private organizations located far away from Bathinda.

Challenges:

- Collaborations with other national and international universities and research institutes needs to be strengthened with more number of MoUs.
- To attract more students from the rural area within the state.
- To create awareness among the farmers and common public regarding the safe handling of pesticides and health issues related to it.
- To get NABL accreditation for the instrument facility available in the centre

52. Future plans of the department.

The environmental science laboratory had been set up with the objectives to cater to the needs for educating students and carrying out research to address local environmental issues. Thus, the future plans of the Centre encompass

- Transfer of laboratory research output to field for benefiting the society.
- Increasing the research output to gain international recognition.

- To establish an EIA (Environmental Impact Assessment) cell to provide services to the industries and companies at low cost
- To establish water and soil testing laboratory to benefit adjoining industries and the local public/ farmers
- To do free water testing for villages around the town.
- To establish more industry collaboration for research and employment opportunities
- To organize national and international conferences, symposia, workshops etc.

9. Centre for Physical Sciences

1. Name of the Department

Centre for Physical Sciences

2. Year of establishment

2013 as Centre for Physical and Mathematical Sciences and renamed in 2015

3. Is the Department part of a School/Faculty of the university?

Yes (Part of School of Basic and Applied Sciences)

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

M.Sc.	Physics
M. Phil.	Physics (discontinued from 2015-16 session)
Ph. D.	Physics (started in 2015-16 session)

5. Interdisciplinary programmes and departments involved

Nil

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

Nil

7. Details of programmes discontinued, if any, with reasons

Nil.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

Semester and Choice Based Credit System

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

Interdisciplinary Courses taken by the Centre faculty (Offered by other Centres)

- Science for Humanities

Centre Involved

- Centre for Environmental Law

Interdisciplinary Courses offered by the Centre

- Humanity for Science Students
- Statistics and Computer Applications
- Concepts of Physics
- Physics in Everyday Life

Centres Involved

- Centre for Computational Sciences
- Centre for Computer Science and Technology
- Centre for Environmental Law
- Centre for Comparative Literature
- Centre for South and Central Asian
- Centre for Development Economics

Dr. Amarpreet Kaur taught the following courses in the other centers in 2013-2014 Batch

- BSS.502 Bio-Statistics in Centre for Biosciences
- BSS.602 Bio-Statistics in Centre for Biosciences
- EVST.502 Bio-Statistics in Centre for Environmental Sciences
- EVST.602 Bio-Statistics in Centre for Environmental Sciences

Dr. Amarpreet Kaur taught the following courses in the other centres in 2014-2015 Batch

- BSS.502 Bio-Statistics in Centre for Biosciences
- BSS.602 Bio-Statistics in Centre for Biosciences
- EVST.502 Bio-Statistics in Centre for Environmental Sciences
- EVST.602 Bio-Statistics in Centre for Environmental Sciences
- CPS.502 Bio-Statistics in Centre for Pharmaceutical Sciences
- MGE.502 Bio-Statistics in Centre for Molecular Genetics
- HGS.502 Bio-Statistics in Centre for Human Genetics
- GDM.502 Bio-Statistics in Centre for Genetics Disease and Molecular Medicine

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professors	2	0	0
Assistant Professors	4	3	3

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. Achchhe Lal Sharma	Ph.D.	Assistant Professor	Experimental condensed matter physics: Li-ion batteries and supercapacitors	Four Years	Nil
Dr. Kamlesh	Ph.D.	Assistant Professor	Experimental condensed matter	Two Years	-do-

Yadav			physics: nanomaterials and thin films		
Dr. Jai Prakash	Ph.D.	Assistant Professor	Experimental condensed matter physics:liquid crystals physics and nonlinear optics	Four Years	-do-
Dr. Ashok Kumar	Ph.D.	Assistant Professor	Computational materials science: modelling of materials	One Year	-do-

12. List of Senior Visiting Fellows, Adjunct faculty, Emeritus professors

Nil

13. Percentage of classes taken by temporary faculty

Nil

14. Programme-wise Student Teacher Ratio

Batch	Programme	Student Teacher Ratio
2013-2014 Batch	M.Sc. Physics (Spl in Nanophysics)	4:1
	M.Phil. Physics	4:1
2014-2015 Batch	M.Sc. Physics (Spl in Nanophysics)	8:1
	M.Phil. Physics	8:1
2015-16 Batch	M.Sc. Physics	7:1
2015-16 Batch	Ph. D. Physics	0.3 :1

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

After the approval of Cadre Recruitment Rule

16. Research thrust areas as recognized by major funding agencies

- Experimental condensed matter physics (Lithium ion batteries, supercapacitors)
- Experimental condensed matter physics (Magnetic memory devices)

- Experimental condensed matter physics (Liquid crystals and biosensors)

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

Title of the Project	Principle Investigation/ Co-investigation	Year		Funding Agency	Amount Sanctioned (In Lacs)
		From	To		
Ionic Conduction and Stability Improvement in Polymer Clay Nanocomposites for Device Applications	Dr. A. L. Sharma	2015	2017	UGC	6 Lacs
Synthesis and Study of Structural, Magnetic, Dielectric and Transport Properties of Doped Nanodimensional BiMnO ₃ Perovskite Manganites	Dr. Kamlesh Yadav	2015	2017	UGC	6 Lacs
Dielectric and electro-optical studies of metal oxide nanoparticles doped ferroelectric liquid crystal and their applications	Dr. Jai Prakash	2015	2017	UGC	6 Lacs
Exploration of electro-optical properties of nano-materials doped ferroelectric liquid crystals and their applications	Dr. Jai Prakash	2012	2017	DST	35 Lacs
Preparation, characterization and evaluation of free standing polymeric films for energy storage/conversion device application	Dr. A. L. Sharma	2014	2016	CUPB	3 Lacs
Thin Film Deposition of Magnetic Oxides using Spray Pyrolysis Technique and their Characterization	Dr. Kamlesh Yadav	2014	2016	CUPB	3 Lacs

18. Inter-institutional collaborative projects and associated grants received**a) National collaboration**

Nil

b) International collaboration

Nil

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

Nil

20. Research facility / centre with

- Microwave synthesis: Monowave equipment
- Network Analyzer
- Potentiostat/Galvanostat
- Spray pyrolysis set up
- High temperature furnace
- Vacuum oven

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

Nil

22. Publications**Table: Description of the research/academic outcome**

Sr. No.	Description	Number/ Score
1	No. of papers published in peer reviewed journals(national/international):	66
2	Monographs	Nil
3	Chapters in books:	1
4	Edited books:	Nil
5	Books with ISBN with details of publishers:	Nil
6	Citation Index– range/average:	(0-124)/15.61
8	SNIP:	Dr. ALS - 6.495 Dr. JP - 32.61 Dr. KY - 9.393 Dr. AK - 19.637

9	SJR:	Dr. ALS - 4.076 Dr. JP - 35.507 Dr. KY - 6.297 Dr. AK - 16.935
10	Impact Factor– range/index:	(0.44-7.73)/147.39
11	<i>h</i> - Index	18

Table: Faculty-wise Publication Summary

S. No.	Name of Faculty	No. of Publications	h-Index	Citations	Impact Factor Range/Average
1.	Dr. A L Sharma	06	3	33	(1.13-2.04)/ 1.723
2.	Dr. Jai Prakash	30	13	652	(0.44-7.73)/2.56
3.	Dr. Kamlesh Yadav	10	3	24	(0.402-2.239)/ 1.438
4.	Dr. Ashok Kumar	20	11	337	(1.3-4.5)/ 2.30
Total		66	30	1046	

23. Details of patents and income generated

02 (01 International and 01 National)

24. Areas of consultancy and income generated

Nil

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

Nil

26. Faculty serving in (a) National committees (b) International committees (c) Editorial Boards (d) Any others***Dr. Jai Prakash***

- Reviewer of Physical Review Journals and Macromolecule Symposia
- Reviewer of Phase Transition

Dr. Ashok Kumar

Reviewer of Research Journals:

- Chemical Society Reviews (Royal Society of Chemistry)
- Nature Communications (Nature Publishing Group)
- Nanoscale (Royal Society of Chemistry)
- Journal of Physical Chemistry Letter (American Chemical Society)
- ACS Applied Materials and Interfaces (American Chemical Society)
- Journal of Materials Chemistry C (Royal Society of Chemistry)
- Journal of Chemical Physics (American Institute of Physics)
- Journal of Alloys and Compounds (Elsevier)
- Journal of Materials Science (Springer)

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

CUPB encourages teachers to participate in orientation programmes refresher courses, workshops, and seminars etc. By providing liberal travel support.

Orientation Programme:

- Special Winter School during 3-12 Dec 2014 at Academic Staff College, AMU Aligarh (Dr. Jai Prakash)
- Orientation course during 1-28 Jan 2015 at Academic Staff College, Lucknow, University of Lucknow (Dr. Achchhe Lal Sharma).
- Orientation Program during 12 Jan to 07 Feb 2015 at University of Rajasthan, Jaipur. (Dr. Kamlesh Yadav)

28. Student projects

- **Percentage of students who have done in-house projects including inter-departmental projects**

100%

- **Percentage of students doing projects in collaboration with other universities industry / institute**

Students working/doing characterizations at CSIR-National Physical Laboratory (NPL), University of Delhi (DU) Thapar University (TU) and National Institute of Technology (NIT) Kurukshetra etc.

29. Awards/recognitions received at the national and international level by Faculty, Doctoral/Post-doctoral fellows/students

- INSPIRE Faculty Award (Dr. Jai Prakash)
- Young Scientist Award Under Science and Engineering Research Board Fast Track Scheme; (Dr. Jai Prakash)
- United States Air Force Office of Scientific Research (USAFOSR) Postdoctoral Scholarship at San Francisco State University, USA; (Dr. Jai Prakash)
- Young Scientist Award by Punjab Academy of Sciences (Dr. Ashok Kumar)
- D. S. Kothari Post-Doctoral Fellowship (Dr. Ashok Kumar)
- Invited talk entitled “*Ultrathin Metallic Nanowires on Monolayer MoS₂*” in International Workshop on Materials Modelling and Simulations (IWMMS-2014), Budelkhand University Jhansi, M. P., India. (Dr. Ashok Kumar)
- Invited talk entitled “*MoS₂: A Promising Layered Material beyond Graphene*” in International Conference on Transport Properties in Low Dimensional Systems: Experiment and Simulation (TransLES 2014), DST Institute of Advanced study in Science and Technology (IASST), Guwahati, Assam, India. (Dr. Ashok Kumar)
- Best oral presentation award, Dewan Jawahar Lal Nayyer Memorial Prize, awarded for best presentation during 14th National Conference on Liquid Crystals. (Dr. Jai Prakash)
- Best Research Paper award in Oral presentation at National Conference on Condensed Matter Physics and Applications-CMPA-2015, Manipal University, Manipal-576104; March 27-28, 2015 (Neha Bharadwaj, M.Phil. Students)
- Best Research Paper award in Poster presentation at National Conference on Condensed Matter Physics and Applications-CMPA-2015, Manipal University, Manipal-576104; March 27-28, 2015 (Reena Rani, M.Phil. Students)

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

Nil

31. Code of ethics for research followed by the departments

The Centre follows code of ethics and polices as per CUPB guidelines.

32. Student profile programme-wise:

Batch	Name of Course/ Programme	Application received	Selected		Pass Percentage	
			Male	Female	Male	Female
2013- 2014 Batch	M. Sc. Physics (Spl in Nanophysics)	13	06	01	100	100
	M. Phil. Physics	34	07	03	100	100
2014- 2015 Batch	M. Sc. Physics (Spl in Nanophysics)	36	04	04	Ongoing Programme	Ongoing Programme
	M. Phil. Physics	32	05	05	Ongoing Programme	Ongoing Programme
2015- 2016 Batch	M. Sc. Physics	523	12	03	Ongoing Programme	Ongoing Programme

33. Diversity of students

Batch	Name of Course	% of students from the same university	% of students from other university within the State	% of students from university outside the State	% of students from other countries
2013- 2014 Batch	M. Sc. Physics (Spl in Nanophysics)	Nil	14	86	Nil
	M. Phil. Physics	Nil	33	67	Nil
2014- 2015 Batch	M. Sc. Physics (Spl in Nanophysics)	Nil	33	67	Nil
	M. Phil. Physics	Nil	30	70	Nil
2015- 2016 Batch	M. Sc. Physics	Nil	07	93	Nil

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

Course Name	CSIR-UGC NET, GATE	Name of Student
M.Sc. Physics (Spl in Nanophysics) (2013-2014 batch)	CSIR-UGC NET	Anil Arya
M.Phil. Physics (2013-2014 batch)	CSIR-UGC NET	Mohd. Sadiqi
M.Sc. Physics (Spl in Nanophysics) (2013-2014 batch)	GATE	Gaurav Kumar Yogesh
M.Sc. Physics (Spl in Nanophysics) (2013-2014 batch)	GATE	Anil Arya
M.Phil. Physics (2013-2014 batch)	GATE	Mohd. Sadiq

- 35. Student progression**

Nil

- 36. Diversity of staff**

Percentage of faculty who are graduates (Ph.D.)	100%
of the same university	Nil
from other universities within the State	Nil
from universities from other States	03
from universities outside the country	Nil

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

Nil

- 38. Present details of departmental infrastructural facilities with regard to**

- a) Library**

Central library books (Physics, Mathematics, Research Methodology and Nanotechnology): 657

- b) Internet facilities for staff and students**

Yes

c) Total number of class rooms

01

d) Class rooms with ICT facility

01

e) Students' laboratories

01 consisting of electronics, digital electronic, modern physics, solid state physics and nuclear physics experiments.

f) Research laboratories

01 consisting of thin film deposition, nanomaterial synthesis, material processing and liquid crystal related study.

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

a) From the host institution/university: 01

b) From other institutions/universities: Nil

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

All M.Phil. Enrolled students are getting financial assistance from the University @ 5,000 per month.

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

- The Centre for Physical Sciences started M. Sc. in Physics with specialization in Nanophysics and M. Phil. program in Physics. This specialized post-graduation program is aimed to develop the expertise giving students an opportunity to make career in the Nanophysics. The program has balanced choice based credit system with flexible seamless curricula which emphasize interdisciplinary nature of science in the 21st century and promote exploration, innovation and research.
- Needs of Learners: M. Sc. Physics and M.Phil Physics are in demand of learners in order to understand fundamental concept of the subject and to explore the job opportunities in the academic/industries.

- The curriculum is designed keeping in mind the syllabus of national level competitive examinations such as CSIR UGC NET, GATE, JEST, DRDO, BARC, TIFR etc.

42. Does the department obtain feedback from

- a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?**

Yes, such feedback is not only taken at centre level but also at university level.

- b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?**

Yes. Such feedback helps very much in identifying strength and weakness of staff members. On the basis of feedback the university identify best staff of the year.

- c. Alumni and employers on the programmes offered and how does the department utilize the feedback?**

Nil

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

CUPB is a new university and there are no alumni at this time.

44. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts

Special lectures	<p>Prof. A.P. Pathak, Centre of Physics, University of Hyderabad, delivered a lecture on “Ion Beam Studies of Nano Materials” on May 17, 2013.</p> <p>Prof. A.P. Pathak, Centre of Physics, University of Hyderabad, delivered a lecture on “Accelerator based materials science - I on 13.04.2015</p> <p>Prof. A.P. Pathak, Centre of Physics, University of Hyderabad, delivered a lecture on “Accelerator based materials science - II on 13.04.2015</p>
CPS Faculty Seminars	<p>Dr. Sharma A. L., Nanostructured Plastic Separator for Renewable Energy Applications, Centre for Physical and Mathematical Sciences on 05-Jul-2013.</p> <p>Dr. J., Prakash Effect of Nano-materials on the Electro-optical Properties of Ferroelectric Liquid Crystals and their Applications, Centre for Physical and Mathematical Sciences on 19-Jul-2013.</p>

Dr. Kamlesh Yadav, Magnetic Properties of Doped Perovskite Manganites, Centre for Physical and Mathematical Sciences on 04-April-2014.

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

- Delivery of lectures and teaching using ICT multimedia and green/white board.
- Group discussion
- Interactive method
- Surprise test/ quiz
- Seminar presentations by students
- Group activities
- Class Seminar
- Class Assignment

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

- Students are continuously assessed throughout semesters by giving assignments, term paper writing, surprise test and organizing quiz activities and at the end of semester their performance is evaluated by end semester examination.
- Objective of the programmes offered by Centre is to make students confident and capable.
- To fulfill this objective students are encouraged to participate in various educational and extracurricular activities.

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

Nil

48. Give details of “beyond syllabus scholarly activities” of the department

- News and information are displayed on information boards of the classroom and current issues are discussed in time to time.
- Students are encouraged to participate and present their work in seminar/conferences and workshop.

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

Nil

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

Our faculty involved in basic and applied research. We publish the latest developments of our research work in international journals of repute and present them in the national/international conferences/seminars. Faculties are actively working on materials processing and its applications, thin film, nano-materials and liquid crystals.

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

Strengths:

- Dedicated and disciplined faculty specialized in emerging research areas.
- Faculty involved on basic, applied and interdisciplinary areas of experimental research.
- University provides research seed money for newly recruited faculties (3 Lacs).
- Continuous reframing of syllabi in context with latest development in the subject.
- Participation of faculty/students in national and international conferences/seminars.

Weaknesses:

- Shortage of faculty.
- Insufficient number of class rooms and faculty for the growing strength of students.

Opportunities:

- We would like to strengthen centre by introducing new subjects and cutting edge research in basic and applied sciences.
- We have very good opportunity to do interdisciplinary research by contacting with other centers of the university.

Challenges:

- To attract good and motivated students and enhance their employment prospects.
- To set up relevant experimental facilities for high quality research.
- To develop more frontier areas of research of interdisciplinary nature.

52. Future plans of the department

The centre has procured some important equipment such as microwave synthesis: monowave, spray pyrolysis equipment for synthesizing variety of nano-materials like nanoparticles, nanotubes, quantum dots and thin films. The centre is also planning some more equipment such as, differential scanning calorimetry, impedance/network analyser, polarizing microscope, electrochemical work station etc.

10. Centre for Geography and Geology

1. Name of the Department:

Centre for Geography and Geology

2. Year of establishment:

2015 (The centre has come out of Centre for South and Central Asian Studies which was established in 2009)

3. Is the Department part of a School/Faculty of the University?:

Yes, School of Environmental and Earth Sciences

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):

M.A./ M.Sc.	Geography
M.Sc.	Earth and Geological Sciences
Ph.D. programme	Geography

5. Interdisciplinary programmes and departments involved:

M.Sc. Geography Programme is interdisciplinary. In second semester, students study papers offered by Centre for Environmental Science and Technology.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.:

Nil

7. Details of programmes discontinued, if any, with reasons:

Nil

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

- The centre follows Choice Based Credit System (prescribed by the UGC) and semester system.

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

M.A./M.Sc. Students of the Centre study interdisciplinary courses in two semesters offered by other centres. Also, the centre offers courses taken by students of other centres.

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

Positions	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professors	2	0	0
Assistant Professors	4	4	4

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

Sr. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of M.Phil./ Ph.D. students guided for the last 4years
1	Dr Kiran K. Singh	Ph.D (Geography)	Assistant Professor	Environmental degradation, land use dynamics, urban planning.	4 years 2months	8 M.Phil./ 05 Ph.D. (ongoing)
2.	Dr. Jitendra Kumar Pattanai k	Ph.D (Geology)	Assistant Professor	Application of cosmogenic radionuclides to understand the earth surface processes and exposure dating, continental weathering and CO2 consumption rate	7 Years	0
3.	Dr. L T Sasang Guite	Ph.D (Geography)	Assistant Professor	Social, population and developmental geography	2 years	0

4	Dr. Milan Sharma	Ph.D. (Geology)	Assistant Professor	Applied palaeontology, Remote sensing, Economic geology, Palaeobiogeography, Sedimentology, Stratigraphy, General geology, Geomorphology	4 years	0
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12. List of Senior Visiting Fellows, adjunct faculty, emeritus professors:

Nil

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

Nil

14. Programme-wise Student-Teacher Ratio:

For Academic year 2015-16

M.A. Geography	:	4:1
M.Sc. Geography	:	4:1
M.Sc. Earth and Geological Sciences	:	2:1

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

As and when CRR is approved the positions will be filled.

16. Research thrust areas as recognised by major funding agencies:

- Chemical weathering
- Geochemistry
- Urban environment
- Urban planning.

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

S.No.	Title of the Project	Principle Investigation/Co-investigation	Year		Funding Agency	Amount Sanctioned (In INR Lacs)
			From	to		
1.	Assessment of urban environment quality of Bathinda: A socio-geographical perspective	Dr Kiran K Singh	2013	2015	Indian Council of Social Science Research	4.0
2.	Mobilization and redistribution of elements during different stages of chemical weathering of Rajmahal Basalt in Pakur district of Jharkhand”	Dr Jitendra K. Pattanaik	2015	2018	Department of Science and Technology	47.76

- 18. Inter-institutional collaborative projects and associated grants received:**

Nil

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

Total grants received: 51.76 lacs.

- 20. Research facility/centre with**

- **state recognition**
- **national recognition**
- **international recognition**

The Centre is established in 2015

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

Nil

22. Publications:

S.No.	Items	Total Numbers			
		Dr. Kiran K Singh	Dr. Jitendra K Pattannai k	Dr. LT Sasang Guite	Dr. K Milan K Sharma
1.	Number of paper published in peer review journals (2009-2015)	8	8	3	9
2.	Number of paper published in Conferences/ workshops / symposium/ meeting	-	9	-	-
3.	Monographs	1	-	-	-
4.	Chapters in books	-	-	1	-
5.	Edited books	-	-	1	-
6.	Books with ISBN with details of publisher	VDM Verlag Publishing House Ltd, German y. ISBN-13: 978-3639305753	-	-	-
7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)	-	8	-	-
8.	Citation Index range/Average	-	27	-	5

9.	SNIP	-	8.41 (range 0.771 - 1.643)	-	-
10.	SJR	-	7.536 (range 0.293 - 2.284)	-	-
11.	Impact factor range/average	0.34	0.8-4.25	-	2.56
12.	<i>h</i> -index	-	3	-	2

23. Details of patents and income generated:

Nil

24. Areas of consultancy and income generated:

Nil

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

Nil

26. Faculty serving in

- a) **National committees:**
- b) **International committees:**
- c) **Editorial Boards:**
- d) **Any other (please specify):**

Dr. Jitendra K Pattnaik

- Life member of Indian Society for Mass Spectrometry (ISMAS), Mumbai.
- Annual member of European Association of Geo Chemistry.
- Reviewer of Applied Geochemistry, Elsevier Journal.
- Reviewer of Himalayan Geology Journal.
- Reviewer of Iberian Geology journal.

Dr. LT Sasang Guite

- Life member of North East Indian Council for Social Science Research (NEICSSR), Shillong.
- Life member of Geographical Society of North-Eastern Hill

Region (GSNEHR), Shillong.

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

- Dr Kiran K. Singh attended special training programme on “Geospatial Technologies for Urban and Regional Planning” organised by Indian Institute of Remote Sensing, ISRO, Dehradun during 15-26 December 2014.
- Dr Kiran K. Singh attended Orientation Programme at UGC-HRD Centre, Banaras Hindu University from 3rd June to 30th June 2015.

28. Student projects

- **Percentage of students who have done in-house projects including inter-departmental projects (Only Percentage):**

The Centre has started PG courses from 2015-16 academic sessions.

- **Percentage of students doing projects in collaboration with other universities, industry/institute (Only Percentage):**

Nil

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

- **Faculty**

Sr. No.	Name of faculty/ Fellows/Students with designation in centre	Name of the award	Awarding authority	Year and other details
1	Dr Kiran K Singh	Recognition of 'Academic Excellence.'	Jawaharlal Nehru Memorial Funds, Teen Murti House, New Delhi	2004
		BHU Medal	Banaras Hindu University	2002
		BHU Prize	Banaras Hindu University	2000
		Sri Ram Sundar Singh Memorial Prize	Banaras Hindu University	2000

• **Doctoral / post-doctoral fellows**

S. No.	Name of faculty/ Fellows/ Students with designation in centre	Name of the award	Awarding authority	Year and other details
1.	Dr. Jitendra Kumar Pattanaik	DS Kothari Post-Doctoral Fellowship	UGC	2010

• **Students:**

Nil

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

Nil

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

- The centre follows the code of ethics of the university.

32. Student profile programme-wise:

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female		
M.A./M.Sc Geography	90	10	4	-	-
M.Sc. Earth and Geological Sciences	78	5	0		
Ph.D. Geography	24	3	0	-	-

33. Diversity of Students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.A./M.Sc. Geography	-	7%	93%	-

M.Sc. Earth and Geological Sciences	-	-	100%	-
Ph.D. in Geography	-	100%	-	-

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

S. No.	Name of Students	Qualifying Exam
1.	Amanpreet Singh	JRF-UGC
2.	Varinder	JRF-UGC
3.	Amandeep Kaur	UGC-NET
4.	Moh. Hussain Naik	UGC-NET
5.	Gaurav Kumar	UGC-NET
6.	Amritpal Singh	UGC-NET

35. Student progression:

Nil

36. Diversity of staff

Percentage of faculty who are graduate from the same University	Nil
From other universities within the State	25%
From Universities from other States	75%
From Universities outside the country	NIL

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

- Dr. LT Sasang Guite has been awarded Ph.D. in 2015.

38. Present details of departmental infrastructural facilities with regard to:

- Library: Many books are available in University Library. Purchase of more books for geology is under process.
- Internet facilities for staff and students: Every faculty and students has internet facility. Faculty members have desktop with internet and students have access to internet enabled computers in computer centre of the university.
- Total number of class rooms: 1

d) Class rooms with ICT facility: 1

e) Students' laboratories: Nil

f) Research laboratories: 1

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

a) From the host institution/university:

S. No.	Name of Doctoral Students
1.	Maninderjit Singh
2.	Rajbir Singh
3.	Amandeep Kaur
4.	Moh. Hussain Naik
5.	Gaurav Kumar
6.	Amritpal Singh
7.	Amanpreet Singh
8.	Varinder

b) From other institutions/universities:

Nil

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

Ph.D. level : 4

M.Phil. level : 3*

(*M.Phil. students are registered in Centre for South and Central Asian Studies and being supervised by faculty from this Centre)

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

Yes.

- Need of society
- Need of learner: the programmes are designed in such a way that students can have job opportunities after completing their programme. Recent advancement in geography and geology are offering lot of scope to the students in private as well as public sectors.
- Syllabi of the programmes aligns with national level tests conducted by UGC and CSIR.
- Such needs are assessed by discussion with experts of these fields and

through feedback of the students.

42. Does the department obtain feedback from

- a. Faculty on curriculum as well as teaching-learning-evaluation?
If yes, how does the department utilize the feedback?**

All the faculty members interact with each other and obtain their feedback. Such feedback is utilised during revision of syllabus and preparation of new courses. The feedback on curriculum and teaching-learning- evaluation method are discussed with Dean of School, DAA and also in Board of Studies meetings.

- b. Students on staff, curriculum and teaching-learning-evaluation
and how does the department utilize the feedback?**

Such feedback is taken at university level and not at centre level.

- c. Alumni and employers on the programmes offered and how
does the department utilize the feedback?**

No

43. List the distinguished alumni of the department (maximum 10):

Centre for Geography and Geology is a newly established centre.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Nil

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

- Delivery of lectures and teaching using ICT multimedia and green/ white board, use of 3D models, animations.
- Group discussion
- Interactive method
- Surprise test/ quiz
- Seminar presentations by students

- Assignments
- Mini projects
- In M.A./M.Sc. Geography and M.Sc. Geology programmes field work is part of the curriculum. In M.A./M.Sc. Geography students will carry out socio-economic survey in nearby areas and will also go for geographical field trip. In Geology the students will go to the field and study rock types and their properties.

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

- The Centre aims to develop expertise in cartography, application of GIS and Remote Sensing, urban planning, Geochemistry, Paleontology and Earth Surface Processes. Programme objectives can be monitored through performances of students in their specialised fields.
- Learning outcome is specifically monitored through continuous assessment in the form of quiz, discussion, surprise test, assignment and seminar. This is done in addition to the examination system.
- Feedbacks are taken from student about their learning.

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

- Dr Kiran K. Singh delivered an invited lecture on Research Methodology programme at Guru Nanak College for Girls Sri Muktsar Sahib on 25th March 2015.

48. Give details of “beyond syllabus scholarly activities” of the department:

The Centre is planning to start Geographical Research Forum.

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

Not yet

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

New centre.

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

Strength

- Provides platform for interdisciplinary research.
- Well qualified and devoted faculty with sound expertise in their areas.
- Updated and comprehensive curriculum to cater with needs of the society.
- Faculty equipped with latest teaching technology.

Weaknesses

- Shortage of senior faculty members.
- Inadequate space for teaching as well as research.
- Lack of a building and infrastructure facility.
- Lack of books and journals in specific areas.

Opportunities

- Faculty and student exchange programmes.
- Consultancy projects
- Collaboration with local governance department as well as international level institutions.
- Institution and industrial linkages.
- Learning ambience

Challenges

- To link research output with policy measures.
- To attract aspired and motivated students.
- To set up relevant facilities for high quality research

52. Future plans of the department.

- Geographical Research Forum will be started by the Centre.
- Collaboration will be done with similar kind of centre of other universities and organizations.
- Remote Sensing and GIS lab will be setup.
- Geology lab will be set up.
- Seminars will be organized.
- To be engaged in outreach programme
- To get involved in e governance of local community.
-
- To constitute research ethical committees.

11. Centre for Mathematics and Statistics

1. Name of the Department

Centre for Mathematics and Statistics

2. Year of establishment

2013 as Centre for Physical and Mathematical Sciences; reorganized in 2015

3. Is the Department part of a School/Faculty of the university?

Yes (School of Basic and Applied Sciences)

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

M. Sc.	Mathematics
M. Sc.	Statistics
Ph.D.	Mathematics
Ph.D.	Statistics.

5. Interdisciplinary programmes and departments involved

Nil

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

The Centre of Mathematics and Statistics is a newly established centre came in existence in 2015.

7. Details of programmes discontinued, if any, with reasons

Nil

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

The University has adopted Choice Based Credit System (CBCS) and it has been implemented in the centre from academic session 2015-16.

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

Courses taught by the centre's faculty in the other centers in 2013-2014 and 2014-15.

- BSS.502 Bio-Statistics in Centre for Biosciences
- BSS.602 Bio-Statistics in Centre for Biosciences
- EVST.502 Bio-Statistics in Centre for Environmental Sciences
- EVST.602 Bio-Statistics in Centre for Environmental Sciences

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professors	2	0	0
Asst. Professors	4	3	3

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for the last 4 years
Dr. Sachin Kumar	Ph.D.	Assistant Professor	Symmetries and Exact Solutions of Nonlinear Partial Differential Equations	4	Nil
Dr. Anoop Kumar	Ph.D.	Assistant Professor	First order hyperbolic	1	Nil

			system of nonlinear partial differential equations.		
Dr. Harmanpreet Singh Kapoor	Ph.D.	Assistant Professor	Some Applications of Statistics in Actuarial Science	1	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Newly established centre came in existence in 2015.

13. Percentage of classes taken by temporary faculty

Nil

14. Programme-wise Student Teacher Ratio

S.No	Programme	Year		No of students	Faculty	Student Teacher Ratio
		From	To			
1.	M.Sc Mathematics	2015	2017	14	2	7:1
2.	M.Sc Statistics	2015	2017	13	1	7:1
3.	Ph.D Mathematics	2015	2018	1	1	1:4

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

Nil

16. Research thrust areas as recognized by major funding agencies

Nil

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

Nil

18. Inter-institutional collaborative projects and associated grants received

a) National collaboration

Nil

b) International collaboration

Nil

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

Nil

20. Research facility / centre with state recognition, national recognition, international recognition.

The centre is new and developing

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

Nil

22. Publications

S.No.	Items	Total Numbers		
		Dr. Sachin Kumar	Dr. Anoop Kumar	Dr. Harmanpreet Singh Kapoor
1.	Number of paper published in peer review journals (2009-2015)	23	7	3
2.	Number of paper published in Conferences/workshops / symposium/meeting	2	1	-
3.	Monographs	-	-	-

4.	Chapters in books	-	-	-
5.	Edited books	-	-	-
6.	Books with ISBN with details of publisher	-	-	-
7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)	-	-	-
8.	Citation Index/Average	172	23	-
9.	SNIP	-	-	-
10.	SJR	-	-	-
11.	Impact factor range	.367 2.849	-	-
12.	<i>h</i> -index	7	-	-

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

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

Nil

26. Faculty serving in (a) National committees (b) International committees (c) Editorial Boards (d) Any others

Dr. Sachin Kumar

Reviewer of following International Journals

- Nonlinear Dynamics
- Maejo International Journal of Science and Technology
- Optoelectronics and Advanced Materials – Rapid Communications and many other international reputed journals

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

Faculty of the centre attended the following:

Sachin Kumar, Workshop on Parallel Computing using HPCC at Panjab University, Chandigarh on March 21-22, 2013.

Sachin Kumar, Teacher's Enrichment Workshop Finite Group Theory (2014) at Punjabi University, Patiala on May 27-June 2, 2014.

Sachin Kumar. Instructional School for Lecturers in Differential Equations and Computations, sponsored by National Board for Higher Mathematics (NBHM) at Jaypee University of Information Technology, Solan on June 04-16, 2012

Sachin Kumar. Faculty Development Program sponsored by Punjab Technical University Jalandhar at Rayat Group of Institutes, Ropar (Punjab).

Sachin Kumar. Instructional School for Lecturers in Numerical Analysis (2014), Sponsored by National Board for Higher Mathematics (NBHM) and TIFR at Panjab University Chandigarh on June 9 – 28, 2014

Sachin Kumar Workshop on Parallel Computing using HPCC **Student projects**

Anoop Kumar National Board of higher Mathematics ATM Workshop on PDE and Mechanics, Jaypee University of Information Technology, Wanknaghat, (Himachal Pradesh) 03-15 June, 2013.

28. Awards/recognitions received at the national and international level by Faculty, Doctoral/Post-doctoral fellows/students

Dr. Sachin Kumar

UGC Dr. D.S. Kothari Post-Doctoral Fellowship Award

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

Nil

30. Code of ethics for research followed by the departments

- The centre follows code of ethics and polices as per CUPB guidelines.
- The university also obtains consent forms regarding the open access of the thesis (full or partial) from the student through supervisor during the submission of the hard bound copy of the thesis.

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

Nil

32. Student profile programme-wise:

The first batch of students has joined the programme in the academic year 2015-2016.

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Sc Mathematics	461	12	2		
M.Sc Statistics	158	7	6		
Ph.D.	20	1	-		

33. Diversity of students

Name of the Programme	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Sc Mathematics-	Nil	21.4	78.6	-
M.Sc Statistics	Nil	61.5	38.5	-
Ph.D. Mathematics	Nil	-	100	

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

Nil (centre is new)

35. Student progression

Nil (centre is new)

36. Diversity of staff

Percentage of faculty who are graduates (Ph.D.)	
of the same university	Nil
from other universities within the State	67%
from universities from other States	33%
from universities outside the country	Nil

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

Nil

38. Present details of departmental infrastructural facilities with regard to**a) Library**

This facility is available from the Main Library
Central library Books (Mathematics, Statistics and Research Methodology): About 400 Books

b) Internet facilities for staff and students

Yes

c) Students' laboratories:

01 Computer lab consisting of software like Turbo C/C++

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

a) from the host institution/university: Nil

b) from other institutions/universities: Nil

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

Nil

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

- Yes, the need assessment included the need to meet CUPB vision and mission as also needs of learners and society.
Needs of learners: programmes of the centre help learners to understand the fundamental concept of the subjects and provide them the opportunity of jobs in academics/ industries.
- Curriculum is designed keeping in mind the syllabus of national level competitive examinations such as CSIR UGC NET, GATE, JEST, DRDO, BARC etc.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, such feedback is not only taken at centre level but also at university level as a general practices.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes. Such feedback helps very much in identifying strength and weakness of staff members.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

New centre

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

CUPB is a new university and there are no alumni at this time.

44. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts

Centre is new. But we are planning to conduct special lectures or seminars from different areas of Mathematics and Statistics in coming sessions.

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

- Delivery of lectures and teaching using ICT multimedia and green/

white board.

- Group discussion
- Interactive method
- Seminar presentations by students
- Group activities
- Class Seminar
- Class Assignment

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

- Students will be continuously assessed throughout semesters by giving assignments, term paper writing, surprise test and organizing quiz activities and at the end of semester their performance is evaluated by end semester examination.
- Objective of the programmes offered by centre is to make students confident and capable.
- To fulfil these objective students will be encouraged to participate in various educational and extracurricular activities.

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

New centre

48. Give details of “beyond syllabus scholarly activities” of the department

- News and information will be displayed on information boards of the classroom and current issues will be discussed in time to time.
- Students will be encouraged to participate and present their work in seminar/conferences and workshop.

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

The department has no specialized regulatory body.

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

The faculty involved in basic and applied research. The latest developments in research work are published in international journals of repute and presented in the national/international conferences/seminars.

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

Strengths:

- Faculty is dedicated and disciplined
- Faculty specialized in emerging research areas.
- Faculty involved on basic, applied and interdisciplinary areas of research.

Weaknesses:

- Shortage of faculty at Associate Professor and Professor level.
- Insufficient number of class rooms and faculty for the growing strength of students.
- Lack of a building and infrastructure facility.

Opportunities:

- Opportunities of introducing new subjects and cutting edge research in basic and applied sciences.
- Opportunity to do interdisciplinary research by contacting with other centers of the university.

Challenges:

- To attract good and motivated students.
- To set up relevant facilities for high quality research.
- To develop more frontier areas of research of interdisciplinary nature.

52. Future plans of the department

To establish research labs and provide study material of good quality to students. Centre will procure software like MATLAB, MATHEMATICA, MAPLE etc. for quality research.

12. Centre for Comparative Literature

1. Name of the Department:

Centre for Comparative Literature

2. Year of establishment:

2009

3. Is the Department part of a School/ Faculty of the University:

Yes, School of Languages, Literature and Culture

4. Names of Programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters Integrated Ph.D., D.Sc. D.Lit. etc.):

M.Phil.	Comparative Literature
M.A.	English (Comparative Literature and Translation)
M.Phil.-Ph.D. Integrated	Comparative Literature

5. Interdisciplinary Courses and Departments involved:

- Comparative Literature in itself is an interdisciplinary programme covering literature from different languages and regions.
- In both M.Phil. and M.A. programmes, faculty from Centre for Classical and Modern Languages is involved.

6. Courses in collaboration with other Universities, industries, foreign institutions, etc.:

Nil

7. Details of programmes/ courses discontinued, if any, with reasons:

- M.Phil.-Ph.D. Integrated Programme in Comparative Literature was restructured and divided into two separate phases of M.Phil. and Ph.D. because university has introduced stand-alone Ph.D. programme.
- M.A. in Comparative Literature was redesigned and renamed as M.A. English (Comparative Literature and Translation) keeping in view the job prospects and requirements of the area.

- M.A. (Hons.) Punjabi and Comparative Literature was redesigned and renamed as M.A. Punjabi and is being offered by Centre for Classical and Modern Languages from 2015-16.

8. Examination System: Annual/Semester/Choice Based Credit System:

Semester and Choice Based Credit System as per UGC guidelines.

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

- Centre for Comparative Literature faculty is involved in teaching of following courses in Centre for Classical and Modern Languages:
 - PBL.501 Punjabi Sahit da Itahas (upto 1850)
 - PBL.502 Sahit Sidhant
 - PBL.503 Gurmat Sahit
 - PBL.504 Adhunik Punjabi Kaav
- Centre's faculty has also taught following courses in Centre for South and Central Asian Studies and Centre for Economic Studies.
 - SCA.601 Research Methodologies
 - DVE.601 Research Methodologies
- Faculty has participated in the Humanities for Science course offered for science students.
- Centre has also offered Academic and Technical Writing and Communication Skills development courses for students from other centres.

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

Post	Sanctioned	Filled	Actual (including CAS & MPS)
Professors	1	0	0
Associate Professors	2	0	0
Assistant Professors	4	3	3

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil. students guided for last 4 years
Dr. Zameerpal Kaur	Ph.D. (Punjabi) M. A. Punjabi, M. A. Sanskrit and M. A. Anthropological Linguistics and Punjabi Language	Assistant Professor	Literary theories, Ecocriticism	10 years	M.Phil. : 14 Ph.D. Ongoing: 02
Dr. Rajinder Kumar	Ph.D. (Hindi)	Assistant Professor	Anchalik Upanyas, Dalit and Gender studies, Culture Studies	4 years	M.Phil. : 11 Ph.D. Ongoing: 07
Dr. Amandeep Singh	Ph.D. (Punjabi) M. A. Punjabi and English	Assistant Professor	Diasporic Fiction, Ecocriticism	4.5 years	M.Phil. : 13 Ph.D. Ongoing: 04
Dr. Neetu Purohit	Ph.D. (English)	Research Associate	Narrative Techniques	6 years	Nil

12. List of Senior Visiting Fellows, Faculty, adjunct faculty, emeritus professors:

Prof. Awadhesh Kumar Sharma, Centre for English Language, Central University of Jharkhand

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

Nil

14. Programme-wise Student Teacher Ratio:

M.Phil. Comparative Literature: 5:1

M.A. English (Comparative Literature and Translation): 5:1

Average Centre student to Teacher ratio for the last five year: 5:1

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

Designation	Sanctioned	Filled	Actual
Research Associate	01	01	01

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

- Ecocriticism
- Bagri Dialect
- Cinema and Theatre

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

S.No.	Title of the Project	Principal Investigator/Co-Investigator	Year		Funding Agency	Amount Sanctioned (In rupees)
			From	To		
1.	Ecocriticism and Modern Punjabi Poetry	Dr. Zameerpal Kaur	2013	2015	UGC-Major Research Project	7.92 lacs
2.	Grammatical Structure of Bagri Dialect	Dr. Rajinder Kumar	2013	2015	UGC-Major Research Project	8.91 lacs
3.	Ecological Concerns in Contemporary Punjabi Fiction: Native and Diasporic Writing	Dr. Amandeep Singh	2014	2016	CUPB Research Seed Money	1.5 lacs

4.	Tracing Evolutionary Heritage of Indian Languages Using Computational Phylogenetics	Dr. Zameerpal Kaur (Co-PI)	2015	2017	ICSSR	7.0 lacs
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18. Inter-institutional collaborative projects and grants received.

Nil

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

Nil

20. Research facility/Centre with * State recognition; * national recognition; * international recognition:

Nil.

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

Nil

22. Publications:

S. No.	Item	Total Numbers				
		Dr. Zameerpal Kaur	Dr. Rajinder Kumar	Dr. Amandeep Singh	Dr. Neetu Purohit	Student Publications
1.	No. of papers published in journals	9	33	3	-	10
2.	Monographs	-	-	-	-	-
3.	Chapters in books	1	3	-	2	-
4.	Edited books	-	3	-	1	-
5.	Books with ISBN with details of publishers (including edited books)	3 (ISBN 81-302-0031-7) Punjabi University	3 (ISBN 978-93-5017-774-7) Unistar	-	1 (ISBN-978-9351131625) Unistar Publication	-

		ty	Publicati on			
6.	Number listed in International Database (For e.g. Web of Science,	-	-	-	-	-
7.	Citation Index–range/average	-	-	-	-	-
8.	SNIP	-	-	-	-	-
9.	SJR	-	-	-	-	-
10.	Impact Factor–range/index	-	-	-	-	-
11.	<i>h</i> -index	-	-	-	-	-

23. Details of patents and income generated:

Nil

24. Areas of consultancy and income generated:

Dr. Zameerpal Kaur : Appointed as the examiner responsible for "Punjabi A: Literature" for two years by the International Baccalaureate Organization (UK) Limited, Cardiff, UK.

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

Nil

26. Faculty serving in a) National Committees b) International Committees c) Editorial Boards d) Any other (please specify):

- Dr. Zameerpal Kaur, Incharge, Youth Affairs, AIU, New Delhi
- Dr. Rajinder Kumar Sen, Member Board of Studies in Hindi, Guru Kashi University, Talwandi Sabo.

27. Faculty recharging strategies:

- The faculty attends refresher and orientation programmes and participates in various national and international seminars for an active exchange of opinions and views.
- Orientation Programmes
 - **Dr. Zameerpal Kaur**, at North–Eastern Hill University, Shillong in June, 2014.
 - **Dr. Rajinder Kumar Sen**, at University of Rajasthan, Jaipur in

Jan-Feb 2015.

- **Dr. Amandeep Singh**, at Panjab University, Chandigarh in August 2015.
- Refresher Programmes
 - **Dr. Zameerpal Kaur**, at Panjab University, Chandigarh in June-July, 2015.
 - **Dr. Rajinder Kumar Sen**, at University of Rajasthan, Jaipur in June-July, 2015.
- Eminent speakers from renowned institutions are invited to deliver lectures and involve into a brainstorming session with the faculty and the students.
- Faculty of Centre for Comparative Literature keeps itself actively involved in the cultural and literary activities of the university which revitalizes their intellectual acumen.
- Newly recruited faculty is provided with Research Seed Money Grants to initiate research.

28. Student projects:

Percentage of students who have done in-house projects including inter-departmental projects:

100%

Percentage of students doing projects in collaboration with other Universities/ Industry /Institute:

Nil.

29. Awards / recognitions received at the national and international level by faculty, Doctoral, Post-doctoral fellow and students:

- Faculty:
Dr. Zameerpal Kaur, UGC Research Associateship (2004-2009) for Post-Doctoral Research
- Doctoral / post-doctoral fellows: Nil
- Students: Nil

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

Centre for Comparative Literature has organized a number of Literary Programmes on life and works of eminent writers, critics and scholars in which teachers and students from nearby institutions also participated:

- Literary programme in memory of renowned Punjabi playwright **Balwant Gargi**. Speakers: Sahitya Akademi Award winner Ajmer Singh Aulacs and thespian Tony Batish. April 23, 2013.
- Literary programme in memory of legendary Punjabi poet Shiv Kumar Batalvi, the youngest recipient of Sahitya Akademi Award. Speakers: Prof. Harbhajan Singh Bhatia, School of Punjabi Studies, Guru Nanak Dev University, Amritsar and Prof. Sukhdev Singh, Punjabi Department, Punjab University, Chandigarh. May 07, 2013.
- Literary programme in memory of the legendary Punjabi writer and thinker **Prof. Pritam Singh**. Speakers: Chancellor Prof. S.S. Johl, N. S. Ratan, Prof. Sukhdev Singh Sirsa, Prof. Harbhajan Singh Bhatia, Dr. Harshinder Kaur and Padam Bhushan Sh. Gurdial Singh. October 25, 2013.
- Literary programme in memory of legendary Punjabi playwright **Gursharan Singh**. Speakers: Dr. Swarajbir, eminent Punjabi playwright and Dr. Navsharan Kaur, daughter of Gursharan Singh and a key activist in promoting women’s causes. September 27, 2013.
- Literary programme in memory of eminent Sikh scholar and writer **Bhai Kahn Singh Nabha**. Speakers: Dr. Jagmail Singh Bhathuan, Prof. J.S. Grewal, Former Vice Chancellor, Guru Nanak Dev University, Amritsar and Major Adarsh Pal Singh, the grandson of Bhai Kahn Singh. November 25, 2013.
- Literary programme in memory of the legendary Punjabi poet **Avtar Singh Sandhu ‘Pash’** and performance of play ‘Khetan da putt’ based on life and writings of Pash by Rana Ranbir. September 9, 2014.

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

- Centre for Comparative Literature follows CUPB ethics regarding research.
- The centre recognizes the rights of researchers and gives them academic freedom while endeavoring to eliminate any unacceptable practices.

32. Student profile course-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass Percentage	
		Male	Female	Male	Female
M.Phil.-Ph.D. integrated Programme (2009-10)	21	2	2	50	100
M.Phil.-Ph.D. integrated Programme (2010-11)	31	1	7	100	71
M.Phil.-Ph.D. integrated Programme (2011-12)	35	1	9	0	100

M.Phil.-Ph.D integrated Programme (2012-13)	55	11	4	72	75
M.Phil.-Ph.D. integrated Programme (2013-14)	87	13	10	Programmes in progress	
M.Phil. Programme (2014-15)	96	8	16		
M.Phil. Programme (2015-16)	124	07	07		
M.A. English (Comparative Literature and Translation) (2015-16)	112	00	05		

33. Diversity of students

Name of the Programme	%of students from the same University	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
M.Phil.-Ph.D. integrated Programme (2009-10)	0	25	75	0
M.Phil.-Ph.D. integrated Programme (2010-11)	0	25	75	0
M.Phil.-Ph.D. integrated Programme (2011-12)	0	30	70	0
M.Phil.-Ph.D. integrated Programme (2012-13)	0	13	87	0
M.Phil.-Ph.D. integrated Programme (2013-14)	0	34	66	0
M.Phil. Programme (2014-15)	0	58	42	0
M.Phil. Programme (2015-16)	0	50	50	0
M.A. English (Comparative Literature and Translation) (2015-16)	0	60	40	0

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

- UGC-JRF: 01
- UGC-NET: 08

Details:

S.	Name of the Student	Batch	Year	Exam Qualified
1	Yeshpal	2009-10	2012	UGC-NET
2	Kamaljeet Kaur	2009-10	2011	UGC-NET
3	Barjinder Singh	2010-11	2012	UGC-JRF
4	Amandeep Kaur	2010-11	2014	UGC-NET
5	Chitra	2011-12	2012, 2013	UGC-NET
6	Disha	2011-12	2011	UGC-NET
7	Rajpal Kaur	2011-12	2012	UGC-NET
8	Vandana	2011-12	2012	UGC-NET
9	Pardeep Kaur	2011-12	2014	UGC-NET

35. Student Progression:

Student Progression	Percentage against enrolled
UG to PG	N.A
PG to M.Phil.	N.A.
M.Phil. to Ph.D.	49%
Ph.D. to Post-Doctoral	N.A.
Employed	
<input type="checkbox"/> Campus Selection	--
<input type="checkbox"/> Other than campus recruitment	14.28%
Entrepreneurs	--
The Centre for Comparative Literature was started in 2010. A good number of CPL M.Phil. -Ph.D. students have cleared NET examination and have also found positions in various educational institutions across the region. A few students have enrolled in other universities for Ph.D. programme.	

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	-
from other universities within the State	100%
from universities from other States	-
from universities outside the country	-

37. Number of faculty who were awarded Ph.D., D.Sc., and D.Lit. during the assessment period:

Nil

38. Present details of infrastructural facilities with regard to:

- a) **Library:** Library has about 4515 books related to different domains of languages, literature and culture. Library also subscribes to approx. 425 online and print journals.
- b) **Internet facilities for staff and students:** Every faculty has individual internet enabled desktop computer. Similarly, students have access to internet enabled computers in language lab and computer centre of the university.
- c) **Total Number of class rooms:** 01
- d) **Classrooms with ICTfacility:**01
- e) **Students' laboratories:** Language Lab having well equipped computers and software.
- f) **Research Laboratories:** Nil

39. List of Doctoral, Post-doctoral Students and Research Associates:**a) From the host institution/university: 19**

S.No.	Ph.D. Student	Registration No.
1.	Yeshpal	CUP/MPh-PhD/SLLC/CPL/ 2009-10/02
2.	Poonam Pahuja	CUP/MPh-PhD/SLLC/CPL/ 2009-10/04
3.	Tania Bansal	CUP/MPh-PhD/SLLC/ CPL/ 2010-11/04
4.	Manpreet Kaur	CUP/MPh-PhD/SLLC/ CPL/ 2010-11/03
5.	Shyamkiran Kaur	CUP/MPh-PhD/SLLC/ CPL/ 2010-11/02
6.	Barjinder Singh	CUP/MPh-PhD/SLLC/ CPL/ 2010-11/01
7.	Amandeep Kaur	CUP/MPh-PhD/SLLC/ CPL/ 2010-11/07
8.	Chitra	CUP/MPh-PhD/SLLC/ CPL/2011-12/01
9.	Sheenam	CUP/MPh-PhD/SLLC/ CPL/2011-12/06
10.	Pardeep Kaur	CUP/MPh-PhD/SLLC/ CPL/2011-12/07
11.	Priyanka Chandel	CUPB/MPh-PhD/SLLC/CPL/2012-13/02
12.	Sapinder Singh	CUPB/MPh-PhD/SLLC/CPL/2012-13/04
13.	Jagdish Singh	CUPB/MPh-PhD/SLLC/CPL/2012-13/06
14.	Jagmeet Singh	CUPB/MPh-PhD/SLLC/CPL/2012-13/07
15.	Devendra Kumar Gora	CUPB/MPh-PhD/SLLC/CPL/2012-13/08
16.	Showkat Ahmad Naik	CUPB/MPh-PhD/SLLC/CPL/2012-13/09
17.	Nancy	CUPB/MPh-PhD/SLLC/CPL/2012-13/11
18.	Sumeet	CUPB/MPh-PhD/SLLC/CPL/2012-13/14
19.	Rajandeep Kaur	CUPB/MPh-PhD/SLLC/CPL/2012-13/15

b) From other institutions/universities: 01

Dr. Neetu Purohit, Research Associate

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

Nil

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

- Keeping in view the mission of the university to offer a wide range of instructional and research facilities across integrated and cross-disciplinary studies, programme in Comparative Literature was envisioned.
- Inputs from subject experts were taken about current and future requirements of the area.
- Data about programmes already being offered across this region revealed prevalence of single language programmes and to bridge this gap, study in comparative perspective was initiated and programmes developed accordingly.

42. Does the department obtain feedback from:

A. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Faculty of the university and experts from other universities are invited regularly and meetings are held to discuss, review and revise the syllabi.

B. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Besides having elected student representatives who regularly interact with faculty, students' course evaluation feedbacks are assessed at the end of every semester so as to allow teachers to revise teaching material and devise new teaching strategies.

C. Alumni and employers on the programmes offered and how does the department utilize the feedback?

Regular meetings of the centre faculty are held to discuss feedback and programmes offered.

43. List the distinguished alumni of the department (maximum 10):

Nil

44. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts.

Centre for Comparative Literature regularly organizes special lectures and literary programmes to broaden the horizons of knowledge:

- **Lecture** on “Indian Knowledge Traditions” by Prof. Jagbir Singh, Ex-Head, Department of Punjabi, Delhi University. February 10, 2012.
- **Special lecture** on “Biography, Autobiography and Translation” by diplomat Sh. Bal Anand (IFS) on April 25, 2012.
- **Extension lecture** by Prof. Abdul Bismillah, well-known author and critic. June 28, 2013.
- **Special lecture** on “Remembering Ghadar Party Hero Kartar Singh Sarabha in Centenary Year”. Speaker: Dr. Chaman Lal, former professor, JNU, New Delhi. November 13, 2013.
- **Expert lectures** in history, economics, science and linguistics to celebrate International Mother Tongue Day. Speakers: Padam Shree S. Gurdial Singh, Prof. Prithipal Singh Kapur, Prof. Surjit Singh Dhillon, Prof. Ramesh Kuntal Megh, Prof. Gian Singh and Prof. Paramjit Singh Dhingra. February 21, 2014.
- **Special lecture** on “Reading Film” by Dr. Prabhjot Parmar, Centre for Indo Canadian Studies, University of the Fraser Valley, Abbotsford, Canada. May 27, 2014.

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

Besides regular lectures and tutorials, seminars are used in M.Phil. and Ph.D. programmes to encourage interactive student-presentations and discussions. Power point presentations are given by the faculty and the students on a given topic. Screening of films, documentaries, etc. are held for the students of CPL. Also, invited lectures are a feature of most programmes. Students are also given assignments and term-papers to improve writing skills and expression.

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

M.Phil. programmes in Comparative Literature intend to familiarize students with study of texts in comparative perspective and grounding in translation theory and practice. The programme also aims to familiarize students with

the history, genres, movements, trends and major authors/texts of Indian and world literature.

To ensure that programme objectives are constantly met, regular feedback is taken from the students. Regular departmental meetings are held, wherein the centre coordinator takes stock of all the activities of the centre related to the faculty and the students. Students are required to submit term papers and assignments at the end of the semester to determine the learning outcomes.

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

CPL faculty have been involved in various academic and administrative committees of the University, such as, cultural committee, Hindi Rajbhasha committee, anti-ragging committees, placement cell, library committee, examination cell, admission committee, debate and declamation committee, and warden duties. Apart from orientation/refresher course talks/ lectures, they are also actively involved in various capacities, as panelists and speaker etc., for programmes organized by students of the university as well as other universities/ institutions/ organizations.

Besides being members of Student Union, the CPL students have been actively involved in NSS and participate in a number of socio-cultural events organized in the university.

The centre also offers basic courses in different languages such as Punjabi and Urdu. The centre has a language laboratory which conducts Communication and Soft skills Development Classes for students of all the centres.

48. Give details of “beyond syllabus scholarly activities” of the department.

- **Screening** of art movie “Attu Khoji”. Speakers: Rajeev Sharma, Director, Tejinder Dheer, Producer, Samuel John, Lead Actor. November 25, 2011.
- A ‘**Kavi Darbar**’ and ‘**Malwai Lok Gayan**’. Poets: Dr. Surjit Patar, Sukhwinder Amrit, Jaswant Jafar, Gurbhajan Gill, Trilochan, Savi, Surinder preet Ghaniya, Jagwinder Jodha and Hardarshan Sohal. February 21, 2014.
- **Performance of play** about female condition by renowned Punjabi dramatist, Ajmer Singh Aulacs titled ‘Jhanna De Pani’. February 25, 2014.
- **Observed 83rd Martyrdom Day** of Bhagat Singh, Rajguru and Sukhdev with guest lecture by Prof. Chaman Lal, and a play ‘Butt Bol Paya’. March 25, 2014.

- The centre offers basic courses in different languages such as Punjabi and Urdu. The centre also offers Communication and Soft Skills Development Classes for students of all the Centres.

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

No

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

Being interdisciplinary in nature, Centre for Comparative Literature is gradually increasing its presence in the field of ecocritical study of literature. Study of environment and literature is comparatively new field in northern India and Centre faculty is trying to fill this gap by good quality publications and paper presentations.

51. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the Department:

Strengths:

- Well qualified faculty devoted to teaching and research in the traditional core areas as well as the newly emerging and challenging areas.
- The faculty belongs to the diverse areas of literature which provide much scope for interdisciplinary studies.
- Well-equipped language lab
- Rigorous admission system comprising of national level entrance examination.

Weaknesses:

- Lack of senior faculty
- Lack of awareness about the innovative courses in the region.
- Insufficient space for classrooms and staff
- Inadequate connectivity of the city with other major cities acts as a constraint in increasing visits of outside experts

Opportunities:

- National, International research
- Student exchange programmes
- Interdisciplinary research
- Research Grants

Challenges:

- To attract good quality and motivated learners
- To advertise the programmes at the local and national level
- Creating Job opportunities for interdisciplinary programmes
- To create awareness about new programs

52. Future Plans of the department:

- Centre for Comparative Literature intends to start a job oriented course such as translation to address the need for skilled translators.
- The Centre also plans to organize a series of lectures / seminars related with role and relevance of comparative literature in the contemporary world.

13. Centre for Classical and Modern Languages

1. Name of the Department :

Centre for Classical and Modern Languages

2. Year of establishment :

2013 as Centre for Punjabi Language, Literature and Culture in 2013; restructured as Classical and Modern Languages in 2015.

3. Is the Department part of a School/Faculty of the university?

Yes, the Centre is a part of School of Languages, Literature and Culture.

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.) :

Centre for Classical and Modern Languages offers one PG level teaching programme and one research programme as below:

M. A.	Punjabi
Ph. D.	Punjabi Language, Literature and Culture

5. Interdisciplinary programmes and departments involved :

Nil

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

Nil

7. Details of programmes discontinued, if any, with reasons :

No programme has been discontinued. M.A. (Hons.) Punjabi and Comparative Literature, which was earlier running in Centre for Comparative Literature, is now offered by Centre for Classical and Modern Languages as M.A. Punjabi.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

As per UGC guidelines, CUPB follows semester and Choice Based Credit System.

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

The faculty of Centre for Classical and Modern Languages is involved in teaching courses at M.A. and M.Phil. level offered by Centre for Comparative Literature.

Dr. Alpna Saini and Dr. Ramanpreet Kaur taught the following courses in the academic session 2013-2014 and 2014-2015:

Course Code	Course Title
• PCL.503	<i>Gurmat Sahit</i>
• PCL.508	<i>Sahit Sidant-II</i>
• PCL.510	<i>Punjabi Bhasha te Bhasha Vigyan</i>
• PCL.512	<i>Sabhyachar ate Punjabi Sabhyachar</i>
• CPL.608	World Literary Classics
• PCL.514	<i>Punjabi Sahit Alochna Da Itihaas-II</i>
• PCL.516	<i>Aadunak Punjabi Vartak</i>
• PCL.521	<i>Aadunak Punjabi Kav</i>
• PCL.523	<i>Punjabi Galap: Sidant te Vihaar</i>
• PCL.524	<i>Punjabi Kahani: Sidant te Vihaar</i>
• CPL. 601	Research Methodology
• CPL.606	Area Studies

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

Position	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	01	Nil	Nil
Associate Professors	02	01	01
Asst. Professors	04	02	02

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

Name	Qualification	Designation	Specialization	No of Year of Experience	No. of Ph.D. /M.Phil. students guided
Dr. Alpna Saini	Ph.D. (English) UGC-NET	Associate Professor	Indian Drama, Film studies, Subjectivity	12 years	Awarded : 5 Ongoing: 6
Dr. Ramanpreet Kaur	Ph.D. (Punjabi), M.A. (Punjabi), M.Phil. (Punjabi),	Assistant Professor	Grammatical and textual studies, Literary theory, Punjabi criticism, Indian linguistic and philosophical tradition	07 years	Nil
Dr. Dinesh Babu P.	Ph.D. (English) M.A., M.Phil.	Assistant Professor	19 th Century american literature, 19 th century african american literature, 20 th Century american literature and 20 th Century african american literature	02 years	Nil

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors :

Nil

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

Nil

14. Programme-wise Student Teacher Ratio :

M.A. Punjabi (2015-16): 3:1

Ph.D. Punjabi (2015-16): 1:1

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

The positions will be filled when CRR is approved.

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

- Cinema and theatre
- Comparative study of grammatical markers
- American literature

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

Sr. No.	Title of the Project	Principal Investigator/Co-Investigator	Year		Funding Agency	Amount Sanctioned (In rupees)
			From	To		
1.	Taboo issues in Contemporary Indian cinema and theatre and their treatment with special focus on the theories of subjectivity	Dr. Alpna Saini	2013	2014	UGC-Minor Research Project	1.25 lacs
2.	A comparative study of formal and semantic structure of <i>Japuji Sahib</i> and <i>Jaap Sahib</i> in Indo-Aryan perspective	Dr. Ramanpreet Kaur	2014	2016	CUPB	1.50 lacs

18. Inter-institutional collaborative projects and associated grants received :

Nil

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

Nil

20. Research facility / centre with state recognition /national recognition /international recognition :

Nil

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

Nil

22. Publications:

S.No.	Items	Dr. Alpna Saini	Dr. Ramanpreet Kaur	Dr. Dinesh Babu P.
1.	Number of paper published in peer review journals	18	17	6
2.	Number of paper published in Conferences/workshops/symposium/meeting	-	09	-
3.	Monographs	-	-	-
4.	Chapters in books	04	11	-
5.	Edited books	01	01	-
6.	Books with ISBN with details of publisher	02	02	-
7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)	-	-	-
8.	Citation Index/Average	-	-	-
9.	SNIP	-	-	-
10.	SJR	-	-	-
11.	Impact factor range	-	-	-
12.	H-index	-	-	-

23. Details of patents and income generated:

Nil

24. Areas of consultancy and income generated :

Nil

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

Nil

26. Faculty serving in (a) National committees (b) International committees (c) Editorial Boards (d) Any other (please specify):

Nil

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

The faculty attends refresher and orientation programmes and participates in national and international seminars/conferences for an active exchange of opinions and views. Along with it they actively concerned about the latest information and knowledge of Punjabi (Language, Literature, Folklore and Cultural) and English literature and studies of both these disciplines.

Dr. Alpna Saini attended a refresher course in languages at Punjabi University Patiala from 17/11/14 to 6/12/14.

28. Student projects

Percentage of students who have done in-house projects including inter-departmental projects:

40%

Percentage of students doing projects in collaboration with other universities industry / institute:

Nil

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

- **Faculty :**

S. No.	Name of faculty/fellows/students with designation in centre	Name of the award	Awarding Authority	Year and other details
1.	Dr. Ramanpreet Kaur	Role of Honour	Harkrishan Educational Society, Chandigarh	April 24, 2011
2.	Dr. Ramanpreet Kaur	Post-Doctoral Fellowship for Women Candidates	UGC, Delhi	Awarded on Jan. 23, 2012 (for five years) Worked as PDF. from Feb. 21, 2012 to Sep. 19, 2013

- **Doctoral / post-doctoral fellows:** Nil
- **Students:** Nil.

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

Centre for Classical and Modern Languages (Punjabi Language, Literature and Culture; English), which was earlier working as Centre for Punjabi Language, Literature and Culture organized a seminar/programme entitled "Punjab Day Celebration" on November 1, 2013 funded by CUPB. The details of this programme /seminar are given in the following table:

Expert/Speaker	Designation	Topic
Prof. Prithipal Singh Kapur	Former Pro-Vice Chancellor, Guru Nanak Dev University, Amritsar,	Construction of modern Punjab.
Prof. M. S. Kang	Former Vice Chancellor, Punjab Agricultural University, Ludhiana	Importance of technology in agriculture
Prof. Ranjit Singh Ghuman	Centre for Research in Rural and Industrial Development	Economic situation of Punjab
Dr. Satnam Singh Ladhar	Joint Director (Environment), Punjab State Council for Science and Technology	Natural sources of Punjab

- Centre organised the “International Mother Tongue Day” on February 21, 2014 in collaboration with Centre for Comparative Literature.

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

Centre for Classical and Modern Languages follows CUPB rules and regulations regarding research ethics. CML also follows its own Code of ethics for research is:

- The research problem should not be a direct attack on some religion, individual, or on an organisation.
- Research should be accountable to the society, honesty and a sense of responsibility should be reflected in it
- For surveying the literature original sources are to be referred and literature should be thoroughly reviewed
- For deciding about research design any type of manipulation is to be avoided.
- For analysis of the data, finding should not be manipulated to suit the hypotheses and results are to be interpreted not generalised.
- To acknowledge everyone who helped in research and be honest in report writing.

32. Student profile programme-wise:

Name of the Programme	Applications received	Selected		Pass Percentage	
		Male	Female	Male	Female
M.A. Punjabi (2015-16)	11	3	6	Programme is Ongoing	
Ph.D. Punjabi (2015-16)	68	0	1	Programme is Ongoing	

33. Diversity of students :

Name of the Programme	%of students from the same University	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
M.A. Punjabi (2015-16)	0	100	0	0
Ph.D. Punjabi (2015-16)	0	100	0	0

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

PG and Research level programmes are yet to be started, so right now there are no students who have cleared Civil Services and Defence Services examinations, NET, SLET and other competitive examinations.

35. Student progression

Student Progression	Percentage against enrolled
UG to PG	N.A
PG to M.Phil.	N.A.
M.Phil. to Ph.D.	N.A
Ph.D. to Post-Doctoral	N.A.
Employed	
Campus Selection	--
Other than campus recruitment	
Entrepreneurs	--

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	0%
from other universities within the State	66.66%
from universities from other States	33.33%
from universities outside the country	0%

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

Nil

38. Present details of departmental infrastructural facilities with regard to

- a. **Library:** About 4500 books (text books, reference books, analytical, classical) in the Central Library related to Punjabi and English Language.
- b. **Internet facilities for staff and students:** Available
- c. **Total Number of class rooms:** 01
- d. **Class rooms with ICT facility:** 01
- e. **Student's laboratories:** Centre has one common Language Lab.
- f. **Research Laboratories:** Nil

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

Sr. No.	Name	Doctoral	Batch
1.	Gurpreet Kaur	Ph.D.	2015-16

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

Nil

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

Yes, for developing the M.A. Punjabi and Ph.D. programmes of Centre for Classical and Modern Languages, the exercise of need assessment has been undertaken. The highlights of the methodology are as follows:

- While developing the curriculum of M.A. and Ph.D. programmes, the vision and mission of the CUPB as well as the centre have been taken into consideration for attaining excellence in teaching, learning and research.
- The curriculum of the programmes are framed keeping in mind the needs of the learners. For the present needs of the learners some specific portions have been incorporated in the curriculum. Like new literary concepts and literary theories, impact of globalization on languages, literatures, folklore and cultures, its challenges and responses.
- There is always social change occurring in the society which has an impact on societal need. For satisfying the social and employability needs, some elective and open elective courses have been incorporated in the programme's curriculum. Like media studies and journalism, translation, comparative literature, computer application
- To understand the Punjabi society, special focus has been given on Punjabi language, Punjabi literature (medieval & modern), Punjabi folklore and culture.
- The requirements of the regulatory authorities like UGC are also explored before framing the curriculum.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

For framing the curriculum of various programmes, the Centre focused on students' needs for competitive examinations such as

SET, UGC-NET, and civil services examinations. Faculty of the university and experts from other universities are invited regularly and meetings are held to discuss, review and revise the syllabi.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

At present, not applicable.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

N.A.

43. List the distinguished alumni of the department:

N.A

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

The faculty of Centre for Classical and Modern Languages has been involved in special lectures by external scholars (faculty associated in arranging the lecturers) for particular classes/courses as well as for general enrichment organized by Centre for Comparative Literature. These are the following programmes/ special lectures:

- A programme in remembrance of the legendary Punjabi writer and thinker Prof. Pritam Singh on October 25, 2013. Speakers: Chancellor Prof. S.S. Johl, N. S. Ratan, Prof. Sukhdev Singh Sirsa, Prof. Harbhajan Singh Bhatia, Dr. Harshinder Kaur and Padam Bhushan Sh. Gurdial Singh.
- A programme in commemoration of the legendary Punjabi playwright Gursharan Singh on his death anniversary on September 27, 2013. Speakers: Dr. Swarajbir, eminent Punjabi playwright and Dr. NavsharanKaur, daughter of Gursharan Singh and a key activist in promoting women's causes.
- A special lecture on "Remembering Ghadar Party Hero Kartar Singh Sarabha in Centenary Year" on November 13, 2013. The speaker on the event was Dr. Chaman Lal, former professor, JNU, New Delhi and former visiting professor, University of West Indies.
- A programme in remembrance of the eminent Sikh scholar and writer Bhai Kahn Singh Nabha on November 25, 2013. Speakers: Dr.

Jagmail Singh Bhathuan , Prof. J.S. Grewal, Former Vice Chancellor, Guru Nanak Dev University, Amritsar and Major Adarsh Pal Singh, the grandson of Bhai Kahn Singh.

- Lectures by experts in history, economics, science and linguistics to celebrate International Mother Tongue Day on February 21, 2014. Speakers: Padam Shree and Jnanpith awardee famous Punjabi novelist Sh. Gurdial Singh, Prof. Prithipal Singh Kapur, Former Pro-Vice Chancellor, Guru Nanak Dev University, Amritsar , Prof. Surjit Singh Dhillon, Prof. Ramesh Kuntal Megh, Prof. Gian Singh and Prof. Paramjit Singh Dhingra.
- Dramatic performance of a play of renowned Punjabi dramatist, Ajmer Singh Aulacs titled ‘Jhanna De Pani’ on 25 February, 2014. The play pinpoints the debt ridden farmers and as well as commented over the low birth rate of girls which pressurized the villagers to buy females from other states.
- Observed 83rd Martyrdom Day of Bhagat Singh, Rajguru and Sukhdev on 25 March, 2014. A guest lecture by Prof. Chaman Lal, and a play ‘Butt Bol Paya’ was staged.
- A special lecture on “Reading Film” by Dr. Prabhjot Parmar, Centre for Indo Canadian Studies, University of the Fraser Valley, Abbotsford, Canada on May 27, 2014.

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

Faculty has adopted various teaching methods during their teaching. These are the following:

- Brain storming discussion with students
- Class Seminars
- Class Assignments
- Peer interaction
- Special documentary
- Story-telling
- Narration
- Quiz
- Demonstration.

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

- By empowering the students and scholars of English and Punjabi studies with professional competence.
- Analysing the linkage between language, literature and culture.
- Understanding the rich Indian heritage especially with reference to Punjabi creative process.
- Developing a potential of competence to understand the cultural creative process in this region of the country.
- Attempting independent and integrated study of language, literature folklore and culture.
- Establishing the correlative existence of secular Indian tradition and demarcating the contours of regional languages, literatures and cultures.
- Providing an opportunity to students, scholars and researchers to study Punjabi creative process in the perspective of comparative literature also.

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

Faculty of Centre for Classical and Modern Languages (Punjabi Language, Literature and Culture; English) is actively involved in various programmes organized by other centres of the university. They attend and participate in faculty seminars. For the Non Punjabi students and faculty to learn Punjabi, Centre has started a basic course i.e. "Introductory Course of Punjabi Language".

48. Give details of “beyond syllabus scholarly activities” of the department.

Centre for Classical and Modern Languages (Punjabi Language, Literature and Culture; English), which was previously known as Centre for Punjabi Language, Literature and Culture organized two academic and two Literary cum cultural programmes with the association of Centre for Comparative Literature:

- Punjab Day Celebration on November 1, 2013.
- International Mother Language Day on February 21, 2014

- Kavi Darbar and Traditional Folk Singing on Feb.24, 2014: In this programme renowned Punjabi poets (like Dr. Surjit Patar, Sukhwinder Amrit, Jaswant Jafar, Gurbhajan Gill, Trilochan Savi, Surinderpreet Ghaniya, Jagwinder Jodha and Hardarshan Sohal) two legendry Punjabi folk singers (Baba Kashi Ram and Bebe surjit Kaur) participated and as well as performed.
- Literary Play and Lecture on Punjabi Poet Paash on September 9, 2014: A programme was organised in remembrance of the legendary Punjabi poet Avtar Singh Sandhu ‘Pash’ on the occasion of his birth anniversary. The play ‘Khetan da putt’ was staged by famous artist of Punjabi cinema, Mr. RanaRanbir who has written the play Khetan Da Putt, based on writings, life and letters of the writer.

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

No

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

In the centre, the faculty of Punjabi language have generated and introduced new theoretical concepts in the field of Punjabi Linguistics especially in the area of morphology and also developing the theoretical base of textual studies of Punjabi literature. The centre was previously working as Centre for Punjabi Language, Literature and Culture, which was established on September 2013. Since then it has organized two academic programmes related to the contribution of major literary scholars. Apart from this, the faculty of the Centre is associated in teaching programmes for Centre for Comparative Literature. The faculty has contributed 33 publications and has made 25 presentations at university/state/national level seminars/conferences/workshops during the assessment period.

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

Strengths:

- Centre for Classical and Modern Languages (Punjabi Language, Literature and Culture; English) is a harmonious blend two languages and literatures i.e. Punjabi and English.
- The focus of the centre is to produce interdisciplinary knowledge

through the conference of these two varied streams.

- The present and the future human resources of the Centre is apt for achieving the fundamental objectives of the centre.
- Well qualified and dedicated faculty with specialization of aforementioned fields.

Weaknesses:

- Lack of senior faculty and staff in the Centre.
- Presently centre does not have its own library.
- Lack of expertise in the field of folklore and culture
- Need to introduce more languages and literatures.

Opportunities:

- As the Centre is a growing academic platform it has immense potential to generate basic research material on varied languages, literatures, folklore and cultures.
- Opportunity of interaction between western and regional cultures.
- Students have the chance to learn the working knowledge of computer and internet.
- Students also have the advantage to study and learn the theory and application of translation and comparative literature.
- Students can choose their career in teaching, civil services, print media and translation etc.
- There is a great potential in this Centre for the study of regional language, literature and culture.

Challenges:

- Socio-economic situation of the state and the present international socio-political orders in the form of LPG (Liberalization, Privatization and Globalization) has created great many challenges for social sciences and languages.

- The Centre will also have to face the impact of these challenges. The Centre has the biggest challenge in the form of making attractive programmes for the students.
- To change the mind set of students about regional languages in the present global world.
- To encourage and motivate bright students for choosing their profession in both the languages in this age of science and technology.

52. Future plans of the department.

The Centre has already introduced postgraduate programme in Punjabi and is planning to start new research based programmes. The Centre also plans to interpret and transmit the available theoretical and applied knowledge in the field of linguistics, literary and cultural studies by using national and international resourcing. Centre will also be contributing research publications in Punjabi and English. Apart from it the Centre is also planning research projects to study and analyse the linguistic variations, creative process of Malwa region and cultural consciousness of Malwai peoples with special reference to Bathinda. Centre also has the planning to organize seminars/conferences related with emerging trends of languages, literature and cultural studies.

14. Centre for South and Central Asian Studies (Including Historical Studies)

1. Name of the Department:

Centre for South and Central Asian Studies (Including Historical Studies)

2. Year of establishment:

2009 as Centre for South and Central Asian Studies; renamed in 2015

3. Is the Department part of a School/Faculty of the University?:

Yes, School of Global Relations

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.):

From Academic Sessions 2015-16:

- M.A. Political Science,
- M.A. History,

From Academic Session 2014-15 onwards:

- M.Phil. South and Central Asian Studies,

From 2009-10 to 2013-2014:

- M.Phil.-Ph.D. Integrated programme in South and Central Asian Studies

5. Interdisciplinary programmes and departments involved

Nil

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

Nil

7. Details of programmes discontinued, if any, with reasons:

M.Phil.-Ph.D. Integrated programme was changed to stand-alone M.Phil. Programme from the academic session 2014-15.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

As per the UGC guidelines, Choice Based Credit System (CBCS) has been implemented by the centre from present Academic session (2015-2016).

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

Nil

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professors	2	1	1
Asst. Professors	4	3	3

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of M.Phil. Students guided for the last 4 years	No. of Ph.D. students guided for the last 4 years
Dr. Vinay Kumar Rao	Ph.D.	Associate Professor, CoC	Archaeology and ancient history	10.1	0	1
Dr Nishtha Kaushiki	Ph.D.	Assistant Professor	Foreign policy and great power politics	3	8	6 ongoing
Dr Bawa Singh	Ph.D.	Assistant Professor	Geopolitics of Central Asia, India Ocean, strategic affairs of South Asia,	6	8	8 ongoing

			Comparative politics			
Dr. Sudheer Singh Verma	Ph.D.	Assistant Professor	International Relations, Environmental politics (Climate Change)	1.7	Nil	Nil

12. List of Senior Visiting Fellows, adjunct faculty, emeritus professors:

Nil

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

Nil

14. Programme-wise Student-Teacher Ratio:

M.Phil.-Ph.D. Integrated programme- 2009-10	1:2
M.Phil.-Ph.D. Integrated programme- 2010-11	3:2
M.Phil.-Ph.D. Integrated programme- 2011-12	2:1
M.Phil.-Ph.D. Integrated programme- 2012-13	3:1
M.Phil.-Ph.D. Integrated programme- 2013-14	3:1
M.Phil. programme- 2014-2015	5:1
M.Phil. programme- 2015-16	5:1
M.A. Political Science- 2015-16	3:1
M.A. History- 2015-16	2:1

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

As and when CRR will be approved, the positions will be filled.

16. Research thrust areas as recognised by major funding agencies

- Indian foreign policy,
- International politics,
- Historical studies,
- Environmental concerns of the Malwa region

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

Title of the Project	Principle Investigation/Co-investigation	Year		Funding Agency	Amount Sanctioned (In Lacs)
		From	To		
The sculptural art of Eastern India and its influence on sculptural art of Arakan	Dr. Vinay Kumar Rao	2015	2018	UGC	10.18 Lac
Role of SAARC: Geostrategic and geo-economic perspective	Dr Bawa Singh and Dr Sandeep Kaur	2014	2016	Indian Council of Social Science Research	7.0 Lac
Mapping of maritime security concerns for South Asia: contextualizing Indian concerns and	Dr Bawa Singh	2014	2016	Central University of Punjab, Bathinda	1.5 Lac
The great rebalancing and emerging triangular dynamics of India, China and Japan: An analysis.	Dr Nishtha Kaushiki	2014	2016	Central University of Punjab, Bathinda	1.5 Lac
TOTAL GRANTS					20.18 Lac

18. Inter-institutional collaborative projects and associated grants received:

a) National collaboration:

Nil

b) International collaboration:

Nil

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

Nil

20. Research facility/centre with

- **State recognition:** Nil
- **National recognition:** Nil
- **International recognition:** Nil

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

Nil

22. Publications:

Sr. No.	Items	Total Numbers			
		Dr. Vinay K. Rao	Dr. Nishtha Kaushiki	Dr. Bawa Singh	Dr. Sudheer S. Verma
1.	Number of papers Published in Peer reviewed Journals	14	2	8	1
2.	Number of Papers Published in Conferences/Workshops/Symposium/ Meeting	-	-	-	-
3.	Monographs	1	-	-	-
4.	Chapters in Books	-	2	8	2
5.	Edited Books	-	-	-	-
6.	Books with ISBN and With Details of Publishers	3	-	-	-
7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)	-	-	-	-
8.	Citation Index/Average	-	-	-	-
9.	SNIP	-	-	-	-
10.	SJR	-	-	-	-
11.	Impact Factor	-	-	-	-
12.	H-Index	-	-	-	-

Apart from this, students of the centre have attended many national as well as international conferences and have also presented their papers in most of these conferences.

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

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

Nil

26. Faculty serving in

- a) **National committees:** Name of the Faculty, Designation & Name of the Committee, Year

Nil

- b) **International committees:** Name of the Faculty, Designation & Name of the Committee, Year

Nil

- c) **Editorial Boards:** Name of the Faculty, Designation & Name of the Committee, Year

Dr. Bawa Singh

- Member, Advisory Board of the Journal ‘Emerging Trends in Social Sciences’ [ISSN: 2277-8624]

- d) **Any other (please specify):**

Dr. Vinay Kumar Rao

- Member, Board of Post Graduate Studies (Department of History), Assam University, Silchar.

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

Dr Bawa Singh

- Orientation Programme at UGC-HRD Centre, Punjabi University Patiala from 15th June 2015 to 11th July 2015.

Dr Nishtha Kaushiki

- Orientation Programme at UGC-ASC, JNU, Delhi from 6th April 2015 to 1st May 2015.

28. Student projects

- Percentage of students who have done in-house projects including inter-departmental projects (Only Percentage):
100 percent.
- Percentage of students doing projects in collaboration with other universities industry/institute (Only Percentage):
There is no collaboration with other universities.

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

Faculty: Nil

Doctoral/post doctoral fellows: None

Students

S. No.	Students / Research Scholar	Name of the award	Awarding authority	Year and other details
1	Gurpreet Kaur	RGNF	UGC	2011
2	Anu Sonia	RGNF	UGC	2011
		Offer for study tour to Columbia University, U.S.A	Ministry of Social Justice and Empowerment	19 th -25 th October 2015. (letter dated 28 th August 2015)
3	Kovid Kumar	Junior Research Fellowship (UGC-JRF)	UGC	2011
4	Maninderjit Singh	NET	UGC	2012
5	Mohammad Arif	NET	UGC	2012

6	Amandeep Kaur	MANF and NET	UGC	2012, 2014
7	Manpreet Kaur	MANF	UGC	2013
8	Mohd. Hussain Naik	NET	UGC	2013
9	Amritpal Singh	NET	UGC	2014
10	Meenakshi	RGNF	UGC	2015
11	Gaurav Kumar	NET	UGC	2014
12	Kuldip Singh	NET	UGC	2014

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

Nil

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

The Centre follows the university's code of ethics. However, the centre has evolved the following ethic:

If the faculty assists its research scholars, then the first authorship in the papers etc. is given to the student and the faculty does not impose their respective names in the publications of the students.

32. Student profile programme-wise:

Name of the Programme	Applications Received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Phil.-Ph.D. Integrated Programme (2009-10)	19	3	1	75%	25%
M.Phil.-Ph.D. Integrated Programme (2010-11)	32	6	2	75%	25%
M.Phil.-Ph.D. Integrated Programme (2011-12)	31	4	4	50%	50%
M.Phil.-Ph.D. Integrated Programme (2012-13)	54	12	4	75%	25%
M.Phil.-Ph.D. Integrated Programme (2013-14)	113	22	2	91.66%	8.33%
M.Phil. (2014-15)	75	11	3	78.57%	21.42%
M.Phil. (2015-16)	105	12	3	80%	20%
M.A. Political Science (2015-16)	97	8	1	88.88%	11.12%
M.A. History (2015-16)	53	5	0	100%	-

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Phil.-Ph.D. Integrated Programme (2009-10)	0%	50%	50%	0%
M.Phil.-Ph.D. Integrated Programme (2010-11)	0%	75%	25%	0%
M.Phil.-Ph.D. Integrated Programme (2011-12)	0%	50%	50%	0%
M.Phil.-Ph.D. Integrated Programme (2012-13)	0%	50%	50%	0%
M.Phil.-Ph.D. Integrated Programme (2013-14)	0%	37.5%	62.5%	0%
M.Phil. (2014-15)	0%	43%	57%	0%
M.Phil. (2015-16)	0%	60%	40%	0%
M.A. Political Science (2015-16)	0%	0%	100%	0%
M.A. History (2015-16)	0%	0%	100%	0%

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

S. No.	Name of Students	Year	Qualifying Exam
1.	Gurpreet Kaur	2011	RGNF-UGC
2.	Anu Sonia	2011	RGNF-UGC
3.	Kovid Kumar	2011	UGC-JRF
4.	Maninderjit Singh	2012	NET-UGC
5.	Mohammad Arif	2012	NET-UGC
6.	Amandeep Kaur	2012 / 2014	MANF, NET –UGC
7.	Manpreet Kaur	2013	MANF-UGC

8.	Mohd. Hussain Naik	2013	NET-UGC
9.	Amritpal Singh	2014	NET –UGC
10.	Meenakshi	2015	RGNF-UGC
11.	Gaurav Kumar	2014	NET-UGC
12.	Kuldip Singh	2014	NET-UGC

35. Student progression

Student progression	Percentage against enrolled
UG to PG	N/A
PG to M.Phil.	N/A
PG to Ph.D. M.Phil.-Ph.D. Integrated Programme (from batch 2009-10 to 2012-13)	89 % (24 out of 27)
Ph.D. to Post-Doctoral	N/A
Employed	
<ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	4 %
	NIL
Entrepreneurs	NIL

36. Diversity of staff

Percentage of faculty who are graduate	
from the same University	Nil
from other universities within the State	25%
from Universities from other States	75 %
from Universities outside the country	Nil

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

None

38. Present details of departmental infrastructural facilities with regard to:

A.	Library	
	e-Journals	About 1200 for the centre
	Books	1214 for the centre
B	Internet Facilities for Staff and Students	<ul style="list-style-type: none"> • Every faculty has individual internet enabled desktop computer, • Similarly, all students have access to internet

		enabled computers in Computer Centre of the university.
C	Total number of classrooms	01
D	Class rooms with ICT facility	01
E	Students' laboratories	Nil
F	Research laboratories	Nil

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

a. Doctoral Students from the Host Institution/ University:

S. No.	Batch	Name
1	2009-10	Gurpreet Kaur
2	2010-11	Maninderjit Singh
3		Kovid Kumar
4		Dinesh Bassi
5		Anu Sonia
6		Rajbir Singh
7		2011-12
8	Mohamad Arif Mir	
9	Waseem Ahmad Dar	
10	Swati Raikhy	
11	Mudasir Mubarik	
12	Mairu	
13	Gurvinder Singh	
14	Amandeep Kaur	
15	2012-13	Hilal Ramzan
16		Amandeep Kaur
17		Mohd Hussain Naik
18		Mansoor Ahmad Lone
19		Manpreet Kaur
20		Ghulam Mohiudin Naiko
21		Parvaiz Ahmad Thoker
22		Bhupinder Singh
23		Sandeep Singh
24		Gaurav Kumar

Post-Doctoral from the Host Institution/ University:

Nil

Research Associates from the Host Institution/ University:

Nil

b. From other institutions/Universities: Nil

40. Number of postgraduate students getting financial assistance from the university:

All students enrolled in M.Phil. get fellowship of 5,000 per month from the university.

All students enrolled in Ph.D. get fellowship of 8,000 per month from the university.

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

Yes. New programmes are developed after rigorous discussion among faculty members, students, and experts. The discussion takes into consideration the needs of the learners and the society. It is only after that the new programmes are approved by the Board of Studies, School Board, Academic Council and then the Executive Council.

42. Does the department obtain feedback from:

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, such feedback is not only taken at centre level but also at university level.

The feedback is utilised during revision of syllabus and preparation of new courses. As regards to teaching-learning- evaluation method the feedback is used to arrange remedial classes for students.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Such feedback helps very much in identifying strength and weakness of staff members. On the basis of feedback the university identifies

best staff of the year. Dean Academic affairs and Dean of the School interacts with students to obtain feedback on curriculum and teaching-learning-evaluation. The feedback is conveyed to faculty members.

c. **Alumni and employers on the programmes offered and how does the department utilize the feedback?**

No. The Centre was established only in 2009 and was renamed in 2015. Thus, there are no alumni.

43. List the distinguished alumni of the department (maximum 10):

CUPB is a new university and currently there are no alumni.

44. Give details of student enrichment programmes (special lectures/workshops/seminar) involving external experts.

The centre for South and Central Asian Studies is interdisciplinary in nature. Students and faculty of the centre attend lectures and seminar of scholars from different disciplines.

Date	Speaker		Topic
4 March, 2015	Dr Jatinder Kumar Jain	IPS	Delivered lecture on the eve of International women's day
4 September, 2014	Sh. Bal Anand	Renowned and eminent personality of Indian Foreign Services	India's Global Goals - Perceptions and Prospects for 2020
6 May 2014	Prof. Rajiv Lochan	Department of History, Panjab University.	Special lecture on "Relevance of Dr. B.R. Ambedkar in Globalisation arena."
27 May, 2014	Dr. Prabhjot Parmar	Professor of English, University of the Fraser Valley, Abbotsford, Canada	Cinema Studies
07 May 2014	Prof. M. Rajivlochan	Department of History, Panjab University.	Special lecture on Bharat Ratna Dr. B.

			R. Ambedkar
1 November , 2013	Dr. Satnam Singh Ladhar,	Joint Director (Environment), Punjab State Council for Science and Technology	Those countries are considered developed who have an abundance of natural resources
1 November , 2013	Prof. Ranjit Singh Ghuman	Centre for Research in Rural and Industrial Development, Chandigarh	Economic situation of Punjab
27 December, 2012	Dr. Babu Ram	Member Secretary, Punjab Pollution Control Board	Environmental Issues and their Management
26 September, 2012	Prof. C. P Kaushik	Dean, Faculty of Non-Conventional Sources of Energy and Environmental Science, Guru Jambheshwar University of Science and Technology Hisar	Protecting our atmosphere for Generations to come
20 April, 2012	Dr. A Banerjee		Global Food Crisis: Magnitude and Causes
17 April, 2012	Prof. Anwar Alam	Centre for West Asian Studies, Jamia Millia Islamia New Delhi.	India's Politico-economic Relations with its South and Central Asian Neighbours
04 April 2012	Dr. Pritam Singh	Director, P.G. Programme in international Management and International Relations, Oxford Brooks university, UK.	India's federal political Economy and Punjab's development pattern.
13 Dec. 2011	Prof. (Dr.)(Retd.) Harish Puri	B. R. Ambedkar Chair, Department of Political Science, GNDU, Amritsar.	Human Rights.
24 Nov. 2011	Prof. (Dr.) Mool Chand Sharma	Vice Chancellor, Central University of Haryana.	Indian Democracy on cross roads.

13 Sep. 2011	Dr. Margaret Walton-Roberts	Director, International Migration Research Centre, Wilfrid Laurier University, Waterloo, Canada.	Contrasting regional migration and diaspora-led transformation in Punjab and Kerala.
26 April 2011	Sh. Bal Anand,	IFS (Retd.)	Foreign relations of India: present implications and probabilities.
21 April 2011	Prof. R. L. Hangloo,	Former Dean- School of Global Relations, CUP.	Pakistan during the cold war and after.
13 July 2010	Prof. R. L. Hangloo,	Head, Dept. of History, University of Hyderabad.	Kashmir problem in global context.

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

- Lecture methods and teaching using ICT multimedia and green/white board,
- Question answer techniques, interactive sessions to share the knowledge amongst the students.

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

The primary objective of the centre is to train future researchers and academicians. Also, other objective of the centre is to make students confident and capable. For meeting these objectives, students are continuously assessed throughout the semesters by giving assignments, term paper writing, surprise test and organizing quiz activities. Further, research forum of the centre has also been functional since 2011. Also, the university has adopted a continuous evaluation system. At the end of semester, their performances are evaluated by end semester examination.

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

- Students and Faculty had organized International Women’s Day Function at the University level on 4th March 2015,
- The Centre organized an essay writing competition on the issue of women in India in 2010.

48. Give details of “beyond syllabus scholarly activities” of the department.

- News and information are displayed and regularly updated on information boards of the classroom and current issues are discussed from time to time,
- Education tour to Science City, Jalandhar was also organized for the students in 2014,
- A visit to the Biodiversity Train was organized at Bathinda Railway Station in 2013,
- Research forum has been regularly organized since 2011,
- The faculty presented their respective research findings in the faculty seminar series,
- Student’s feedback has been regularly obtained on the teaching methodology etc. and suggestions etc. have been incorporated.

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

No

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

Faculty and students of the Centre publish their works in reputed journals and disseminate their knowledge through participation in seminars and conferences.

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

Strengths

- Interdisciplinary research.
- Diversity of faculty expertise.
- Good infrastructural facilities for students.
- Centre has attracted students from Jammu and Kashmir to Kerala and from Pondicherry, Maharashtra to Bihar and Assam. This diversity is a unique assemblage allowing students to come across different culture, languages and ideas.

Weaknesses

- Non-availability of non-teaching and technical staff.
- Inadequate number of classrooms.
- Lack of senior faculty member (Professor).
- There is no collaboration with other universities at both national and international level.

Opportunities

- The biggest opportunity is to develop expertise on different countries of Central Asia and South Asia. Centre can have experts on Pakistan, Afghanistan, and Kazakhstan and like others.
- Similarly, the centre can theorize and conceptualize regional issues.
- Collaboration with universities and institutions of South and Central Asian countries and others.
- Faculty and student exchange programmes possibility.

Challenges

- To link research output with policy making initiatives is a vision of the centre but still a challenge.

52. Future plans of the department.

- The faculty of the centre intends to collaborate with other similar departments of well-established Central Universities for regular knowledge exchanges through seminars, conferences etc.,
- The centre plans to initiate student exchange programme with foreign universities,
- The centre is also planning to have MOUs with well-established research institutes.
- The centre intends to coordinate with the embassies and high commissions to invite the senior diplomats, political secretaries for special invited lectures,
- The centre intends to coordinate with the Indian Council of Historical Research to organize tours, conferences, workshops, lectures, seminars, etc.

15. Centre for Economic Studies

1. Name of the Department

Centre for Economic Studies

2. Year of establishment

2011.

3. Is the Department part of a School/Faculty of the university?

Yes, the Centre for Economic Studies is a part of the School of Social Sciences.

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

- M.A. in Economics
- M.Phil. in Economics
- M.Phil.-Ph.D. Integrated Programme in Development Economics

5. Interdisciplinary programmes and departments involved

NA

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

NA

7. Details of programmes discontinued, if any, with reasons:

M.Phil.-Ph.D. Integrated programme has been discontinued in 2014. M.Phil. Programme has been started from academic session 2014-15.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

The centre follows semester and Choice Based Credit System as per UGC norms.

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

Sl. No.	Name of Teacher	Course Name	Centre offering
1.	Dr. Sandeep Kaur	Computer Applications-Theory and Practical	Centre for South and Central Asian Studies
2.	Dr. Sandeep Kaur	Humanities for Science Students	All Science Centres
3.	Dr. Naresh Kumar Singla	Humanities for Science Students	All Science Centres

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

Position	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professors	2	1	1
Asst. Professors	4	4	4

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

Name of Teacher	Qualification	Designation	Area of Specialization	No. of Years of Experience	No. of M.Phil. Guided in last 4 years	No. of Ph. D. Guided in last 4 years
Dr. Pabitra Kumar Mishra	M.A., M.Phil., Ph.D.	Associate Professor	Quantitative economics and Financial economics	13 years	-	-
Dr. Sandeep Kaur Bhatia	Ph.D.	Assistant Professor	International economics; Environmental degradation and political economy	10.4 years	18+8*	1*
Dr. Naresh Kumar	Ph.D.,	Assistant Professor	Agricultural price policy; institutional	7 years	12+3*	3*

Singla			economics; Agri-business management and Agricultural marketing			
Dr. Jainendra Kumar Verma	MBA, M.A., Ph.D.	Assistant Professor	Industrial economics, Economics of development ; MSMEs challenges	4 years	-	-
Dr. Jajati Keshari Parida	M.A., Ph.D.	Assistant Professor	Labour migration, Employment and regional development	4 years	-	-

* Ongoing

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

Sl. No.	Name of Visiting Professors	University/Institute from where
1.	Prof. A.S. Sethi	Punjab School of Economics, GNDU, Amritsar
2.	Prof. Gurmail Singh	Department of Economics, Panjab University, Chandigarh

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

Nil

14. Programme-wise Student Teacher Ratio:

M.Phil.-Ph.D. Integrated programme- 2011-12:	5 : 1
M.Phil.-Ph.D. Integrated programme- 2012-13:	5 : 1
M.Phil.-Ph.D. Integrated programme- 2013-14:	5 : 1
M.Phil. in Economics - 2014-15:	5 : 1
M.Phil. in Economics – 2015-16:	3 : 1
M.A in Economics – 2015-16:	3 : 1

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

NA

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

International economics, environmental degradation, political economy, agricultural economics, entrepreneurship development, socio-economic and regional issues of development

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

S.No	Title of the Project	Principle Investigator /Co-Investigator	Year		Funding Agency	Amount Sanctioned (In Rupees)
			From	To		
1.	Socio economic externalities of Guru Nanak Dev Thermal Power Plant in Bathinda	Dr. Sandeep Kaur (PI)	09.04.2012	08.04.2014	ICSSR	4.85 lacs
2.	Geo strategic and geo economic relations of SAARC	Dr. Bawa Singh (PI) and Dr. Sandeep Kaur (Co-PI)	01.02.2014	01.08.2015	ICSSR	7.0 lacs
3.	Post-harvest losses in fruits and vegetables in Punjab- The role of agro processing industries and retail chains	Dr. Naresh Singla (PI)	28.03.2014	27.03.2016	Central University of Punjab under RSM	1.50 lacs

18. Inter-institutional collaborative projects and associated grants received:

a. **National collaboration:**

Dr. Sandeep Kaur, Submitted a report ‘A study of Tourism services of India: Analysis of Strengths, Potential And Challenges’ under Centre for WTO Studies, IIFT New Delhi and Ministry of Commerce, New Delhi.

b. **International collaboration:**

NA

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

NA

20. Research facility / centre with

- State recognition: NA
- National recognition: NA
- International recognition: NA

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

NA

22. Publications (For details kindly refer annexure-1)

Content	Total of the Centre	P. K Mishra	Dr. Sandeep Kaur Bhatia	Dr. Naresh Singla	Dr. Jainendra Kumar Verma	Dr. Jajati Keshari Parida
No. of Papers Published in peer reviewed journals (national/international)	89	48	11	9	14	6
No. of Monographs	Nil	Nil	Nil	Nil	Nil	Nil
No. of Chapters in Books/Edited Volume	10	4	1	5	-	2

No. of Edited Books	-	-	-	-	-	-
No. of Books with ISBN	04	2	01	1	-	-
No. of papers listed in international database (e.g., Web of Science, Scopus, etc.)	65	39	11	9	-	6
Citation Index – Range / Average	1 to 33	1 to 33	-	-	-	-
SNIP	Nil	nil	-	-	-	-
SJR	Nil	nil	-	-	-	-
Impact Factor – Range / Average	0.109 to 1.50	0.109-1.50	-	-	-	-
h-index	-	11	1	2	-	-

23. Details of patents and income generated:

NA

24. Areas of consultancy and income generated:

Dr. Sandeep Kaur, Submitted a report ‘A study Tourism services of India: Analysis of Strengths, Potential And Challenges’ under Centre for WTO Studies, IIFT New Delhi and Ministry of Commerce, New Delhi.

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

- Dr. Sandeep Kaur selected for Indo Canadian Shastri Travel Grant in 2012.
- Dr. Sandeep Kaur selected and presented paper macro economic impact of remittances in South Asia, CAG2012 Annual Meeting, Wilfrid Laurier University and the University of Waterloo, Waterloo, Ontario, Canada, May 28-June2, 2012.
- Dr. Sandeep Kaur selected and presented paper south free trade agreements in Asia: Where does SAFTA stand? University of Copenhagen, Asian Dynamics conference, 22-24 October, 2014

26. Faculty serving in

(a) National committees

Nil

(b) International committees

Nil

(c) Editorial/Reviewer Board Membership:

Dr. P.K. Mishra

Editorial Advisory Board Member Interdisciplinary Studies Journal;
Member of Editorial Board, International Journal of Management
and Administrative Sciences

Dr. Jainendra Kumar Verma

Editor, Socrates (International)

Editor, Socrates (National)

Editor, International Journal of Marketing & Technology

Editor, International Journal of Humanities, Arts, Medicine and
Sciences

Editor, International Journal of Management, Information
Technology and Engineering

Reviewer

Dr. P.K. Mishra, Reviewer of Journal of Business Economics and
Management

Dr. P.K. Mishra, Reviewer of Brussels Economic Review, France

Dr. P.K. Mishra, Reviewer of African Journal of Business
Management

Dr. P.K. Mishra, Reviewer of Journal of Economics and
International Finance

Dr. P.K. Mishra, Reviewer of Global Journal of Economics and
Finance

Dr. P.K. Mishra, Reviewer of Herald Journal of Economics and
Finance

Dr. P.K. Mishra, South Asian Journal of Global Business Research

Dr. Sandeep Kaur, Journal of Global Economy

Dr. Naresh Singla, Indian Journal of Economics and Development
(2014-15)

Dr. Naresh Singla, Journal of Agribusiness in Developing and
Emerging Economies

Dr. Naresh Singla, International Journal of Agriculture Sciences
(2015-2018)

(d) Any other:

- Dr. P.K. Mishra, Life Member of Orissa Economic Association.
- Dr. Sandeep Kaur, Board of Studies, Guru Kashi University.
- Dr. Naresh Singla: Life Member, Indian Society for Agricultural Marketing
- Dr. Naresh Singla: Life Member, Indian Society for Agricultural Development and Policy.
- Dr. Naresh Singla: Life Member, Agricultural Economics Research Association.
- Dr. Jainendra Kumar Verma, Uttarakhand Economic Association
- Dr. Jainendra Kumar Verma ,Indian Economic Association
- Dr. Jainendra Kumar Verma, Indian Commerce Association

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

- Dr. Pabitra Kumar Mishra, participated in 77th orientation programme during 10 March 2014 to 06 April 2014 at UGC-Staff Academic College, Ranchi University, Ranchi.
- Dr. Sandeep Kaur Bhatia attended orientation programme at Guru Nanak Dev University during 11 Dec to 7 Jan 2014.
- Dr. Sandeep Kaur Bhatia attended refresher programme at Guru Nanak Dev University during 9 – 29 June 2015.
- Dr. Sandeep Kaur Bhatia attended UNCTAD Workshop, New Delhi, 2010.
- Dr. Naresh Singla attended orientation programme at Punjabi University, Patiala during 15 June to 11 July 2015.
- Dr. Naresh Singla attended training programme on “Quantifying the Impact of Climate Change on Agriculture” at National Centre for

Agricultural Economics and Policy Research (NCAP), New Delhi from 21-25 March, 2011.

- Attended Research Methodology Workshop during 23-25 Jan 2013 at Kirori Mal College, New Delhi
- Dr. Jainendra Kumar Verma attended research methodology and project formulation during 18-28 Feb 2013 at Giri Institute of Development Studies, Lucknow
- Dr. Jainendra Kumar Verma Attended Research Methods on Gender Issues in labour during 25 Feb to 1 March, 2013 at Giri National Labour Institute, Noida
- Dr. Jainendra Kumar Verma attended Research Methodology course in social sciences during 19-29 March, 2013 at NIT, Rourkela
- Dr. Jainendra Kumar Verma Attended Research Skill enhancement programme during 3-17 Jan 2014 at Devi Ahilya Bai University, Indore.

28. Students projects:

Percentage of students who have done in-house projects including inter-departmental projects (Only Percentage):

100 per cent. Total 19 students have completed their dissertations

Percentage of students doing projects in collaboration with other universities industry / institute (Only Percentage):

Nil

29. Awards/recognitions received at the national and international level by faculty/students/scholars:

Faculty Members:

Dr. Sandeep Kaur Bhatia, Recipient of Indo-Canadian International Travel Grant Fellowship, 2012.

Dr. Jainendra Kumar Verma, Recipient of UGC Post-Doctoral Fellowship in 2013.

Scholars/Students:

Amandeep Kaur	CUP/M.Phil.-Ph.D./SSS/CSS/2011-12/06	UGC-NET-JRF 2011
Harmeet Kaur	CUPB/MPh/SSS/CES/2014-15/01	UGC-NET-JRF 2014
Munish Kumar	CUP/M.Phil-Ph.D./SSS/CSS/2011-12/04	UGC-RGNF, 2011-12
Mumtaz Ahmad	CUPB/MPh-PhD/SSS/CES/2012-13/14	UGC-RGNF, 2012-13
Parmjeet Kaur	CUPB/MPh-PhD/SSS/CES/2013-14/17	UGC-RGNF, 2014-15
Manpreet Kaur	CUPB/MPh-PhD/SSS/CES/2013-14/18	UGC-RGNF, 2014-15

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

NA

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

Centre for Economic Studies follows CUPB rules regarding research which serve as an important guideline to inspire researchers to maintain high ethical standards in all research activities at the university.

The centre recognizes the rights of researchers and gives them academic freedom while also endeavoring to eliminate any unacceptable practices.

32. Student profile programme-wise:

Name of the Programme	Applications received	Selected		Pass Percentage	
		Male	Female	Male	Female
M.Phil.-Ph.D. Integrated, 2011-12	29	1	4	100%	100%
M.Phil.-Ph.D. Integrated, 2012-13	43	7	8	100%	100%
M.Phil.-Ph.D. Integrated, 2013-14	136	14	11	100%	100%
M.Phil., 2014-15	71	3	10	100%	100%
M.Phil. – 2015-16	170	11	4	Programme in progress	
M.A. – 2015-16	168	4	8		

33. Diversity of Students:

Name of the Course (refer to question no.4)	% of students from the same University	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
M.Phil.-Ph.D. Integrated, 2011-12	Nil	25.0	75.0	Nil
M.Phil.-Ph.D. Integrated, 2012-13	Nil	46.7	53.3	Nil
M.Phil.-Ph.D. Integrated, 2013-14	Nil	40.0	60.0	Nil
M.Phil., 2014-15	Nil	76.9	23.1	Nil
M.Phil., 2015-16	Nil	40	60	Nil
M.A., 2015-16	Nil	31	69	Nil

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

S. No.	Name of Students/ Registration No.	Year	Qualifying Exam
1	Munish Kumar (CUP/M.Phil-Ph.D./SSS/CSS/2011-12/04)	2011, 2012	UGC-NET
2	Neha Jindal (CUP/M.Phil-Ph.D./SSS/CSS/2011-12/01)	2011	UGC-NET
3	Harpreet Kaur (CUPB/MPh-PhD/SSS/CES/2013-14/14)	2014	UGC-NET
4	Raman deep Kaur (CUPB/MPh-PhD/SSS/CES/2013-14/13)	2014	UGC-NET
5	Nadeem Ahmad Bhat CUPB/MPh-PhD/SSS/CES/2013-14/02	2014	UGC-NET
6	J. Vineesh Prakash (CUPB/MPh-PhD/SSS/CES/2013-14/03)	2014	UGC-NET
7	Javaid CUPB/MPh-PhD/SSS/CES/2013-14/01	2014- 15	UGC-NET
8	Bishwajeet Prakash CUPB/MPh-PhD/SSS/CES/2013-14/15	2014- 15	UGC-NET
9	Mohd. Fayaz CUPB/MPh-PhD/SSS/CES/2013-14/10	2014- 15	UGC-NET

35. Student progression

Student progression	Percentage against enrolled
UG to PG	Nil
PG to M.Phil.	Nil
M.Phil. to Ph.D.	41%
Ph.D. to Post- Doctoral	Nil
Employed	
• Campus selection	Nil
• Other than campus recruitment	Nil
Entrepreneurs	Nil

36. Diversity of staff

Percentage of faculty who are graduates	
Of the same university	-
From other universities within the state	40.0 %
From universities from other states	60.0%
From universities outside the country	-

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

Nil

38. Present details of departmental infrastructural facilities with regard to**a) Library:**

Books: 2162

E-Journals: 614

Databases: World Bank e-library, Economic Outlook, Prowess, States of India, Indiastat.com, ISID, JCCC

b) Internet facilities for staff and students:

Yes available

c) Total number of class rooms

One

d) Class rooms with ICT facility

One

e) Students' laboratories

One computer-lab has been provided with internet access.

f) Research laboratories

Nil

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

a) From the host institution/ university

S.No.	Name of Doctoral Students	Registration Number
1.	Manisha	CUPB/MPh-PhD/SSS/CES/2012-13/02
2.	Rajpreet Kaur	CUPB/MPh-PhD/SSS/CES/2012-13/05
3.	Harvinder Kaur	CUPB/MPh-PhD/SSS/CES/2012-13/08
4.	Irfana Unjum	CUPB/MPh-PhD/SSS/CES/2012-13/10
5.	Pavneet	CUPB/MPh-PhD/SSS/CES/2012-13/11
6.	Mumtaz Ahmed	CUPB/MPh-PhD/SSS/CES/2012-13/14

b) From other institutions/ universities

Nil

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

All M.Phil. enrolled students are getting fellowship from the university at Rs. 5,000 per month, while Ph.D. students receive Rs. 8,000 per month.

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

Yes. New programmes have been developed after rigorous discussion among faculty members and students, keeping in mind the employment prospects of the programmes. Faculty from other universities was also involved in finalization of the structure of the programme and syllabi. The syllabi of the new programmes were discussed with experts during Board of Studies meetings.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation?

If yes, how does the department utilize the feedback?

Yes. At regular intervals, the feedback from faculty members is taken on curriculum as well as teaching-learning-evaluation process. Their responses are duly incorporated after proper brain storming. The faculty members of the centre are in Board of Studies which upgrades the syllabi on the basis of their feedbacks, classroom experience and developments in the field.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Students of the centre have freedom to suggest for upgradations in teaching methodology, curriculum structure, contents of syllabi, etc. The system is in place in the university to collect computer based feedback from students. This allows the centre to incorporate their valuable suggestions in the process of teaching-learning and evaluation.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

NA

43. List the distinguished alumni of the department (maximum 10):

NA

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

- a) Lecture delivered on India's Federal Political Economy and Punjab's Development Pattern, delivered by Dr. Pritam Singh, Director, Post Graduate Programme in International management and International Relations, Oxford Brooks University, UK. on April 4, 2012.
- b) Lecture delivered on Distribution of Income in Post Reform (Post Globalization) by Dr. S.S. Gill, Director, CRRID, Chandigarh, on May 8, 2012.
- c) Lecture delivered on Applied Econometrics by Prof. A.S. Sethi, Punjab School of Economics, GNDU, Amritsar for M.Phil.-Ph.D. students during 2013.

- d) Lecture delivered on Concepts in Regression Analysis by Prof. Gurmail Singh Professor, Dept. of Economics, Panjab University, Chandigarh on 24 November, 2014.
- e) Lecture delivered on Indian Service Trade by Dr. Pralok Gupta, Assistant Professor, Indian Institute of Foreign Trade, New Delhi on April 10, 2015.

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

- Teachers in the centre besides availing the facilities for audio-visual presentations of course material, use of LCD projectors, etc., also use other innovative methods such as distribution of the reading materials along with its discussion amongst students. Depending upon the nature of the course, different methods to teach the students are used. However, the traditional use of the blackboard has not been given up and it is also provided at the disposal of the teachers in every classroom.
- Outcome based learning and teaching methods are also adopted through continuous evaluation procedures as prescribed by the university such as surprise tests, assignments and term papers besides mid and end semester examinations.
- Students are encouraged to present their credit seminar report findings in the seminar hall in front of a large number of students in the presence of Dean Academic Affairs, which boosts their performance.

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

The students are continuously evaluated in the semester by conducting surprise test, giving assignments and term papers besides organizing quiz activities. They also give presentations during their credit seminars which gives them confidence to perform at the highest level. Besides, students are also encouraged to participate in various research methodology workshops organized by other research institutes and universities. Students select research topics as per the thrust areas of the centre and try to complete their theses in time.

Feed Back of Faculty from the students has been taken every year.

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

The Centre for Economic Studies has the practice of taking students to subject related trips. Besides students are also encouraged to visit the libraries of the other universities in the area. They are also encouraged to share their research findings as they are timely updated regarding the forthcoming seminars and conferences.

48. Give details of “beyond syllabus scholarly activities” of the department.

- The M.Phil-Ph.D. and M.Phil. programmes in the centre are not confined to classroom teaching alone. Lectures are also organized within the centre in which both faculty and students participate on topics which are not confined to the courses that are taught.
- The students of the centre are also active in participating in various functions organized by university.
- A science city trip was organized for the students.
- Students participated in various cultural functions organized by the university.
- Students and faculties of the centre got status of blood donors in blood donation camp organized by the university.

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

No

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

The faculty members of the Centre are engaged in quality research in various applied fields of economics which enrich the existing literature with new empirical as well as theoretical findings. These outcomes are disseminated in the form of research paper publications in journals of national and international repute. One consultancy project by Dr. Sandeep Kaur Bhatia has been completed with the collaboration of Indian Institute of Foreign Trade. Various faculties are participating in national and international conferences/seminars and helping in generation of new ideas.

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

Strengths:

- Focus on knowledge acquisition and employment capabilities of students
- Interdisciplinary learning
- Innovative and focused research
- Team spirit of the faculty members
- Individual/group research of faculty members

Weaknesses:

- Inadequate infrastructure
- Inadequate industry-academia interface
- Lack of consultancy projects
- Lack of cross-border collaborations
- Lack of specialized labs

Opportunities:

- To develop a curriculum structure as per the present day requirement
- To incorporate industry requirements in the syllabi
- To provide opportunities of learning interdisciplinary/multidisciplinary courses
- To set up a computational lab for empirical research
- To strengthen research by organizing seminars/conferences/workshops, etc.

Challenges:

- Incorporating community based programmes
- Developing a research oriented curriculum
- Undertaking projects of global importance
- Imparting value loaded teaching to students from abroad

- Attracting research scholars from rest of the world

52. Future plans of the department.

- To tie up with industry, etc. for placement , consultancy and research
- Continuous up-grading of syllabus and evaluation methods
- To set up a computational / statistical lab
- To organize seminars/conferences/workshops/summer courses.
- To collaborate with reputed institutes of Economics and allied subjects

16. Centre for Education

1. Name of the Department:

Centre for Education

2. Year of establishment:

2013

3. Is the Department part of a School/Faculty of the university?

Yes, School of Education

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.) :

M.Ed.	Education
M.A.	Education
Ph.D.	Education

5. Interdisciplinary programmes and departments involved:

There is no interdisciplinary programme.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.:

A proposal has been sent to UGC for international collaboration with Columbia University, USA and University of Worcester, UK

7. Details of programmes discontinued, if any, with reasons:

No programme has been discontinued.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

Semester and Choice based credit system is being followed as per university policy.

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

Dr. Shamshir Singh Dhillon teaches Humanities course to Science students.

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	1	1
Associate Professors	2	1	1
Assistant Professors	4	4	4

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

	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of M.Phil./Ph.D. students guided for the last 4
1	Dr. S.K.Bawa	Ph.D	Professor and CoC	Methodology of research, Measurement and evaluation and women education	28 years	9 M.Phil and 5 Ph.D., 7 Ph.D. under guidance
2	Dr. Satvind pal Kaur	Ph.D.	Associate Professor	Sociology of education	15 years	1 Ph.D.
3	Dr. Shamshir Singh Dhillon	Ph.D.	Assistant Professor	Educational psychology, Educational technology, Special education, Environmental education.	11 years	4 M.Phil.
4	Dr. Shireesh Pal Singh	Ph.D.	Assistant Professor	Educational psychology, Measurement and evaluation	9 years	3 Ph.D. students guiding

5	Dr. Jubilee Padmanabhan	Ph.D.	Assistant Professor	Elementary education, Environmental education and Science education	5 years	Nil
6	Dr. Sesadeba Pany	Ph.D.	Assistant Professor	Teacher education, Curriculum planning, Measurement and evaluation, Research methodology	9 years	M. Phil. 5 Ph.D. 1 guiding

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

- Dr. Amit Kauts Principal, MGN College of Education, Jalandhar.

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

Nil. Academic session started from 2015-2016

14. Programme-wise Student Teacher Ratio:

Sr No.	Programme	Students	Teachers	Ratio
1	Ph.D.	6	6	1:1
2	M.Ed.	27	6	4.5:1
3	M.A	7	5	1.2:1

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

The posts will be filled after UGC approval of CRR rules

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

- Exceptional children
- Social problems and education
- Educational technology.
- Women education
- Teacher education
- Education and multimedia

- Environmental education

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

Title of the Project	Principal Investigation/Co-investigation	Year		Funding Agency	Amount Sanctioned (In rupees)
		From	to		
Constraints in educational empowerment of rural women: A survey of	Dr. Satvinderpal Kaur	March 2014	March 2016	UGC	Rs. 22.45/- lacs

18. Inter-institutional collaborative projects and associated grants received

a. National collaboration

Nil

b. International collaboration

1. Dr. Jubilee Padmanabhan developed blended learning strategy in collaboration with Columbia University, New York (<http://cgsd.columbia.edu/>). The project is entitled as Pioneering Innovation in the Education of B.Ed. Students in Madhya Pradesh, India:
2. Dr. S K Bawa “Developing thinking skills using ubiquitous learning: A study of Indian and Thai students” applied for grant of Rs.17,78050/- to ICSSR

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

S No.	Name of faculty	Name of programme	Sponsoring body	Year of sanction	Amount sanctioned
1	Prof. S K Bawa and Dr. Shireesh	Research methodology course for Ph.D. students	ICSSR	2015-16	5.50 lacs

	Pal Singh				
2	Dr. Jubilee Padmanabhan and Dr. Shireesh Pal Singh	National seminar on education for sustainable development	ICSSR	2015-16	2.0 lacs

20. Research facility / centre with

- **State recognition --**

Not yet

- **National recognition**

Not yet

- **International recognition**

Not yet

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

Nil

22. Publications

S. No.	Items	Total Numbers					
		Dr. S K Bawa	Dr Satvinder pal Kaur	Dr. Shamshir Singh	Dr. Shreesh Pal	Dr. Jubilee	Dr. S Pany
1.	Number of paper published in peer review journals	75	30	25	14	12	29
2.	Number of paper published in Conferences/workshops / symposium/meeting	62	35	35	41	31	29
3.	Monographs	-	-	-	-	-	-
4.	Chapters in books	3	2	12	2	2	=
5.	Edited books	7	2	-	-	2	1
6.	Books with ISBN with details of publisher	4	-	-	-	-	2

7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)			-	-	1	
8.	Citation Index/Average						
9.	SNIP	-	-				
10.	SJR	-	-				
11.	Impact factor range	-					
12.	<i>h</i> -index						

23. Details of patents and income generated:

Nil

24. Areas of consultancy and income generated:

Nil

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

Dr. S K Bawa for faculty development programme at University of Wolverhampton, Wallsal, UK from 14 Nov to 23 Nov. 2009

26. Faculty serving in

- a) **National committees:**
- b) **International committees:**
- c) **Editorial Boards**
- d) **Any other (please specify):**

Information required is presented in table below

S. No.	Name of Faculty	Member National Committees	International Committees
1.	Dr. S.K. Bawa	Executive member of Praachi Psycho Cultural Research Association	President (HQ) of Global Educational Research Association
		Executive member of Psycho-linguistic Association	Chairperson of India chapter of International Professional development Association UK
		All India Association for	

		Educational Research (Ex Vice President and Executive member) & Secretary, Punjab Chapter	
		Secretary, Educational Research Association	
		Member of Selection Committee in Education, HP University, Shimla	
		Panjab University Chandigarh	
		Member of Selection Committee, Punjabi University, Patiala	
2.	Dr. Shireesh Pal Singh	President Learning Community	

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

Sr.No	Faculty name	Refresher courses	Orientation programme	Workshop attended/ Training programme
1	Dr. S.K. Bawa	3	1	2 workshops
2	Dr. Satvinderpal Kaur	3	1	5 workshops
3	Dr. Shamshir Singh Dhillon	-	1	4 workshops
4	Dr. Shireesh Pal Singh	-	1	7 workshops
5	Dr. Jubilee Padmanabhan	-	-	15 workshops and 3 training programmes
6	Dr. Sesadeba Pany	2	-	2 workshops

28. Student projects

Academic session started from 2015-2016.

- **Percentage of students who have done in-house projects including inter-departmental projects.**
 - New course

- **Percentage of students doing projects in collaboration with other universities industry / institute.**

- None

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

- Faculty – 4 awards at national level
- Doctoral / post-doctoral fellows
Nil

S. No.	Name of faculty/ Fellows/ Students with designation in centre	Name of the award	Awarding authority	Year and other details
	Prof. S. K. Bawa	GNDU Medalist	GNDU, Amritsar	1978
	Prof. S. K. Bawa	Professional Involvement Award	Psycho-Linguistic Association of India	1995
	Prof. S. K. Bawa	Best Educationist Award	Indian Psychometric and Educational Research Association	2009
	Prof. S. K. Bawa	Prof. V P Sharma Award for Contribution in Education	Psycho-Linguistic Association of India	2011
	Prof. S. K. Bawa	Sudarshan Rakheja Memorial Award for Best Woman Educationist	Indian Psychometric and Educational Research Association	2014
2.	Dr. Satvinderpal Kaur	UGC Research Award	UGC	2012
3	Dr. Jubilee Padmanabhan	University Gold medalist	Kannur University	2002
		Best Paper Award in an International Conference	AIAER	2007

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

Nil

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

- The problem selected for research should not be a direct attack on religion, individual or organization.
- Modification of literature to be avoided.
- Biased attitude while selecting samples should be avoided.
- Privacy and dignity of subjects to be maintained.
- Informed consent to be secured from respondent.
- Findings should not be manipulated.
- Honesty in writing the report.
- Legalities are to be followed while publishing the report

32. Student profile programme-wise:

Academic session started from 2015-2016.

33. Diversity of students

Name of the Programme	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
Ph.D.	-	50	50	nil
M.Ed.	-	50	50	-
M A	-	14	86	nil

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

Academic session started from 2015-2016.

35. Student progression

Academic session started from 2015-2016

36. Diversity of staff

Percentage of faculty who are graduate	
from the same university	Nil

from other universities within the State	33
from universities from other states	67
from universities outside the country	Nil

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

Nil

38. Present details of departmental infrastructural facilities with regard to:

- a) Library (about 3000 books)
- b) Internet facilities for staff and students:
 - High Speed Internet Connectivity with 1Gbps NKN Link and Wi-Fi campus.
 - 138 Windows/ Linux systems with 2-4GB RAM, 320/500 GB HDD
 - 2 network printers and 1 desktop printer and scanner
 - Online and offline UPS.
- c) Total number of class rooms: 1
- d) Class rooms with ICT facility: 1
- e) Students’ laboratories: Psychology resource centre and Educational Technology lab.
- f) Research laboratories: Nil

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

- a) From the host institution/university:
The Centre has started from academic session 2015-2016.
- b) From other institutions/universities
The Centre has started from academic session 2015-2016.

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

Nil

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

Yes. New programmes are developed after rigorous discussion among faculty members and various experts and following steps are followed:

Need assessment
Societal expectation/need
Stakeholders' requirement
Experts' opinion
Requirement of a programme as per the govt./ university/ UGC/MHRD
Policy or scheme

42. Does the department obtain feedback from

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

Yes, such feedback is not only taken at centre level but also at university level. Such feedback is utilised during revision of syllabus and preparation of new courses.

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

Students give the feedback online on the prescribed form. The information is evaluated by the authority. It helps in identifying strength and weakness of staff members. On the basis of feedback, the university identifies best faculty of the year.

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

NA

43. List the distinguished alumni of the department (maximum 10):

At present Centre for education have no alumni.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

1. Dr. Rajesh Gill, Professor Punjab University was invited for extension lecture on *Gender sensitivity*

2. Dr. Arbind Kumar Jha, Professor MG International Hindi University; Wardha visited the centre for extension lectures on *Pedagogical Spacing: Probing practices*.
3. Dr. Jayanti Dutta, Deputy Director, Academic Staff College Panjab University Chandigarh delivered a lecture on *How We Teach and how we should teach* on 10.6.2015
4. Dr. Agyajit Singh former Head of the Deptt. of Psychology delivered a lecture on *Emotional Intelligence* on 31 Aug, 2015

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

- Group discussion
- Seminar presentations
- Dialogue method
- Team teaching
- Problem solving
- E – discussion
- Collaborative techniques
- Cooperative learning
- Demonstration
- Story telling
- Narration
- Video conferencing
- Simulated teaching
- Focused workshops

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

The programme objectives of M.Ed. are met by ensuring the following:

- Conducting of continuous assessment in the form of tests
- Continuous observation of the students to know their interests and skills
- Conducting of peer evaluation to know the aptitude and interest of learners
- By assessing using self-evaluation techniques
- Through class assessment techniques

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

Centre for Education started from academic session 2015-2016.

Dr. Jubilee Padmanabhan has been assigned the coordinator of MOOC

(Massive Open Online Courses) to be started at the university

48. Give details of “beyond syllabus scholarly activities” of the department.

- Expert lectures are organized as in *Section 44* above.

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

Not yet

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

1. Faculty members are working on very relevant themes related to Education. They publish their works in journals of national and International repute and disseminate their knowledge through participation in seminars and conferences.
2. Faculty has standardized psychological tests which are being used by young researchers at master and doctoral level
3. Mentoring model has been developed which is being used for internship.

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

Strength

- Well qualified faculty devoted to teaching and research in the traditional core areas as well as the newly emerging and challenging areas.
- Good academic resources with well-equipped central library having large collection of books, database and online journals.
- Updated and comprehensive curriculum with contemporary issues and meeting global standards as well as the needs of the society.
- Faculty equipped with latest teaching technology.

Weaknesses

- Space constraint as our university is working in transit campus.

- Faculty requirement in other disciplines like social sciences, mathematics and languages.

Opportunities

- As faculty is experienced and trained they have opportunity to conduct interdisciplinary classes for competitive exams.
- Because of availability of high quality academic resources the faculty is able to conduct research from grass root level to global level.
- To facilitate faculty recharge programme department can organize workshops, seminars and conferences at different levels.
- The department also have facilities to conduct training programme for school teachers, college teachers and teacher trainees on Innovative teaching and evaluative practices

Challenges

- The local community is not aware of academic and human resources available at the centre.
- Medium of instruction in the university is English but majority of students are coming from Hindi and Punjabi background.

52. Future Plans

- The centre is likely to establish in near future an excellent Psychology Resource centre having all the modern equipment, apparatus and psychological tests as well as an Educational Technology lab having smart classroom facilities and Interactive white boards.
- Collaboration with national and international bodies.
- Undertaking of projects by faculty of education.
- Establish a research forum to organize research activities.
- Establishing collaboration with teacher education institutions/ colleges.

17. Centre for Law

1. Name of the Department:

Centre for Law

2. Year of Establishment:

2011

3. Is the Department part of a School/Faculty of the university?

Yes, School of Legal Studies and Governance.

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D. Sc., D.Litt., etc.)

LL.M.-Ph.D Integrated Programme in Environmental Law (2011-12)

LL.M. in Environmental Law (1 Year) (2013-14 and 2014-15)

LL.M. in Law (2 Year) (from session 2015-16)

5. Interdisciplinary programmes and departments involved:

The courses offered by the center are interdisciplinary.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

Nil

7. Details of programmes discontinued, if any, with reasons

- LL. M. - Ph.D. Integrated Programme in Environmental Law: This course is discontinued due to not availability of qualified faculty to guide the students.
- LL.M. in Environmental Law (2 Year): Minimum number of candidate was not available for the programme.
- LL.M. in Environmental Law (1 Year): The requirement of the faculty members for one year LL.M. as per UGC was not fulfilled.

8. Examination System (Annual/Semester/Trimester/Choice Based Credit System):

The university has semester and choice based credit system.

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

The faculty of the Centre teaches courses offered by other centres:

1. EVS.514 Environmental Law and Policy (Centre for Environmental Science and Technology)
2. CBS.508 Cyber Laws (Centre for Computer Science & Technology)
3. BSS.501 Research Methodology (Centre for Biosciences)
4. BSS.601 Research Methodology and Trends in Biosciences (Centre for Biosciences)
5. HGS.501 Research Methodology (Centre for Human Genetics)
6. GDM.501 Research Methodology (Centre for Genetic Diseases and Molecular Medicine)
7. PCS.501 Research Methodologies (Centre for Chemical and Pharmaceutical Sciences)
8. CPS.501 Research Methodology (Centre for Chemical and Pharmaceutical Sciences)

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

	Sanctioned	Filed	Actual (including CAS & MPS)
Professor	1	-	-
Associate Professors	2	2	2
Assistant Professors	4	4	4

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./LL.M. Students guided for the last 5 Years
Dr. Tarun Arora	Ph.D., LL.M.	Associate Professor	Environmental protection laws, Constitutional Law	12 years 3 months	--
Dr. Hans raj Arora	Ph.D , LL.M.	Associate Professor	Consumer protection laws, Environmental law, Land law, Cooperative law, Motor vehicle laws, Cyber laws	10 years	LL.M. 12
Dr. Puneet Pathak	D.Phil., LL.M.	Assistant Professor	Human rights, International environmental law, International law,	09 years	Ph.D. 01* LL.M. 05
Dr. Deepak Kumar	LL.D., LL.M.	Assistant Professor	Environmental law, Constitutional governance, Information technology law, Agricultural law	09 years	Ph.D. 01* LL.M. 05

Dr. Surender Mehra	PH.D, LL.M.	Assistant Professor	Competition law, Criminal law, Family law, Contract act, Consumer protection laws, Environmental law	6 years	LL.M. 7
Dr. Sukhwinder Kaur	Ph.D, LL.M.	Assistant Professor	Criminal law, Constitutional law, Family law, Indian contract act	5 years	LL.M. 01
* Under Guidance					

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors:

Nil

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

Nil

14. Programme-wise Student Teacher Ratio:

LL.M. - Ph.D. Programme		
S. No.	Session	Student Teacher Ratio
	2011-2012	2.5:1
	2012-2013	1.3:1
	2013-2014	1:1
	2014-2015	1:1
LL.M. (1 Year) Programme		
5.	2013-2014	3:1
6.	2014-2015	1.3:1
7.	2015- 2016	2.33:1

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

To be filled after CRR are approved

16. Research thrust areas as recognized by major funding agencies

Pollution from agricultural residue burning
 Environmental crime
 Problem of crop residue burning at local level

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

Project – 03			
Name of PI	Title	Funding Agency	Amount (Rs. in Lacs)
Dr. Deepak Kumar	Impact of laws and policies to prevent and regulate pollution from agriculture residue burning: A study of Bathinda district of the state of Punjab	UGC (Start-up Grant) (Yet to be released)	6
Dr. Puneet Pathak	Emerging trend in transnational environmental crime: A case study of illegal trade, Criminal activities and legal responses	Central University of Punjab	1.5
Dr. Puneet Pathak	Certificate course in Human rights and duties UGC Scheme: Human rights education	UGC	14
Dr. Deepak Kumar	Impact of laws and policies to prevent and regulate pollution from crop residue burning: A Study of Sub-Division Talwandi Sabo of District Bathinda in the State of Punjab.	Central University of Punjab	1.5

18. Inter-institutional collaborative projects and associated grants received

- a. National collaboration- Nil
- b) International collaboration- Nil

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

Nil

20. Research facility / centre with

- **State recognition**

Nil

- **National recognition**

Nil

- **International recognition**

Nil

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

NA

22. Publications:

No. of papers published in journals (national/international)	89
Monographs	Nil
Chapters in books	14
Edited books	Nil
Books with ISBN with details of publishers	4
<ol style="list-style-type: none"> 1. H. R. Arora & Avinash Dhamir Co-Operative Laws in Punjab & Haryana The Twenty-First Century Publications Patiala, 978-93-80144-11-2008, 2. H. R. Arora & Avinash Dhamir, Alankar Arora Motorised Road Transport Service: Checks & Balances, The Twenty-First Century Publications Patiala978-93-80144-12-2009 3. H. R. Arora & Avinash Dhamir A Compendium of Interpretative Techniques The Twenty-First Century Publications Patiala978-93-80144-13-2010 4. H. R. Arora & Avinash Dhamir, Mehak Dua, Land Laws of Punjab and Chandigarh (The Capital City of Beauty) The Twenty-First Century Publications Patiala978-93- 80144-60-3,2012 	

Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International	--
Citation Index– range/average	--
SNIP	--
SJR	--
Impact Factor– range/index	--
h-index	--

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

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

- Dr. Puneet Pathak, attended Amritsar Dialogue on Green Courts and Tribunals: Challenges and Opportunities as a nominee of the Vice Chancellor, CUPB held at GNDU campus, Amritsar on November 23-24, 2013.
- Faculty and students visited the Biodiversity train and collected information related to biodiversity conservation at the railway station at Bathinda (Punjab) on November 30, 2012.
- Dr. Tarun Arora participated in First United Nations Environment Assembly held at Kenya from July 23 to July 27, 2014.

26. Faculty serving in

a) National committees

Dr. Pathak

- Life Member of Indian Society of Criminology
- Life Member of All India Law Teachers Congress.

Dr. Tarun Arora

- Member, Indian Institute of Public Administration, New Delhi

b) International committees:

Dr. Pathak

- Member, International Society for Environmental Information Science.

c) Editorial Boards

Dr. Pathak

- Member of Editorial Board: Journal of Humanities and Culture (ISSN 2329 8285) Member of Editorial Board: Asian Journal of Human Development and Livelihood (ISSN: 2250-3161)

Dr. Tarun Arora

- 1,2,3 and 4th Annual International Conference on Law, Regulation and Public Policy 2012, 2013 and 2014, Singapore.

d) Any other (please specify):

Dr. Tarun Arora, Member, District Legal Services Authority.

Dr. Tarun Arora, Resource Person, Mahatma Gandhi State Institute of Public Administration, Punjab

27. Faculty recharging Strategies

- Cumulative Professional Allowance for attending national/international conferences and membership payments
- Books/Journal Allowance Reimbursement: Assistant Professor, Associate Professor, Professor are entitled to receive Books/Journal grant of Rs. 5000/-, Rs. 7500/-, Rs. 10,000 per annual, respectively.
- Research Seed Money: Every faculty member having substantial position in the university is entitled to receive Research Seed Money once in entire career with an objective develop research attitude among the newly recruited faculty.
- Faculty is entitled to attend one national/international seminar/conference in a year at the expense of the university.
- Faculties are also encouraged to attend orientation programs, refresher courses, training programmes, workshops, symposium under faculty recharging strategies of the university.
- The university started faculty seminar series with the objective to

promote interdisciplinary research collaboration between different centres of the university.

28. Student projects

Percentage of students who have done in-house projects including inter-departmental projects.

100%

Percentage of students doing projects in collaboration with other universities industry / institute

Nil

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

- Faculty

S. No.	Name of faculty/ Fellows/ Students with designation in centre	Name of the award	Awarding authority	Year and other details
1	Dr. Deepak Kumar	Young Scientist Award	Ministry of Petroleum and Natural Gas, Govt. Of India	2011, For research excellence on sustainability of fresh water resources: Legal and institutional mechanism in India
2.	Dr. Tarun Arora	Independence Day Award	Office of Deputy Commissioner, Faridkot	2014 for contributing in the field of environment education, awareness and bringing honour to Faridkot by participating in United Nations environment assembly.

- **Doctoral / post-doctoral fellows:**

Nil

- **Students**

Nil

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

The Centre has organized various events funded by the university:

- Celebrated Constitution Day at Centre and organized a special Lecture on Indian Democracy on Cross Roads delivered by Prof. Mool Chand Sharma, Vice Chancellor, Central University of Haryana, on 24th November 2011.
- Organized a guest lecture on Human Rights by Prof. Harish Puri, Retired Professor, B. R. Ambedkar Chair, Department of Political Science, Guru Nanak Dev University Amritsar on December 8, 2011.
- Celebrated Law Day with an interactive discussion session by faculty members and students of different centres of the University on November 26, 2012.
- Organized a special lecture on ‘Environment Issues and their Management’ delivered by Dr. Babu Ram, Member Secretary, Punjab Pollution Control Board, Chandigarh on November 27, 2012.
- Organized an interactive discussion session by faculty members and students of different centers of the University to celebrate Human Rights Day on 10 December 2012.
- Celebrated Law Day with an interactive discussion session by faculty members and students of different centres of the University on 26 November 2013
- Organized a Poster Exhibition and an interactive discussion session at University level as a part of Human Rights Day Celebration on 10 December 2013.
- Celebrated National Law Day with a special lecture on Law and Social Change by Prof. Veer Singh, Former Vice Chancellor,

NALSAR University of Law, Hyderabad on 26th November 2014.

- Organized a Poster Presentation Competition on “Human Rights of Homemakers” and Discussion Session for Students and Faculty of different centers of the University on the topic “Human Rights of Unpaid Homemakers: Will a price tag help empowerment of Women” as a part of International Human Rights Day on 10 December 2014.

31. Code of ethics for research followed by the departments

Code of ethics followed by the university has been adopted by centre.

32. Student profile programme-wise:

Year	Name of the Course (refer to question no.4)	Applications received	Selected		Pass Percentage	
			Male	Female	Male	Female
2011-12	LL.M- Ph. D Integrated	29	5	0	100	--
2012-13	LL.M (2 Year)	10	0	0	--	--
2013-14	LL.M (1 Year)	47	6	3	100	100
2014-15	LL.M (1Year)	19	3	1	--	
2015-16	LL.M.(2 Years)	14	4	10	--	--
2015-16	Ph.D	18	1(JRF)	1		

33. Diversity of students

Year	Name of the Course (refer to question no.4)	% of students from the same University	% of students from other universities within the State	% of students from Universities outside the State	% of students from other countries
2011-12	LL.M- Ph.D	0	25	75	0
2013-14	LL.M (1 Year)	0	22.22	77.77	0
2014-15	LL.M (1 Year)	0	50	50	0
2015-16	LL.M.(2Years)	0	50	50	0
2015-16	Ph.D	0	100	0	0

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

S. No.	Name of Students/Registration No.	Year	Qualifying Exam
1	Ramandeep Singh Sidhu	2013	UGC-NET
2	Abhishek Kumar	2013	UGC-NET
3	Kamalpreet Singh Dhillon	2014	PCS(E)
4	Nishant Kumar	2015	UGC-NET

35. Student progression

Student progression	Percentage against enrolled
UG to PG	-
PG to M.Phil.	-
PG to Ph.D.	50%
Ph.D. to Post-Doctoral	-
Employed	
<ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	- 01 (Punjab Civil Service) Various Students are self- employed practicing in various courts/tribunals
Entrepreneurs	-

36. Diversity of staff

Percentage of faculty who are graduates	
Of Same University	0%
From other universities within State	50%
From universities from other States	50%
From university outside the country	0%

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

NA

38. Present details of departmental infrastructural facilities with regard to

- a. Library: 429 Law Books, 109 Bare Acts, 11 Encyclopaedia, 198 Law E-Journals
- b. Internet facilities for staff and students: High Speed Internet

Connectivity with 1Gbps NKN Link and Wi-Fi campus

- c. Total number of class rooms: 1
- d. Class rooms with ICT facility: 1
- e. Students’ laboratories: NA
- f. Research laboratories: NA

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

- **From the host institution/university**

S.No	Doctoral	Names
1		Ramandeep Singh Sidhu
2		V.J. Jithin
S.No.	Post-Doctoral	Names
Nil		Nil
S.No.	Research Associates	Names
Nil		Nil

- **From other institutions/universities:**

Nil

- **Number of post graduate students getting financial assistance from the university:**

Nil

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

Yes, before the development of new programme inputs were taken from external experts in the field of Environmental Law.

41. Does the department obtain feedback from Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, feedback of the faculty is utilized for updating course content and teaching methods. Dean Academic Affairs meets the faculty members at regular intervals to discuss issues pertaining to the Centre.

Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes, Student feedback on staff and curriculum is utilized for updating the curriculum as well as for the improvement of the faculty’s teaching methods and skills.

42. Alumni and employers on the programmes offered and how does the department utilize the feedback?

N.A.

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

Name of Student	Year	Qualifying Exam
Kamalpreet Singh Dhillon	2014	PCS(E)

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Detail of student enrichment programmes given as under:-

- Competitive Examination Cell was established by the university in 2012 to equip students with the basic requisite skills for the competitive examinations for better job opportunities.
- The university has also started language learning programme for the students of the university to learn English, Punjabi and Japanese language.
- The university also has a Movie Club to spread awareness among the students regarding contemporary social problems by watching art movies in the university auditorium.
- The University Library organized one day training workshop on plagiarism detection web tools iThenticate and ‘turnitin’ for faculty and students of the university on September 12, 2014.

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

Lecture method, seminar method, case study, field work, course centric chat groups, student seminars and group discussions.

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

Centre adopted continuous evaluation process to assess the progress of the students through internal examinations, term papers, assignments, case studies, seminars etc.

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

Students of the centre participated in university activities.

48. Give details of “beyond syllabus scholarly activities” of the department.

- Celebrated Constitution Day at Centre and organized a special Lecture on Indian Democracy on Cross Roads delivered by Prof. Moolchand Sharma, Vice Chancellor, Central University of Haryana, on 24th November 2011.
- Organized a guest lecture on Human Rights by Prof. Harish Puri, Retired Professor, B. R. Ambedkar Chair, Department of Political Science, Guru Nanak Dev University Amritsar on December 8, 2011.
- Celebrated Law Day with an interactive discussion session by faculty and students of different centers of the university on November 26, 2012.
- Organized a special lecture on ‘Environment Issues and their Management’ delivered by Dr. Babu Ram, Member Secretary, Punjab Pollution Control Board, Chandigarh on November 27, 2012.
- Organized an interactive discussion session by faculty and students of different centers of the University to celebrate Human Rights Day on 10 December 2012.
- Faculty and Students visited the Bio-Diversity Train and collected information related to biodiversity conservation at the Railway Station at Bathinda (Punjab) on November 30, 2012.
- Organized a Poster Exhibition and an interactive discussion session by faculty and students of different centers of the University as a part of Human Rights Day Celebration on 10 December 2013.
- International day for Biodiversity - Lectures on biodiversity were organized as part of biodiversity day celebrations on 22nd May 2013

funded by Punjab Biodiversity Board, Chandigarh.

- Celebrated Law Day with an interactive discussion session by faculty and students of different centers of the university on 26 November 2013.
- Celebrated National Law Day with a special lecture on Law and Social Change by Prof. Veer Singh, Former Vice Chancellor, NALSAR University of Law, Hyderabad on 26th November 2014.
- Organized a Poster Presentation Competition on “Human Rights of Homemakers” and Discussion Session by Students and Faculty of different centers of the university on the topic “Human Rights of Unpaid Homemakers: Will a price tag help empowerment of Women” as a part of International Human Rights Day on 10 December 2014.

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

Nil

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

The centre focuses on the assessment and solutions to regional/local environmental issues with legal instruments i.e. Impacts of crop residue burning, bio-medical waste, initiatives to clean water resources in Punjab, compilation of all cases of M. C. Mehta on Environment.

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

Strengths:

- Working for the Capacity building in Environmental law and human rights as there is an acute shortage of trained men power in the area.
- Diversity of faculty Expertise and interdisciplinary approach of the university enables the faculty and students of the centre to work on the scientific, sociological, economic aspects of environmental issues with legal aspect.
- Diversity of students provides the first-hand experience regarding the environmental hotspot at their place of residence.

- Interdisciplinary approach of the Centre.
- Advance Study resources available in the university.

Weaknesses:

- Lack of alumni network.
- Lack of senior faculty member.
- Lack of collaboration with other institutions having academic programme in law.

Opportunities & Challenges:

- The Centre is trying to meet the challenges of environmental protection and human rights issues at regional and national level through legal mechanism by focusing on local issues with global solution.
- The centre provides an opportunity to develop legal skill for those who want to work in the emerging area of environmental, human rights and corporate advocacy.
- There are only few centres/departments in India working in the area of environmental law and human rights that need to be strengthen and collaboration among them will be helpful to utilize the law as an instrument to mitigate the problem.
- The availability of trained men power is still a challenge in India as environmental institutions such as Pollution Control Board are not fully aware about the scientific and legal implication of environmental degradation. There is an urgent need to concentrate on capacity building to mitigate the environmental challenges of 21st century.

52. Future plans of the department.

1. Academic:

- To start direct LL.B., B.A. LL.B. programme in coming future.
- To add more specialization in LL.M. in Law (2 Year) Programme.

- Sign MOU with Law university and other state universities.

2. Community Activities:

- Initiate awareness programmes to control and manage crop residue burning,
- To organize awareness camps and legal literacy programme.

18. Centre for Sociology

1. Name of the Department:

Centre for Sociology

2. Year of establishment:

2015

3. Is the Department part of a School/Faculty of the University?:

Yes, in School of Social Studies

4. Names of programmes offered (PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc. D.Litt., etc.):

M.A Sociology (From the Academic session 2015-16)

5. Interdisciplinary programmes and departments involved:

Choice based credit system (CBCS) has been implemented by the university in the present academic session (2015-2016). Centre has offered interdisciplinary, as well as, elective courses along with core courses.

6. Courses in collaboration with other universities, industries, foreign institutions, etc.:

Nil

7. Details of programmes discontinued, if any, with reasons:

Nil

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System:

Semester system and Choice Based Credit System as prescribed by UGC

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

Yes.

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	1	0	0
Associate Professors	2	0	0
Assistant Professors	4	2	2

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

S. No	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of M.Phil/ Ph.D Students guided for the last 4
1	Dr. Vinod Arya	Ph.D	Assistant Professor	Human rights, Social change and strategies for social intervention.	2 years, 03 months.	Nil
2	Aditya Ranjan Kapoor	M. Phil	Assistant Professor	Sociology of religion, minority studies (Muslims),	1 Month joined CUP wef 10/8/15	Nil

12. List of Senior Visiting Fellows, adjunct faculty, emeritus professors:

Nil.

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

Nil

14. Programme-wise Student-Teacher Ratio:

2015-16	2.5:1
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15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual:

- As and when CRR would be proposed , the positions will be filled.

16. Research thrust areas as recognised by major funding agencies:

The main thrust areas of the centre are: Human rights, social exclusion, social dominance, sociology of India, minority and Dalit studies. As centre is new one and in the coming time going to apply for projects in these thrust areas.

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

None

18. Inter-institutional collaborative projects and associated grants received:
a) National collaboration b) International collaboration

Nil

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

Nil

20. Research facility/centre with

- **State recognition:**

Nil

- **National recognition:**

Nil

- **International recognition:**

Nil

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

Nil

22. Publications:

S.No.	Items	Total Numbers (after Joining CUPB)	
		Dr. Vinod Arya	Aditya Ranjan Kapoor
1.	Number of paper published in peer review journals (2009-2015)	-	-
2.	Number of paper published in Conferences/workshops / symposium/meeting	1	-
3.	Monographs	-	-
4.	Chapters in books	-	2
5.	Edited books	1	-
6.	Books with ISBN with details of publisher	-	-
7.	Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete)	-	-
8.	Citation Index/Average	-	-
9.	SNIP	-	-
10.	SJR	-	-
11.	Impact factor range	-	-
12.	H-index	-	-

23. Details of patents and income generated:

Nil

24. Areas of consultancy and income generated:

Nil

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

Nil

26. Faculty serving in:

a) National committees b) International committees c) Editorial Boards d) Any other (please specify)

Nil

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

Nil

28. Student projects

Nil

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

- **Faculty:**

Nil

- **Students:**

Nil

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

Nil

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

Centre will follow the code of ethics as in CUPB policy on research related ethics.

32. Student profile programme-wise:

Name of the Programme (refer to question no. 4)	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
MA. (2015-16)	32	3	2	-	-

33. Diversity of students:

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.A. (2015-16)	-	80	20	-

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

Nil- (The first batch of students started in the Academic Year 2015-2016)

35. Student progression:

Student progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil.	NA

36. Diversity of staff:

Percentage of faculty who are graduate from the same University	Nil
From other universities within the State	Nil
From universities from other States	100 %
From universities outside the country	Nil

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

Nil.

38. Present details of departmental infrastructural facilities with regard to:

- a) **Library:** This facility is available from the University Library.
Total e-Journals- About 256
Books available in library for centre- About 1005
- b) **Internet facilities for staff and students**
University has Hi-speed Wi-Fi internet connectivity.
- c) **Total number of class rooms:** 1
- d) **Class rooms with ICT facility:** 1
- e) **Students' laboratories:** Nil
- f) **Research laboratories:** Nil

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

Nil

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

Nil (as the programme started from academic session 2015-16)

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

Yes. New programmes are developed after rigorous discussion among faculty members, students, and experts. The discussion had taken into consideration the needs of the learners and the society. It is only after that the new programmes are approved by the Board of Studies, School Board, Academic Council and then the Executive Council.

42. Does the department obtain feedback from:

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

Yes, such feedback is not only taken at centre level but also at university level. Such feedback is utilised during revision of syllabus and preparation of new courses. As regards to teaching-learning-evaluation method the feedback is used to arrange remedial classes

for students.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes. Such feedback helps very much in identifying strength and weakness of staff members. Dean Academic Affairs interacts with students to obtain feedback on curriculum and teaching-learning-evaluation. The feedback is conveyed to faculty members.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

Nil as centre is started with academic session 2015-16.

43. List the distinguished alumni of the department (maximum 10):

The Centre is new one and thus there are no alumni at this time.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Its new centre established in 2015.

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

- Delivery of lectures and teaching using ICT multimedia and green/white board.
- Group discussion
- interactive) method
- Surprise test/ quiz
- Seminar presentations by students
- Tutorial classes

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

Students would be continuously assessed throughout semesters by giving assignments, term paper writing, surprise test and organizing quiz activities

and at the end of semester their performance is evaluated by end semester examination. Objective of the programmes offered by centre is to make students confident and capable. To fulfil this objective students are encouraged to participate in various educational and extracurricular activities. Also feedback is taken from the students in this regard.

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

New centre

48. Give details of “beyond syllabus scholarly activities” of the department.

New centre

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

No

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

New centre started from 2015-16

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

Strength

- Interdisciplinary research.
- Diversity of faculty expertise.
- Good infrastructural facilities in term of books and journals.
- Selection and screening of students in the respective programme is by the entrance examination.
- High quality uncompromised teaching curriculum of master programme which helps them to prepare for national level competitive examinations and entrance tests.

Weaknesses

- Lack of senior faculty.

- No collaboration with other university.
- New centre
- Low enrolment rate of the students
- Absence of non-teaching and technical staff

Opportunities

- Collaboration with other university/institutes
- Funding opportunities from different agencies
- Analyzing the local social problems
- Participation in decision making process of the centre
- Expanding the programme

Challenges:

- Getting quality visiting faculty and experts from other institution.
- Development of human resources and university infrastructure.
- Insufficient academic and research partnership.
- Placement of students

52. Future plans of the department.

Collaboration will be done with similar kind of centres of other universities for seminars, lectures and projects.

19. Centre for Computer Science & Technology

1. Name of the Department

Centre for Computer Science & Technology

2. Year of establishment

2011

3. Is the Department part of a School/Faculty of the university?

Yes, School of Engineering and Technology

4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D.Litt., etc.)

M.Tech. Computer Science and Technology (2012 onwards)

M.Tech. Cyber Security (for batches 2013-15 and 2014-16)

M.Tech. Computer Science and Technology (Cyber Security) (2015 onwards)

5. Interdisciplinary programmes and departments involved

Nil

6. Courses in collaboration with other universities, industries, foreign institutions, etc.

Nil

7. Details of programmes discontinued, if any, with reasons

Nil

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

- Semester and Choice Based Credit System

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

The faculty of the Centre takes the classes of following courses that are offered by other Centres:

- BSS.502 Computer Applications
- BSS.552 Computer Applications Practical
- EVS.502 Computer Applications
- EVS.552 Computer Applications Practical
- HGS.502 Computer Applications
- HGS.552 Computer Applications Practical
- BSS.602 Computer Applications
- BSS.652 Computer Applications Practical
- EVS.602 Computer Applications
- EVS.652 Computer Applications Practical
- PCS.502 Computer Applications
- PCS.552 Computer Applications Practical
- PHY.602 Computer Applications
- PHY.652 Computer Applications Practical
- SCA.602 Computer Applications
- SCA.652 Computer Applications Practical
- CPL.602 Computer Applications
- CPL.652 Computer Applications Practical
- DVE.602 Computer Applications

- DVE.652 Computer Applications Practical

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

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	01	01	01
Associate Professor	02	01	01
Assistant Professor	04	04	04

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

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of M.Tech. students guided for the last 4 years
Dr. A. K. Jain	Ph. D.	Professor	Bioenergy conversion systems, Environmental engineering.	35 Years	01 03 (In progress)
Dr. Amandeep Kaur	Ph.D.	Associate Professor Coordinator of Centre	Digital image processing	17 years	15 04 (In progress)
Er. Meenakshi	M. E.	Assistant Professor	Computer science & engineering (networking)	04 Years	09 05 (In Progress)
Er. Surinder Singh Khurana	M. E.	Assistant Professor	Computer/ network security	05 Years	07 07 (In Progress)
Er. Navjot Sidhu	M.Tech.	Assistant Professor	Computer engineering (network security)	7 Years 4 Months	07 06 (In Progress)
Er. Sukhreet Singh	M.Tech. (ECE)	Assistant Professor	VLSI design, Image	4 Years	05 4.5 (In

			processing		Progress)
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12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

Nil

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

Nil

14. Programme-wise Student Teacher Ratio

Programme		2012-13	2013-14	2014-15	2015-16
M.Tech. in Computer Science & Technology	:	18:4	36:6	25:5	32:5
M.Tech. in Cyber Security	:	Nil	14:6	28:5	14:5
M.Tech. in Computer Science & Technology (Cyber Security)	:	--	--	--	15:5

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

S. No.	Designation	Sanctioned	Filled	Actual
1.	Technical		01	Nil
2.	Administrative		Nil	Nil

When CRR will be approved, positions will be filled.

16. Research thrust areas as recognized by major funding agencies

- Network security
- Computer networks
- Cloud computing
- Software engineering
- Cyber security
- Bioinformatics

- Image processing

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

S.No	Title of the Project	Principle Investigator/Co- Investigator	Year		Funding Agency	Amount Sanctioned (In lacs)
			From	To		
1.	Overcoming the WPA2-PSK's "Hole 196 Vulnerability" using RSA-Public Key based Cryptography Scheme	Er. Surinder Singh Khurana	28-11-2014	27-11-2016	Central University of Punjab	1.87

18. Inter-institutional collaborative projects and associated grants received

a) **National collaboration**

Nil

b) **International collaboration**

Nil

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

Nil

20. Research facility / centre with

- **State Recognition:**

Nil

- **National Recognition:**

Nil

- International Recognition:**

Nil

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

Nil

22. Publications:

	Prof. A. K. Jain	Dr. Amande ep Kaur	Er. Meenakshi	Er. S. S. Khurana	Er. Navjot Sidhu
Number of papers published in peer reviewed journals (national / international)	: 29	10	04	03	09
Monographs	: Nil	Nil	Nil	Nil	Nil
Chapters in Books	: 07	Nil	Nil	Nil	Nil
Edited Books	: Nil	Nil	Nil	Nil	Nil
Books with ISBN with details of publishers	: Nil	Nil	Nil	Nil	Nil
Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)	: Nil	Nil	Nil	02	Nil
Citation Index – range / average	: 0-204	0-150	0-3	0-3	0-5
SNIP	: Nil	Nil	Nil	Nil	Nil
SJR	: Nil	Nil	Nil	Nil	Nil
Impact Factor – range / average	: 0-5.60	Nil	0-1.92	Nil	0-3.74
<i>h</i> -index	: 8	5	1	1	1

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Nil

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

Nil

26. Faculty serving in (a) National committees (b) International committees (c) Editorial Boards (d) Any other

Prof. A. K. Jain

- Member, National Advisory Committee, 1st International Conference on Recent advances in Bio-Energy Research, 14-17 March 2015, SSS, NIRE, Kapurthala.
- Co-chairman, Committee for making policy in the area of energy in production agriculture, National Academy of Agricultural Sciences, Government of India.
- Member, Editorial Board, Journal of Biofuels and Bioenergy, Sardar Swaran Singh National Institute of Renewable Energy (SSS-NIRE) in Collaboration with Diva Enterprises Pvt. Ltd. (Indianjournal.com).
- Member, Board of Studies, M. Tech./ Ph.D. in renewable energy in Punjab Technical University, NIT Jalandhar and Thapar University of Engineering, Patiala.

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

CUPB encourages teachers to participate in refresher courses, orientation programmes, workshops and seminars, etc. by providing liberal travel support.

- **Er. Surinder Singh Khurana** has attended a Special Summer School organized by UGC: Human Resource Development Centre,

Guru Nanak Dev University, Amritsar, from June 10, 2015 to June 30, 2015 (03 Weeks).

- **Er. Navjot Sidhu** has attended a Short Term Course on “Web Technologies” Organized by Department of Computer Science, NITTTR, Chandigarh from Feb 02, 2015 to Feb 06, 2015.
- **Er. Surinder Singh Khurana** has attended an Orientation Programme organized by Academic Staff College, Guru Jambheshwar University of Science & Technology, Hisar from June 19, 2014 to July 16, 2014 (04 Weeks).
- **Er. Meenakshi** has attended a Short Term Training Programme on "Network Security and Firewalls" organized by NITTTR Chandigarh at MIMIT, Malout (Punjab) from April 21, 2014 - May 2, 2014.
- **Er. Amanpreet Kaur** has attended a Short Term Course on “Cyber Security Measures (under Project of Ministry)” organized by NITTTR, Chandigarh from March 24, 2014 to March 28, 2014.
- **Er. Navjot Sidhu** has attended a 3-days workshop on “Wireless Network Simulation using NS-2”, organized by CSED, Thapar University, Patiala, Punjab from on March 13, 2014 to March 15, 2014.
- **Er. Neha Sood** has attended a 3-days workshop on “Wireless Network Simulation using NS-2”, organized by CSED, Thapar University, Patiala, Punjab from on March 13, 2014 to March 15, 2014.

28. Student projects

- **percentage of students who have done in-house projects including inter-departmental projects (Only Percentage)**

100%

- **percentage of students doing projects in collaboration with other universities industry / institute (Only Percentage)**

Nil

29. Awards / recognitions received at the national and international level by Faculty, Doctoral / Post-doctoral fellows / students

- **Prof. A. K. Jain**

-Visiting Professor, University of California Davis, USA, under a UNDP/FAO sponsored project, for a period of three months in 1986. During this period a project funded by UNDP on the determination of reactor scaling factors for rice husk gasifier was completed.

-UNDP/FAO fellow, Royal Institute of Technology, Stockholm, Sweden, for advanced training in the area of biomass gasification technology for a period of three months in 1990. During that period a mega project on Stand Alone Fuel Cell Power Plant for Rural Electrification in India was formulated and submitted to SIDA (Sweden) and ICAR (India) for funding. The project was later approved and was operated in three Indian Institutions and Royal Institute of Technology, Sweden.

-SIDA/ICAR fellowship, Royal Institute of Technology, Sweden in 1995 for advanced training in the area of fuel cell technology, for a period of two months.

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

S. No.	Name of events	Title	Organized by	Funding
1.	Workshop	Business Process Simulation	Centre for Computer Science & Technology	Central University of Punjab, Bathinda

31. Code of ethics for research followed by the departments

- The Centre follows code of ethics and policies as per CUPB guidelines.
- In addition, the Centre takes a lead in following and promoting IT related ethics and policies.
- Specifically an undertaking is collected from the students of M. Tech. (Cyber Security) regarding Ethical use of IT resources and skills learned during the course.

32. Student profile programme-wise:

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.Tech. in Computer Science & Technology 2012-13	240	06	14	100	100
M.Tech. in Computer Science & Technology 2013-14	852	17	05	on-going programme	On-going programme
M.Tech. in Cyber Security 2013-14	198	11	07	on-going programme	On-going programme
M.Tech. in Computer Science & Technology 2014-15	134	6	1	on-going programme	On-going programme
M.Tech. in Cyber Security 2014-15	103	11	6	on-going programme	On-going programme
M.Tech. in Computer Science & Technology 2015-16	267	7	18	on-going programme	On-going programme
M.Tech. in Computer Science & Technology (Cyber Security) 2015-16	257	6	8	on-going programme	On-going programme

33. Diversity of students

Name of the Programme (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Tech. in Computer Science & Technology 2012-13	0	60	40	0
M.Tech. in Computer Science & Technology 2013-14	0	18.18	81.82	0
M.Tech. in Cyber Security 2013-14	0	44.45	55.55	0
M.Tech. in Computer Science	0	28.57	71.43	0

& Technology 2014-15				
M.Tech. in Cyber Security 2014-15	0	57.14	42.86	0
M.Tech. in Computer Science & Technology 2015-16	0	24	76	0
M.Tech. in Computer Science & Technology (Cyber Security) 2015-16	0	42.85	57.14	0

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

S. No.	Name of Students	Year	Qualifying Exam
1.	Kumari Deepika	2015	GATE
2.	Arvind Kumar	2015	GATE
3.	Gajendra Singh Rathore	2015	GATE
4.	Junaid Ali Reshi	2015	GATE
5.	Anshu Malik	2015	GATE
6.	Amarpreet Kaur	2015	GATE
7.	Anubha	2015	GATE
8.	Rekha Kumari Yadav	2015	GATE
9.	Harsh Kishore Mishra	2015	GATE
10.	Srishti Yadav/ CUPB	2015	GATE
11.	Rinku	2015, 2014, 2013	GATE
12.	Sajja Harikrishna	2015, 2014	GATE
13.	Gursewak Singh	2015, 2014	GATE
14.	Amita	2015, 2014	GATE
15.	Sukhwinder Singh	2015	GATE
16.	Jaskaran Singh	2015	GATE
17.	Shweta Sharma	2015	GATE
18.	Amita Get	2014	UGC-NET
19.	Dharmveer	2014	UGC-NET
20.	Amandeep Kaur	2014	GATE
21.	Kanika	2014	GATE
22.	Siddharath Kumar	2014	GATE
23.	Siddharth	2014	GATE
24.	Shailesh Kumar	2014	GATE

25.	Ankit Pathak	2013	GATE
26.	Marut Kumar	2013	GATE
27.	Deepika Dhiman	2013	GATE
28.	Khushmeet Singh	2013	GATE
29.	Amita Get	2013, 2012	GATE
30.	Dharmveer	2013	GATE
31.	Gaurav Kumar	2013	GATE
32.	Komal Rani	2013	GATE
33.	Meenu Singh	2013	GATE
34.	Pankaj Kumar	2013	GATE
35.	Rajeev Kumar	2013, 2012	GATE
36.	Rajshree Purohit	2013	GATE
37.	Rohit Goyal	2013	GATE
38.	Saurav Kumar Jindal	2013	GATE
39.	Suchismita Mahato	2013, 2012	GATE
40.	Vicky Kumar	2013	GATE
41.	Ruby Goel	2012	GATE
42.	Shifali Hans	2012	GATE
43.	Mandeep Singh	2012	GATE

35. 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		
<input type="checkbox"/>	Campus selection	
<input type="checkbox"/>	Other than campus recruitment	39%
Entrepreneurs		Nil

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	0%
from other universities within the State	50%
from universities from other States	50%
from universities outside the country	0%

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

Nil

38. Present details of departmental infrastructural facilities with regard to

a) Library	University Library <ul style="list-style-type: none"> • Book Title: 606, Volume:615 • Printed International Journal:05, • Printed National Journals: 10 E-Journal Subscription: Elsevier, Springer, Blackwell-Wiley, ScienceDirect
b) Internet facilities for staff and students	1Gbps, NKN Networking
c) Total number of class rooms	1
d) Class rooms with ICT facility	1
e) Students' laboratories	3
f) Research laboratories	2

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

a) from the host institution/university

Nil

b) from other institutions/universities

Nil

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

M.Tech. in Computer Science and Technology students from AICTE: 15

(M.Tech. in Computer Science and Technology (batch 2014-15): 07

M.Tech. in Computer Science and Technology (batch 2015-16): 08)

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

Through external expert and faculty meetings to discuss course curriculum, method of evaluation, social impact and job opportunities.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Through frequent faculty meetings and immediate actions taken to improve teaching environment in the centre.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Students give their feedback on the faculty of all the courses and immediate actions are being taken to excel in the teaching

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

Nil

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

Only one batch of M.Tech. in Computer Science & Technology has passed out in 2014.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

- **Prof. Moin Uddin**, Pro-Vice Chancellor of Delhi Technological University, delivered a lecture on “Application of ICT in Mobile Health Care System” on May 13, 2013.
- **Prof. S.K. Salwan**, Former Vice Chancellor, Punjab Technical University, spoke on "Nature is the best designer" on May 13, 2013.
- **Mr. Parvinder Singh**, Former Senior Vice President, has provided industry interaction to students and faculty of the Centre on 24 September, 2013.

- ‘**First Innovators Day**’ celebrated on Friday, January 17, 2014.
 - ✓ Keynote speaker **Prof. J. S. Hundal**, Director, Giani Zail Singh, Punjab Technical University Campus, Bathinda, Innovations and technology development should not be at the cost of environment.
 - ✓
- **Foundation day Lectures (28 Feb, 2014):** Fifth Foundation Day, special lectures were organized in the university.
 - ✓ **Shri Avinash Chander**, Secretary, Department of Defence, GOI spoke on the evolution of futuristic technologies which shall create new and unseen challenges for the national security.
 - ✓ **Prof. S. K. Salwan**, Former Vice Chancellor, Punjab Technical University, spoke on “The Philosophy Underlying Universities”.
- **Prof. D. S. Broca**, XLRI, Jamshedpur, delivered a lecture on “Business Process Simulation”, on September 8th, 2014.

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

- Use of power point presentation and modular teaching method.
- Specialized courses with hands on project, presentation and home work related to the real practical problems for better understanding and depth knowledge in the subject matter for facing the real challenges to solve problems and to carry out independent research.
- Group discussions and quiz contests
- Brain storming, surprise test
- Class assignments, class seminars conducted to increase the students’ involvement.
- Term paper writing to improve research/review articles writing skills.
- Use of interactive teaching learning methods

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

The main objective of the M. Tech. Programme is to provide quality education in both the theoretical and practical foundations of Computer Science and Technology. And to train the students to apply the latest technologies in the field of cyber security, network security, software engineering, programming, and other recent IT trends to solve various real-world problems. To monitor learning outcomes, following activities are being performed:

- Continuous assessment evaluation;
- M.Tech. dissertation mid-term evaluation by external experts
- M.Tech. Dissertation final evaluation by sending reports to external experts.
- Frequent meetings with students;
- Seminar presentations.
- Quiz
- Feedback from subject experts and alumni

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

The Centre has conducted a Computer Literacy Programme for senior citizens, that was inaugurated at the Central University of Punjab at its city campus on 2nd April, 2013. The programme administered in 6 days from Tuesday to Thursday in two weeks.

48. Give details of “beyond syllabus scholarly activities” of the department.

- UGC/NET (ICT) classes conducted by the Centre
- Interdisciplinary faculty seminars at CUPB
- Participation in the debate competitions and quiz competitions
- Participation in the invited lectures organized by other centres.
- Visit to Science City, Jalandhar.
- Visit to Biodiversity Train.

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

M.Tech. in Computer Science and Technology course is approved by AICTE

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

The centre is involved in generating new academic modules, IT policies and research in its domain areas.

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

Strengths:

- A blend of young and experienced faculty covering the broad spectrum of research areas and they are experts in their field (s)
- Students are admitted through a very competitive admission process.
- Excellent research facilities for students.
- M.Tech. in Computer Science and Technology programme is approved by AICTE. All GATE qualified students admitted in this programme are getting a scholarship of Rs. 8000/- per month from AICTE.
- The centre is the first institute in the region to offer M. Tech. (Cyber Security) course, one of the latest current technology.

Weaknesses:

- Limitation of the space at this city campus.
- Though there are enough research infrastructures for the current programme however, the centre has to develop the facilities for the UG/PG students, such as workshops, drawing halls, programming laboratories, electrical and electronics laboratories etc.

Opportunities:

- In today's networked world, most organizations and enterprises depend on different kinds of information technology solutions which is well met by the courses offered by the Centre, i.e. M.Tech. in

Computer Science & Technology and in Computer Science & Technology (Cyber Security).

- Due to growth in technology, the Internet availability and sharing of information have tremendously increased the information threats to organizations and individuals, the centre thus makes earnest efforts to combat the threats posed by technology by providing hands on training to the students.
- The students are being trained for jobs in computer science and security fields.

Challenges:

- To make this centre as one of the best learning centres.
- To develop MOU's with the world renowned Universities & industries.

52. Future plans of the department.

- The centre is planning to improve its capability in interdisciplinary research.
- Industrial collaborations are also planned to create more research environment and job perspectives.
- Training and placement cell is established to have industry-institute interactions.

Annexure 1

**PUBLICATIONS BY CUPB FACULTY IN JOURNALS OF
IMPACT FACTOR**

Centre for Pharmaceutical Sciences and Natural Products

Prof. P. Ramarao

S. No.	Authors Name, Title, Journal Name, Volume, line number	Impact Factor
1.	Jena, G. B. Kaul, C. L. and Ramarao, P. (2002). Genotoxicity testing, a regulatory requirement for drug discovery and development: Impact of ICH guidelines. <i>Indian J. Pharmacol.</i> 34(2), 86-99.	0.68
2.	Srinivasan, K. Kaul, C. L. and Ramarao, P. (2005). Partial protective effect of rutin on multiple low dose streptozotocin-induced diabetes in mice. <i>Indian J. Pharmacol.</i> 37(5), 327-328.	0.68
3.	Bhadraiah, B. and Ramarao, P. (1982). Isolates of <i>Aspergillus flavus</i> from sorghum seeds and aflatoxin production. <i>Current Science</i> 51(23), 1116-1117.	0.83
4.	Ramakrishnan, N. and Ramarao, P. (1999). Computer modelling and simulation in materials science. <i>Bulletin of Materials Science.</i> 22(5), 829-834.	1.02
5.	Pawar, A. A. Vikram, A. Tripathi, D. N. Padmanabhan, S. Ramarao, P. and Jena, G. (2009). Modulation of mitomycin C-induced genotoxicity by acetyl- and thio- analogues of salicylic acid. <i>In Vivo</i> 23(2), 303-307.	1.15
6.	Ratnam, D. V. Chandraiah, G. Meena, A. K. Ramarao, P. and Kumar, M. N. V. R. (2009). The co-encapsulated antioxidant nanoparticles of ellagic acid and coenzyme Q10 ameliorates hyperlipidemia in high fat diet fed rats. <i>Journal of nanoscience and nanotechnology</i> 9(11), 6741-6746.	1.34
7.	Bhargava, H. N. Gulati, A. and Ramarao, P. (1991). Binding characteristics of [³ H]SCH 23390 in spinal cord and discrete brain regions of kappa-opiate tolerant-dependent and abstinent rats. <i>Pharmacology</i> 42(3), 121-127.	1.58
8.	Bhargava, H. N. Ramarao, P. and Gulati, A. (1988). Effect of methimazole-induced hypothyroidism on multiple opioid receptors in rat brain regions. <i>Pharmacology</i> 37(6), 356-364.	1.58
9.	Bhargava, H. N. Ramarao, P. Gulati, A. Matwyshyn, G. A. and Prasad, R. (1989). Brain and pituitary receptors for thyrotropin-releasing hormone in hypothyroid rats. <i>Pharmacology</i> 38(4), 243-252.	1.58
10.	Gulati, A. Ramarao, P. and Bhargava, H. N. (1989). Effect of	1.58

	repeated administration of U-50, 488H, a kappa opioid receptor agonist, on central 5-HT1 and 5-HT2 receptors in the rat. <i>Pharmacology</i> 39(3), 145-153.	
11.	Ramarao, P. and Bhargava, H. N. (1988). Evidence for the involvement of central opioidergic systems in L-tyrosine methyl ester-induced analgesia in the rat. <i>Pharmacology</i> 37(1), 1-7.	1.58
12.	Kushwaha, S. Tripathi, D. N. Vikram, A. Ramarao, P. and Jena, G. B. (2010). Evaluation of multi-organ DNA damage by comet assay from 28 days repeated dose oral toxicity test in mice: a practical approach for test integration in regulatory toxicity testing. <i>Regulatory Toxicology and Pharmacology</i> 58 (1), 145-154.	2.03
13.	Mondal, S. C. Tripathi, D. N. Vikram, A. Ramarao, P. and Jena, G. B. (2012). Furosemide-induced genotoxicity and cytotoxicity in the hepatocytes, but weak genotoxicity in the bone marrow cells of mice. <i>Fundamental & Clinical Pharmacology</i> 26 (3), 383–392.	2.12
14.	Vikram, A. Tripathi, D. N. Pawar, A. A. Ramarao, P. and Jena, G. B. (2008). Pre-bleed-young-rats in genotoxicity testing: a model for peripheral blood micronucleus assay. <i>Regulatory Toxicology and Pharmacology</i> 52(2), 147-157.	2.14
15.	Vikram, A. Tripathi, D. N. Ramarao, P. and Jena, G. B. (2007). Evaluation of streptozotocin genotoxicity in rats from different ages using the micronucleus assay. <i>Regul Toxicol Pharmacol</i> 49(3), 238-244.	2.14
16.	Arun, K. H. S. Kaul, C. L. and Ramarao, P. (2005). Green fluorescent proteins in receptor research: an emerging tool for drug discovery. <i>J Pharmacol Toxicol Methods</i> 51(1), 1-23.	2.15
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3.	Ashok Kumar, P. K. Ahluwalia Tunable Dielectric Response of Transition Metal Dichalcogenides MX ₂ (M = Mo, W; X= S, Se,Te) <i>Physica B: Condensed Matter</i> , 407: 4627-4634 (2012)	1.32
4.	Ashok Kumar, P. K. Ahluwalia Electronic Structure of Transition Metal Dichalcogenides Monolayers 1H-MX ₂ (M=Mo,W; X=S,Se,Te) from Ab-initio Theory: New Direct Band Gap Semiconductors. <i>European Physical Journal B</i> , 85: 186 (2012)	1.35
5.	Arun Kumar, Ashok Kumar, P. K. Ahluwalia Topology Dependent Electronic and Dielectric Properties of Free Standing Alloyed Ultrathin Nanowires of Noble Metals <i>Physica E:Low-dimensional Systems and Nanostructures</i> , 62: 136-146 (2014)	2.00
6.	Ashok Kumar, P. K. Ahluwalia Ab-initio Study of Structural, Electronic and Dielectric Properties of Free Standing Nanowires of Noble Metals <i>Physica E:Low Dimensionl Systems and Nanostructures</i> , 46: 259-269 (2012)	2.00
7.	Ashok Kumar, P. K. Ahluwalia First Principle Study of Interband Transitions and Electron Energy Loss in Mono and Bilayer Graphene: Effect of External Electric Field. <i>Physica E: Low Dimensionl Systems and Nanostructures</i> , 44: 1670-1674 (2012)	2.00
8.	Brij Mohan, Ashok Kumar, P. K. Ahluwalia A First Principle Calculation of Electronic and Dielectric Properties of Electrically Gated Mono and Bilayer Silicene <i>Physica E: Low Dimensionl Systems and Nanostructures</i> , 53: 233-239 (2013)	2.00
9.	Brij Mohan, Ashok Kumar, P. K. Ahluwalia Electronic and Optical Properties of Silicene under Uni-axial and Bi-axial Mechanical Strains: A First Principle Study <i>Physica E: Low-dimensional Systems and Nanostructures</i> , 61: 40-47 (2014)	2.00
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11.	Ashok Kumar, P. K. Ahluwalia Semiconductor to Metal Transition in Bilayer Transition Metal Dichalcogenides MX ₂ (M=Mo,W; X=S,Se,Te) <i>Modeling and Simulation in Material Science and Engineering</i> , 21: 065015, (2013)	2.17
12.	Munish Sharma, Ashok Kumar, P. K. Ahluwalia Strain and Electric	2.18

	Field Induced Electronic Properties of Two-Dimensional Hybrid Bilayers of Transition-metal Dichalcogenides. <i>Journal of Applied Physics</i> , 116: 063711 (2014)	
13.	Ashok Kumar, P. K. Ahluwalia A First Principle Comparative Study of Electronic and Optical Properties of 1H-MoS ₂ and 2H-MoS ₂ <i>Materials Chemistry and Physics</i> , 135: 755-761 (2012)	2.26
14.	Ashok Kumar, P. K. Ahluwalia Effect of Quantum Confinement on Electronic and Dielectric Properties of NbX ₂ (X= S, Se,Te) <i>Journal of Alloys and Compounds</i> , 550 : 283-291 (2013)	3.00
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16.	Gaoxue Wang, Mingsu Si, Ashok Kumar, Ravindra Pandey Strain Engineering of Dirac Cones in Graphyne. <i>Applied Physics Letters</i> , 104: 213107 (2014)	3.30
17.	Brij Mohan, Ashok Kumar, P. K. Ahluwalia Electronic and Dielectric Properties of Silicene Functionalized with Monomers, Dimers and Trimers of B, C and N Atoms <i>RSC Advances</i> , 4: 31700-31705 (2014)	3.84
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Centre for Geography and Geology

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Centre for Computer Science and Technology

Prof. A. K. Jain

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2.	Jain, A. K., Sharma, S. K. and Singh, D. (1999). Reaction Kinetics of paddy husk thermal decomposition, <i>Journal of Solar Energy Engineering</i> , 121, 25-30.	0.94
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6.	Jain, A. K., Sharma, V. R., Pathak, B.S. (1986). A note on the changes in the bulk density of crop residues due to the application of uniaxial pressure, <i>Agricultural Wastes (Known as Bioresource Technology)</i> , 16 (2), 89–95.	5.60
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Er. Meenakshi

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Er. Navjot Sidhu

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2.	Singh, J., Kumar, K., Sachdeva, M., Sidhu, N. (2012). DDoS Attack's Simulation using Legitimate and Attack Real Data Sets. <i>International Journal of Scientific and Engineering Research</i> . 3(6):1-5.	3.20
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Annexure 2

Publications of CUPB Faculty in Indexed Journals

Centre for Pharmaceutical and Natural Products

Prof. P. Ramarao

1. Ramarao, P. Jagadeesh, G. and Das, P. K. (1981). A study of presynaptic α -adrenoceptors of rabbit intestine. *Indian Journal of Experimental Biology* 19(12), 1154-1158.
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Dr. Vikas Jaitak

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2. Jain, A. K., Hydrogen from biofuels. Fuel Cell Technology. Ed. Panesar, B.S., Jain, A.K. and Singh, C.P., 1997, School of Energy, PAU, Ludhiana, 16-30.
3. Chopra Sangeeta, A.K. Jain, P.K. Gupta, A.K. Singh, P. Singh, R.K. Jindal (2008) ‘Liquid fuel production from biomass’. Training manual on Non Conventional Energy technologies, PAU, Ludhiana , 66-73.
4. Jain, A. K., Soni, R. and Singh, S. K., (2008) ‘State of the Art Technology on Biomass Gasification’. Training manual on Non Conventional Energy technologies, PAU, Ludhiana, 59-65
5. Singh, M., Jain, A. K., and Verma, A., (2008) ‘Commercial Production of alcohol from Lignocellulosic Materials’. Training manual on Non Conventional Energy technologies. Training Unit. COAE, PAU , Ludhiana, 4-8
6. Jain, A. K., and Rajesh Soni. Decentralized Energy Generation Via Biomass Gasification. Climate Change, Biodiversity and food Security in South Asian Region, Ed Neelima Jerath, Ram Boojh and G Singh, Macmillan, Publication, 2010, 381-392.
7. S. K. Singh and A. K. Jain, Application of Paddy Straw as Fuel. Climate Change, Biodiversity and food Security in South Asian Region, Ed Neelima Jerath, Ram Boojh and G Singh, Macmillan, Publication, 2010, 423-433.

Annexure 5

**Papers presented by CUPB Faculty in
Conferences/Seminar/Symposia**

**Centre for Pharmaceutical Sciences and Natural
Products**

Dr. Raj Kumar

1. Kumar, R., Alex, J. M., and Singh, S. (2014). Compounds Inducing hPBMC Proliferative Capacity *In Vitro*. National Symposium “Recent Trends in Molecular Medicine”, Centre for Genetic Diseases and Molecular Medicine, Central University of Punjab, Bathinda, Punjab, India December 5, 2014.
2. Kumar, R., Alex, J. M., and Singh, S. (2014). Novel Compounds as Targets for Cellular Reductases. National Symposium “Recent Trends in Molecular Medicine”. Centre for Genetic Diseases and Molecular Medicine, Central University of Punjab, Bathinda, Punjab, India, December 5, 2014.
3. Kumar, R., Pyrazolo. [3,4-d]pyrimidines: Synthetic strategies and biological activities, International Symposium on Recent Advances on Medicinal Chemistry (ISRAM), IL-12, NIPER, Mohali, September 8 – 10, 2014.
4. Kaur, G, Kumar, R, Rationale design of APE1 DNA repair inhibitors through in silico approaches, 8th Chandigarh Science Congress, CHASCON-2014 Panjab University, Chandigarh, 26th-28th February 2014.
5. Kumar, R, Rana, A., Chauhan, M., Singh, S., Microwave synthesis of derivatives of 4-aminoquinolines as potential anticancer agents, 50th Annual Convention of Chemist 2013, Punjab University, Chandigarh, December 04-07, 2013.
6. Chauhan, M., Alex, J. M., Singh, S., Kumar, R, An easy and greener approach for the synthesis of novel heterocyclics and their anticancer evaluation, 50th Annual Convention of Chemist 2013, Punjab University, Chandigarh, December 04-07, 2013
7. Kumar, R., Chairperson at UGC sponsored seminar on “Green Chemistry” organized at GHG Khalsa College, Gursar Sadhar, Punjab, February 24-25, 2012
8. Kumar, R., Attended a National Seminar on Environment and Health, September 27, 2011, Central University of Punjab, Bathinda.

Dr. Vinod Pathania

1. Sheetal, Ashish Ranjan Dwivedi, and Kumar.V. Poster entitled “Synthesis of Some Piperazine Containing Scaffolds as Potential MAO Inhibitors” 50th Annual Convention of Chemists; December 04-07, 2013; Department of Chemistry & Centre for Advanced Studies in Chemistry; Panjab University, Chandigarh
2. Vijender Saini and Kumar.V. Poster entitled “Design and *In Silico* Screening of Combretastatin Analogues as Potential Microtubule Polymerization Inhibitors” in a National Seminar on “Chemistry for Better Tomorrow: Current Trends and Challenges” March 8, 2014 at Postgraduate Department of Chemistry, Mata Gujri College Shri Fatehgarh Sahib, Punjab.
3. Ashish Ranjan Dwivedi, Ramandeep Kaur, Sandeep Singh and Kumar.V. Poster entitled “Ionic Liquid Mediated Regioselective Synthesis of Alkylimidazoles under Microwave Conditions and Their Antimicrobial Potential” in a National Seminar on “Chemistry for Better Tomorrow: Current Trends and Challenges” March 8, 2014 at Postgraduate Department of Chemistry, Mata Gujri College Shri Fatehgarh Sahib, Punjab, India.
4. Bhupinder Kumar and Kumar.V. Poster entitled “*In Silico* Screening of 1-Benzhydrylpiperazine Derivatives as Putative MAO inhibitors” in a Seminar on “Recent Trends in Molecular Medicine” December 5, 2014 at Central University of Punjab, Centre for Genetic Diseases and Molecular Medicine, Bathinda, Punjab, India.
5. Sapna Kumari and Kumar.V. Poster entitled “Design and *in silico* study of Imidazole Based Combretastatin as Putative Anticancer Agents” in a Seminar on “Recent Trends in Molecular Medicine” December 5, 2014 at Central University of Punjab, Centre for Genetic Diseases and Molecular Medicine, Bathinda, Punjab, India.
6. Shelly Pathania and Kumar.V. Poster entitled “Design and *in silico* Evaluation of putative Selective Estrogen Receptor Modulator Through Hybrid Molecular Approach” in a Seminar on “Recent Trends in Molecular Medicine” December 5, 2014 at Central University of Punjab, Centre for Genetic Diseases and Molecular Medicine, Bathinda, Punjab, India
7. Vivek Prakash Gupta and Kumar.V. Poster entitled “*In Silico* Screening of Combretastatin analogue as potential microtubule inhibitor” in a Seminar on “Recent Trends in Molecular Medicine” December 5, 2014 at Central University of Punjab, Centre for Genetic Diseases and Molecular Medicine, Bathinda, Punjab, India
8. Bhupinder Kumar R, Shelly Pathania and Kumar.V. Presentation entitled “Design, Synthesis and Screening of Phenylpiperazine and 1-Benzhydrylpiperazine Derivatives as Putative MAO inhibitors” in national seminar “51st Annual Convention of Chemists 2014” held on December 9-12, 2014 at Department of Chemistry, Kurukshetra University, Kurukshetra, Haryana, India.

9. Sapna Kumari, Vivek Prakash, Sandeep Singh and Kumar.V. Award presentation by student entitled “Design, Synthesis and *in silico* Studies of Imidazole-Based Combretastatin Analogues as Putative Anticancer Agents” in national seminar “51st Annual Convention of Chemists 2014” held on December 9-12, 2014 at Department of Chemistry, Kurukshetra University, Kurukshetra, Haryana, India.

Dr. Vikas Jaitak

1. Jaitak.V. National seminar on Environment and Health. Central University of Punjab Bathinda, 27th Sept 2011.
2. Mayank, Akanksha Sharma, Jaitak.V. Multi-targeted Breast Cancer Chemotherapy- Answer to Existing problems. 50th Annual Convention of chemists, Golden Jubilee Celebrations of Indian Chemical Society, at Panjab University Chandigarh, December 04-07, 2013.
3. Jaitak.V, *Stevia rebaudiana*: Natural substitute for sugar. 4th Biennial International Conference on Drug Discovery from Natural Products and Traditional Medicines (DDNPTM-2014), 20 - 22 November 2014, NIPER Mohali
4. Anuradha Thakur, Jaitak.V, Coumarins: An emerging invaluable agent with potential anticancer property. One day symposium on Recent Trends in Molecular Medicine, Dec 5, 2014, Central University of Punjab, Bathinda
5. Ramit Singla, Jaitak.V, *Asparagus racemosus* Wild: An Emerging Plant of Enormous Medicinal and Phytochemical Importance. One day symposium on Recent Trends in Molecular Medicine, Dec 5, 2014, Central University of Punjab, Bathinda.
6. Ramit Singla, Jaitak, V., Phytoestrogens from *Asparagus racemosus* targeting breast cancer pathway components.ISBOC-10 an IUPAC's International Symposium on Bio-Organic Chemistry, Indian Institute of Science Education and Research, Pune, India, January 11-15, 2015.

Dr. Pradeep Kumar

1. Pradeep Kumar, Deepika Sharma, Narasimhan B, Adverse Drug Reactions, 7th Annual conference of Society of Pharmacovigilance, 23-25 Nov. 2007, National Institute of Medical Sciences Medical College and Hospital, Jaipur.
2. Pradeep Kumar, Deepika Sharma, Narasimhan B, QSAR studies by Free Wilson analysis, Abstract No.RTPER-103, P-78, National Seminar on Recent Trends in Pharmaceutical Education and Research, 29-30 Sept. 2007, Rajendra Institute of Technology and Sciences, Sirsa.
3. Pradeep Kumar, Deepika Sharma, Narasimhan B, Antimicrobial substituted benzoic acid linked substituted benzylidene hydrazides, Abstract No-B-220, P-202, Proceedings of 59th Indian Pharmaceutical Congress, 20-23 Dec. 2007, BHU, Varanasi.

4. Pradeep Kumar, Balasubramanian Narasimhan, Synthesis, antimicrobial and anticancer evaluation of 3/4-bromo-*N'*-(substituted benzylidene/ furan-2-ylmethylene/ 5-oxopentylidene/ 3-phenylallylidene)benzohydrazides, IPGA national convention-17- 18 November 2012, held at Kurukshetra University, Kurukshetra.
5. Pradeep Kumar, Balasubramanian Narasimhan, Synthesis, antimicrobial, anticancer evaluation and QSAR studies of 2/3-bromo-*N'*-(substituted benzylidene/3-phenylallylidene) benzohydrazides, 18th Annual Convention of Society of Pharmacognosy on “Promotion and Globalisation of Indian Herbal Products- Perspectives and Prospects” held at Department of Pharmaceutical Sciences, Maharshi Dayanand University, Rohtak on February 21-22, 2014.
6. Pradeep Kumar, Balasubramanian Narasimhan, Hansch analysis of substituted benzoic acid benzylidene/furan-2-yl-methylene hydrazides as antimicrobial agents, UGC Sponsored National Seminar on Recent Trends and Innovations in Pharmaceutical Research, Department of Pharmaceutical Sciences, Maharshi Dayanand University, Rohtak held on, 8th March, 2014.
7. Pradeep Kumar, Balasubramanian Narasimhan, Synthesis and antitubercular activities of substituted benzoic acid *N'*-(substituted benzylidene/furan-2-ylmethylene)-*N*-(pyridine-3-carbonyl)-hydrazides, International Conference on Drug Resistance, Development, Pharmaceutical Technology and Outcomes, College of Pharmacy, Chitkara University, Rajpura, Punjab, April 11-12, 2014.
8. Pradeep Kumar, Balasubramanian Narasimhan, Ruma Saharan, Hansch analysis of anti-inflammatory and analgesic activities of substituted 1-alkyl/aryl-3-ethoxy carbonyl-5-hydroxy-2-methyl indoles, 1 Annual Conference of Association of Pharmaceutical Teachers of India, Haryana State Branch, held at Kurukshetra university, Kurukshetra on August 22-23, 2014.
9. Pradeep Kumar, Balasubramanian Narasimhan, Synthesis, antimicrobial, antiviral evaluation and QSAR studies of substituted benzoic acid {4-[(substituted imino/phenylimino/naphthalen-1-ylimino/benzylimino)-methyl]-benzylidene}-hydrazides, 6th National Conference on Thermodynamics of Chemical and Biological Systems (NCTCBS-2011, OP-67), held on 02-04-11, Department of Chemistry, Maharshi Dayanand University, Rohtak.
10. Pradeep Kumar, Jitender Mor, Rajinder Mann and Balasubramanian Narasimhan, Fixed-dose combinations: Merits and Demerits, International conference on “Global trends in pharmaceutical & clinical practices” organized by College of Pharmacy, Teerthanker Mahaveer University, Moradabad, U.P. on February 06-07, 2015.
11. Pradeep Kumar, Green Chemistry. Two Days Faculty Development Programme in collaboration with Indian Pharmacological Society on Emerging Trends in Pharmaceutical Practices, held at Teerthanker Mahaveer College of Pharmacy, Teerthanker Mahaveer University, Moradabad, U.P. on 12th to 13th September, 2014.

12. Kuldeep Mahiwal, Pradeep Kumar and Balasubramanian Narasimhan, Synthesis, antimicrobial and QSAR studies of 2-amino Benzoic Acid, AICTE Sponsored National Seminar on Recent Trends in Pharmaceutical Research, August 7-8, 2010, p. 26.
13. Pooja, Pradeep Kumar, Mahesh Kumar, Balasubramanian Narasimhan, 4-Nitro benzoic acid derivatives: Synthesis, antimicrobial evaluation and Quantitative Structure Activity Relationship studies, AICTE sponsored National Seminar on Recent Trends in Pharmaceutical Research, M.M.College of Pharmacy, Mullana-133207, AMBALA, August 7-8, 2010, p. 30.
14. Sneh Lata, Pradeep Kumar and Balasubramanian Narasimhan, Correlation of antimicrobial activities of 4-[1-(substituted aryl/alkyl carbonyl)-benzoimidazol-2-yl]-benzenesulphonic acids using Hansch analysis, AICTE Sponsored National Seminar on Recent Trends in Pharmaceutical Research, August 7-8, 2010, p. 34.
15. Mahak Saini, Pradeep Kumar, Mahesh Kumar, Balasubramanian Narasimhan, Synthesis, *in vitro* antimicrobial and anticancer evaluation and QSAR studies of *N'*-(substituted)-4-(butan-2-ylideneamino) benzohydrazides, IPGA national convention-17- 18 November 2012, held at Kurukshetra university, Kurukshetra.
16. Sanjiv Kumar, Pradeep Kumar, Rakesh Kumar Marwaha, Balasubramanian Narasimhan, Synthesis, antimicrobial, anticancer evaluation and QSAR studies of 3,4,5-trihydroxy benzoic acid derivatives, IPGA national convention-17- 18 November 2012, held at Kurukshetra university, Kurukshetra.
17. Sneh Lata, Shinky Mehta, Pradeep Kumar, Rakesh Kumar Marwaha, Balasubramanian Narasimhan, Synthesis, antimicrobial and anticancer evaluation of *n*-[2-(4-chloro-phenyl)-4-oxo-4h-quinazolin-3-yl]-2-(substitutedphenylamino)-acetamide derivatives, IPGA national convention-17- 18 November 2012, held at Kurukshetra university, Kurukshetra.
18. Sumit Tahlan, Pradeep Kumar, Balasubramanian Narasimhan, Synthesis, antimicrobial and anticancer evaluation of 1,2,4-triazole derivatives, IPGA national convention-17- 18 November 2012, held at Kurukshetra university, Kurukshetra [Abstract no. IPGANC-146].
19. Jitender Mor, Pradeep Kumar, Rajinder Mann, Ram Kumar Roy, Liposomes as drug delivery systems, UGC Sponsored National Seminar on Recent Trends and Innovations in Pharmaceutical Research, Department of Pharmaceutical Sciences, Maharshi Dayanand University, Rohtak held on 8th March, 2014.
20. Rajinder Mann, Pradeep Kumar, Jitender Mor, Ram Kumar Roy, Pharmacognostical and physico-chemical evaluation of the stem of *Solena amplexicaulis* (lam.) Gandhi, 18th Annual Convention of Society of Pharmacognosy on “Promotion and Globalisation of Indian Herbal Products- Perspectives and Prospects” held at Department of Pharmaceutical Sciences, Maharshi Dayanand University, Rohtak on February 21-22, 2014.

21. Teena Saini, Pradeep Kumar, Saloni Kakkar, Balasubramanian Narasimhan, Synthesis, antimicrobial and anticancer evaluation of N-((3-(4-substituted phenyl)-1-phenyl-1H-pyrazol-4-yl)methylene)-substituted benzenamines, 18th Annual Convention of Society of Pharmacognosy on “Promotion and Globalisation of Indian Herbal Products- Perspectives and Prospects” held at Department of Pharmaceutical Sciences, Maharshi Dayanand University, Rohtak on February 21-22, 2014.
22. Rajinder Mann, Pradeep Kumar, Jitender Mor, Ram Kumar Roy, Pharmacognostical standardization of the roots of *Solena amplexicaulis* (lam.) Gandhi, UGC Sponsored National Seminar on Recent Trends and Innovations in Pharmaceutical Research, Department of Pharmaceutical Sciences, Maharshi Dayanand University, Rohtak held on 8th March, 2014.
23. Ram Kumar Roy, Pradeep Kumar and Prince Prasant Sharma, Conversion of isolated betulin betuleninic acid to via Jone’s oxidation, International Conference on Drug Resistance, Development, Pharmaceutical Technology and Outcomes, College of Pharmacy, Chitkara University, Rajpura, Punjab, held on April 11-12, 2014.
24. Jitender Mor, Pradeep Kumar, Rajinder Mann, Ram Kumar Roy, Recent advances in colon targeted drug delivery systems, International Conference on Drug Resistance, Development, Pharmaceutical Technology and Outcomes, College of Pharmacy, Chitkara University, Rajpura, Punjab, held on April 11-12, 2014.
25. Rajinder Mann, Pradeep Kumar, Jitender Mor, Ram Kumar Roy, Pharmacognostical and physico-chemical evaluation of the roots of *Cryptolepis dubia* (Burm.f.) M.r. Almedia, International Conference on Drug Resistance, Development, Pharmaceutical Technology and Outcomes, College of Pharmacy, Chitkara University, Rajpura, Punjab, held on April 11-12, 2014.

Centre for Chemical Sciences

Dr. Nagendra Babu

1. A. S. Reddy, V. Duggal, J. N. Babu, M. Aggarwal, R. K. Patel and H. Singh, Integrated Management of Mercerizing Wastewater from a Denim Fabric Manufacturing Industrial Facility. *Proceedings of 2nd International Conference on Environmental Management 2010*, 652.
2. A.S. Reddy, V. Duggal, M. Aggarwal, R. K. Patel, J. N. Babu, R. Verma and H. Kumar, Zero effluent discharge strategy for wastewater management from crushed bone acid leaching process. *Proceedings of 2nd International Conference on Environmental Management 2010*, 864.
3. J. N. Babu ‘Kyoto Protocol’ at NITTTR Chandigarh sponsored Staff orientation program on “Sustainable Development in Present Indian Scenario” at BHSBIET, Lehra Gaga, September 13, 2013.
4. J. N. Babu ‘Semi Volatile Organics in Ambient Air’ at

NITTTR Chandigarh sponsored Staff orientation program on “Sustainable Development in Present Indian Scenario” at BHSBIET, Lehra Gaga, September 13, 2013.

5. J. N. Babu ‘Clean Development Mechanism’ at NITTTR Chandigarh Sponsored Staff orientation program on “Sustainable Development- Issues and Latest Developments” at PTU-GZS Campus, Bathinda, July 09, 2012.

Dr. Rakesh Kumar

1. R. Kumar, D. Ermolat’ev, E. Van der Eycken, “Microwave-assisted intramolecular Staudinger/aza-Wittig reaction: A new approach to 2-aminoimidazolidines” 16th Sigma Aldrich Organic Synthesis Meeting, 2012, Spa, Belgium.
2. R. Kumar, D. Ermolat’ev, E. Van der Eycken, “A novel approach to cyclic guanidines (2-aminoimidazolidines)”, 13th Belgian Organic Synthesis Symposium (BOSS-XIII) held on 15-20th July, 2012 held at Katholieke universiteit, Leuven, Belgium.
3. R. Kumar, N. Sharma, A. Sharma, A. K. Sinha. “Green synthesis of bioactive compounds using ionic liquids and microwave”, National Seminar on Chemistry Biology Interface: Recent trends held on November 21-26, 2010, Ranikhet, Almora, India.

Dr. Rajendra Singh Dhayal

1. Unusual Open Eight-Vertex Oxamolybdaboranes: Structural Characterizations of $(\eta^5\text{-C}_5\text{Me}_5\text{Mo})_2\text{B}_5(\mu_3\text{-OEt})\text{H}_6\text{R}$ (R = H and *n*-BuO). *11th CRSI national Symposium in Chemistry*, NCL, Feb., 2009, Pune, India
2. Hydrido Copper (I) clusters stabilized by diselenocarbamate ligands. Annual Meeting of Chemical Society, National Cheng Kung University (NCKU), Tainan. Dec., 2012, Taiwan.
3. Nanosized Copper Polyhydrido cluster: $[\text{Cu}_{32}(\text{H})_{20}\{\text{S}_2\text{P}(\text{O}^2\text{Bu})_{12}\}]$. Annual Meeting of Chemical Society, NTHU, Nov., 2013, Taiwan.
4. Vertex-Fused Metallaborane Clusters: Synthesis, Characterization and Electronic Structure of $[(\eta^5\text{-C}_5\text{Me}_5\text{Mo})_3\text{MoB}_9\text{H}_{18}]$. *Inorganic Ring Systems-12*, August, 2009, Goa, India.
5. Synthesis of a New class of Open-Cage Dimolybdaheteroborane Clusters, *Inaugurated conference on molecular and functional catalysis (ICMFC)-1*, National University Singapore, July 2010, Singapore.
6. Solar H₂ Evolution from Polyhydrido Copper Nanoclusters and Complete Reduction of Hydrido Clusters by Borohydride: Formation of Rhombus-Shaped Copper Nanoparticles. The 11th Taiwan-U.S. Air Force Nanoscience Program Review & Workshop, May (13-15th), 2014, NDHU, Hualien, Taiwan.

7. [Cu₃₂(H)₂₀{S₂P(OⁱPr)₂}₁₂]: The Largest Number of Hydrides Recorded on A Molecular Metal Cluster by Neutron Diffraction, Frontiers at the Chemistry-Allied Sciences Interface (FCASI-2015), Univ. of Rajasthan. March (13-14th), 2015.

Dr. Krishna Kanta Haldar

1. K. K. Haldar, T. Sen and A. Patra, “Metal conjugated semiconductor hybrid nanoparticles based resonance energy transfer with varying their size and shape” poster presented in the International Symposium on Chemistry and Complexity, Indian Association for the cultivation of Science on December 6-8th, 2011.
2. K. K. Haldar, T. Sen and A. Patra, “Metal-Semiconductor Quantum Dots Multifunctional Nanoparticle Based Energy Transfer poster presented in the National Review meeting of Nanoscience & Nanotechnology (NSNT-2011), Indian Institute of Technology, Delhi on 25-27th February, 2011.
3. T. Sen, K. K. Haldar and A. Patra, “Resonance energy transfer between dye and QD’s” poster presented in the 11th Chemical Research Society of India (CRSI) National Symposium in Chemistry, National Chemical Laboratory, Pune on 6-8th February, 2009.
4. T. Sen, K. K. Haldar and A. Patra, “Resonance energy transfer between dye and QD’s” poster presented in the 20th Annual General Meeting of the Materials Research Society of India (MRSI AGM-2009), Saha Institute of Nuclear Physics, Kolkata on 10-12th February, 2009.
5. K. K. Haldar, T. Sen and A. Patra, “Metal-Semiconductor Quantum Dots Multifunctional Nanoparticle Based Energy Transfer” poster presented in the 12th Chemical Research Society of India (CRSI) National Symposium in Chemistry, Indian Institute of Chemical Technology, Hyderabad on 4-7th February, 2010.
6. T. Sen, K. K. Haldar and Amitava Patra, “Quantum-Dot Based Resonance Energy Transfer” poster presented in the Foundation Day, Indian Association for the Cultivation of Science, Kolkata on July 29, 2009.

Center for Animal Sciences

Dr. Anil K. Mantha

1. Mantha AK, Kaur N, Kaur M, Dhiman M. Oxidative Stress Induced Modulation of SOD and APE1: Key Towards Survival of Glioblastoma Cells. Allahabad, October, 24-27, 2013.
2. Mantha AK, Hegde ML, Hazra TK, and Mitra S. Repair of Radiation-Induced Genome Damage: Collaboration between Base Excision and Non-homologous End Joining Repair. Atlanta, May, 15-19 2010.

3. Gautam N, Mantha AK, and Mittal S. Amelioration of Pesticide-induced Toxicity by Phytochemicals. National Workshop on Training the Trainers: Water Quality and Health, February 11, 2015 at Central University of Punjab, Bathinda, India.
4. Sarkar B, Mittal S, and Mantha AK. Effect of Organophosphate Pesticides on Human Health. National Workshop on Training the Trainers: Water Quality and Health, February 11, 2015 at Central University of Punjab, Bathinda, India.
5. Kaur N, Thakur S, Dhiman M, and Mantha AK. Heavy metal Toxicity: A Blind Evil. National Workshop on Training the Trainers: Water Quality and Health, February 11, 2015 at Central University of Punjab, Bathinda, India.
6. Kaur I, Kaur S, Dhiman M, and Mantha AK. Phytoremediation “Green Revolution”. National Workshop on Training the Trainers: Water Quality and Health, February 11, 2015 at Central University of Punjab, Bathinda, India.
7. Atri R, Upadhyay S, Gupta KB, Mantha AK, and Dhiman M. Pollen Induced Stress in Human Lung Carcinoma A549 Cells. National Workshop on Training the Trainers: Water Quality and Health, February 11, 2015 at Central University of Punjab, Bathinda, India.
8. Cholia RP, Kumar R, and Mantha AK. Arsenic Induced Genomic Instability and Cancer. National Workshop on Training the Trainers: Water Quality and Health, February 11, 2015 at Central University of Punjab, Bathinda, India.
9. Kaur M, Dhiman M, Mantha AK. Assessment of Antioxidant Potential of Phytochemicals in Human Glioblastoma (U-87 MG) Cells. Bhubaneswar, Dec. 18-21, 2014.
10. Kaur N, Dhiman M, Perez-Polo JR, and Mantha AK. Phytochemical modulation of APE1-mediated neuronal survival along with mitochondrial OXPHOS against A β -induced neurotoxicity: A synergistic mechanism of neuroprotection. Bengaluru, Nov. 1-3, 2014.
11. Mantha AK, Kaur N, Kaur M, Dhiman M. Oxidative Stress Induced Modulation of SOD and APE1: Key Towards Survival of Glioblastoma Cells. Allahabad, October, 24-27, 2013.
12. Mantha AK, Dhiman M, Taglialatela G. Amyloid beta induced genotoxicity: what protects neurons? Cuttak, Nov. 9-11, 2013.
13. Mantha AK, Dineley KT, Perez-Polo JR and Mitra S. Neuroprotective Role of APE1/Ref-1 in Amyloid Beta Mediated Genotoxicity in Neuronal Precursor PC12 Cells. November 12, 2009 at UTMB, Galveston, TX, USA.
14. Mantha AK, Oezguen N, Izumi T, Bhakat KK, Mitra S and Braun W. Does the APE1 Double Mutant E96Q, D210N Bind Mg²⁺ in the Active Site? February 21 to 25, 2009 at Galveston, TX, USA.
15. Mantha AK, Chandrashekar IR, Dike A, Moorthy K, Baquer NZ and Cowsik SM. Role of Neurokinin B and A β -protein fragment 25-35 on aging rat brain synaptosomes. The XXIst International Conference on Magnetic Resonance in Biological Systems, January 16 to 21, 2005 at Hyderabad, India.
16. Chandrashekar IR, Mantha AK, Dike A and Cowsik SM. Structural features of Neurokinin-2 receptor selective peptide agonists and their role in receptor

- selectivity. The XXIst International Conference on Magnetic Resonance in Biological Systems, January 16 to 21, 2005 at Hyderabad, India.
17. Dike A, Chandrashekar IR, Mantha AK and Cowsik SM. Structural characterization of Scyliorhinin I: A dual NK1/NK2 receptor agonist. The XXIst International Conference on Magnetic Resonance in Biological Systems, January 16 to 21, 2005 at Hyderabad, India.
 18. Mantha AK, Chandrashekar IR, Moorthy K, Baquer NZ and Cowsik SM. Tachykinin NK-3 Receptor and its Agonist Neurokinin B (NKB) Interactions: Shedding Light on Aging Brain Functions. IBRO Advanced School on Neuroscience “Receptors, Channels, Messengers”, September 16 to 28, 2004 at Yalta, Ukraine.
 19. Mantha AK, Chandrashekar IR, Dike A, Baquer NZ and Cowsik SM. Three-dimensional structure of the mammalian tachykinin peptide neurokinin B bound to lipid micelles: A NK3 receptor agonist of mammalian origin involved in neuroprotection and Aging. NMRS 2004 [National Magnetic Resonance Society] Symposium on NMR Drug Design & Bioinformatics, February 17 to 20, 2004 at Kolkatta, India.
 20. Vidyasagar S, Mantha AK and Kulkarni SG. Evaluation of radiation exposure doses from television. National Symposium on Radiation and Molecular Biophysics, Bhabha Atomic Research Centre (BARC), January 21 to 24, 1998 at Mumbai, India.

Dr. Jyoti Parkash

1. J. Parkash, A. Loyens, S. Gallet, E. Balland, F. Pralong, J. Pastercamp, V. Prevot, P. Giacobini 2011 Semaphorin 7A expression in tanycytes is regulated by sex-steroid hormones and controls gonadotropin-releasing hormone-1 (GnRH-1) cell plasticity. 41st Annual Meeting of Neuroscience (SFN), November 2011, Washington DC, USA.
2. J. Parkash, A. Loyens, S. Gallet, E. Balland, F. Pralong, J. Pastercamp, V. Prevot, P. Giacobini Sema7A is a Tanycytic-Secreted Guidance Molecule and Regulates GnRH Axon Outgrowth in the Adult Brain. 14th LARC Neuroscience meeting, October 2010, Lille.
3. J. Parkash, D'Anglemont De Tassigny X, Bellefontaine N, Campagne C, Mazure D, Buée-Scherrer V and Prévot V 2010 Phosphorylation of NMDAR associated nNOS modulates hypothalamic nitric oxide production: The role of estrogen during ovarian cycle in female rats. 7th international congress of Neuroendocrinology from 7th - 11th July, Rouen, France P2-182.
4. J. Parkash, D'Anglemont De Tassigny X, Bellefontaine N, Campagne C, Mazure D, Buée-Scherrer V and Prévot V 2010 Phosphorylation of N-methyl-D-aspartic acid receptor-associated neuronal nitric oxide synthase modulates hypothalamic nitric oxide production: The role of estrogen during ovarian cycle in female rats; 36th Colloque De la societie de

neuroendocrinologie international congress from 15th - 18th September, 2009, Nice, France.

5. J. Parkash and Kaur G Potential of PSA-NCAM to Mediate Neuronal-glia interaction in GnRH Neurosecretion: Role of GABAergic and noradrenergic neurotransmitters; 29th Annual Japan Neuroscience Society (JNS) Kyoto from 19th - 21st July (Neuroscience Research, 2006).
6. J. Parkash and Kaur G Activity dependent neuronal-glia remodeling in the ME of adult rat hypothalamus: Role of GABAergic and noradrenergic neurotransmitters; 7th Biennial Asian Pacific Society for Neurochemistry (APSN 2006) Singapore from 2nd - 5th July (Journal of Neurochemistry 98 (1): 71, 2006).
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Dr. Rapalli Krishna Chaitanya

1. Chaitanya, R. K.: International conference on Frontiers in Comparative Endocrinology and Neurobiology, Department of Animal Biology, School of Life Sciences, University of Hyderabad, India. 24th-28th Novemeber, 2014
2. Chaitanya, R. K.: “Hormone/insecticide induced gene expression & physiological disruption during insect development” at International Conference on Environmental Biology and Ecological Modelling, Department of Zoology, Visva-Bharati, Santiniketan, India 24th-26th February, 2014
3. Chaitanya, R. K.: Genomics hands-on training workshop for quantitative-PCR and Microarray, Genomics facility, School of Life Sciences, University of Hyderabad, Hyderabad, India. 20th-23rd January, 2014.

4. Chaitanya, R. K.: National workshop on ‘Recent advances in Computational Methods for Drug Design & Discovery’ jointly organized by Jawaharlal Nehru Institute of Advanced Studies, Hyderabad & SHRODINGER, Bangalore, India. 17th-18th January, 2014
5. Chaitanya, R. K.: Innovations in Science and Technology for Emerging Knowledge Society, jointly organized by University of Hyderabad and Andhra Pradesh Akademi of Sciences, India 14th-16th November, 2013
6. Chaitanya, R. K.: “Molecular action of juvenile hormone and 20-droxyecdysone on silk fibroin expression in stored grain pest, *Corcyra cephalonica* during late larval development” at International Symposium on Molecular Signalling, Department of Zoology, Visva-Bharati, 18th-20th February, 2013
7. Chaitanya, R. K.: “Silk gene expression in rice moth: disruption by growth regulators” at International Symposium on Comparative Endocrinology and Stress Physiology, University of Kerala, India Santiniketan, India 16th-18th February, 2012
8. Chaitanya, R. K.: 1st-2nd December, 2011: Flow cytometry training & workshop organized by University of Hyderabad, DBT-Centre for Research and Education in Biology and Biotechnology
9. Chaitanya, R. K.: “Steroid modulated gene expression during insect development-An overview” at National Colloquium on Recent advances in Molecular and Cellular Endocrinology, Banaras Hindu University, Varanasi, India 23rd-25th September, 2011.
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11. Chaitanya, R. K.: XXIII All India Cell Biology Conference & International workshop on Cell cycle Regulation organized by School of Life Sciences, University of Hyderabad, Hyderabad, India 10th-13th December, 2009
12. Chaitanya, R. K.: International symposium cum workshop on Frontiers in Molecular Endocrinology organized by Department of Animal Sciences, University of Hyderabad, Hyderabad, India 1st-15th December, 2005

Dr. Ajay Kumar

1. Kumar, A. Poster presentation on “Novel anticancer therapeutic strategy involving targeting of monocarboxylate transporters by α -cyano-4-hydroxycinnamate” at 39th annual conference of Indian Immunology Society.

Centre for Plant Sciences

1. Dhawan, A.K., and Malik, C.P. (1979). Hormonal Control of malate dehydrogenase activity during *in vitro* pine pollen germination. *American Society for Plant Physiology Meeting: Plant Physiol.* 63 (Suppl): 98.
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3. Dhawan, A.K. (1987). Water-deficit stress and freeze tolerance in rape and mustard. *American Society for Plant Physiology Meeting: Plant Physiol. (suppl).* 86: 451.
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2. Guite, L. T. S. (2010). Internal Migration and Conflicts among the Ethnic Groups of Northeast India” dated 19th - 21st February 2010, at the XXXI *Annual Conference of the Institute of Indian Geographer*, organized by Department of Geography, Bangalore University, Karnataka.
3. Guite, L. T. S. (2013). Land, Identity and Ethnic Conflict in the District of Karbi Anglong, Assam” dated 29th—30th January 2013, at National Seminar on Issues of Ethnic Identity and Ethnic Conflict in North East India organized by Department of Cultural Studies, Tezpur University, Assam.
4. Guite, L. T. S. (2014). IAY and IDPs in the District of Karbi Anglong” dated

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5. Guite, L. T. S. (2014). Space and Conflict in Assam: A Geographical Perspective dated 20-22 December 2014 at the 7th Biennial International Conference of Indian Association for Asian and Pacific Studies held at Tezpur University, Assam.
 6. Guite, L. T. S. (2015). Inequality and Conflict: Assessing Regional Imbalances in Karbi Anglong District, Assam dated 25 – 28 February 2015 at International seminar of Institute of Indian Geographer hosted by Department of Geography, Guwahati University, Assam.
 7. Guite, L. T. S. (2007). Unrest in Karbi Anglong: Causes, Impacts and Solution dated 17th February 2007, National Seminar organized by Department of Political Science, Diphu Government College, Diphu.
 8. Guite, L. T. S. (2011). Mapping Changes in South and South-east Asia: Geopolitics, Economy and Demography dated 24th - 26th March 2011, International Seminar organized by Department of Geography, NEHU, Shillong.
 9. Guite, L. T. S. (2009). National workshop on “Research Methodology”, dated 23th - 30th March 2009, organized by Centre for Adult and Continuing Education, NEHU, Shillong.
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Centre for Mathematics and Statistics

1. Kumar, S. (2010). Symmetry Reductions and Exact Solutions of Modified b-Family Equation. Satellite Conference of International Congress of Mathematicians 2010 organized jointly by ISIAM & Sharda University at Sharda University, Greater Noida, Delhi NCR on August 15 -17, 2010.
2. Kumar, S. (2009). Modified b-Equations: Classical Lie Approach and Exact Solutions. Eighteenth International Conference of Forum for Interdisciplinary Mathematics organized by FIM and Jaypee University of Information and Technology at JUIT, Solan on August 2-4, 2009.

Dr. Anoop Kumar

1. Rajan Arora, Anoop Kumar, (2013), Solution of Linear and Nonlinear PDEs by the He’s Variational Iteration Method, *Recent Advances in Intelligent Control, Modelling and Computational Science*, ISBN: 978-960-474-319-3.

Dr. Harmanpreet Singh Kapoor

1. Kapoor, H. S. “Generalized Additive Model for evaluating premium of diabetic patients” in National Conference on Advances in Theoretical and Applied Statistics, 2015, held at Panjab University.
2. Kapoor, H. S. “Ageing Properties of Curtate Future Lifetime” in Chandigarh Science, Congress, 2014, held at Panjab University.

Centre for Classical and Modern Languages

Alpna Saini

1. Saini, A. “Negotiating the Ethical Crisis” in a national seminar at Punjabi University, Patiala in February, 2008
2. Saini, A. “Subjectivity in the Selected Plays of Mahesh Dattani” in a national seminar at Punjabi University, Patiala in February, 2009
3. Saini, A. “Gender and the Subaltern” in a national seminar at Punjabi University, Patiala in February, 2010
4. Saini, A. “A Study of *Videsh* as Cinematic Adaptation of *Nagamandala*” in a national seminar at DAV College, Bathinda in November, 2010
5. Saini, A. “Postcolonial Consciousness and Dalit Experience” in a national seminar at A. S. College, Khanna in November, 2010
6. Saini, A. “The Construction of a Terrorist” in a national seminar at GHG College, Sudhar in January, 2011
7. Saini, A. “The Comic and the Surreal” in a national seminar at Punjabi University, Patiala in February, 2011
8. Saini, A. “Revisiting the Mythical Patterns of Mahabharata” in the Summer School at IAS Shimla on June 26, 2011.
9. Saini, A. “Probing Alternate Sexuality in Mahesh Dattani’s *A Muggy Night in Mumbai*” in an international seminar at Punjabi University, Patiala on 25-26 November, 2011.
10. Saini, A. “Girish Karnad’s *Wedding Album*: The Mythical Discourse of Culture” in a national seminar at Baba Farid College, Bathinda on 1-2 March, 2012.
11. Saini, A. “The Rapist and the Voyeur: Paraphiliac Subjectivities in Manjula Padmanabhan’s *Lights Out*” in an international seminar at Punjabi University, Patiala on 16 November, 2012.
12. Saini, A. “Subjectivity, Indian Drama, and Translation” in a University level seminar at Central University of Punjab, Bathinda on 10 May, 2013.
13. Saini, A. “The Mis/Appropriation of Dalit as Marginal Identity: A Study of Prakash Jha’s *Arakshan*” at the 15th Annual SALA Conference—*Borders Boundaries, and Margins*—on 6 & 7 January 2015 in Vancouver, Canada.
14. Saini, A. “The Use of Folklore and Myth towards an Understanding of Female Subjectivity: An Analysis of Girish Karnad’s *Nagamandala* and *Hayavadana*” in 3rd All India Conference on Linguistics & Folklore at PAU, Ludhiana on May 28, 2015

Dr. Ramanpreet Kaur

1. Kaur, R. “Punjabi De Parmukh Bhashayi Adhyan Ate Paath Vigyanak Adhyan Vidhi” in 3^{ed} *All India Conference of Linguistics and Folklore*, organized by Department of Agril. Journalism, Langs. & Culture, Punjab Agricultural University in collaboration with Punjabi Linguistics Association, Patiala on 28th-29th May 2015.
2. Kaur, R. “Teekakari-Viakhyakari Aadharat Viakhya-Shastar”. National Seminar on *Hermeneutics of Guru Nanak Bani*. Organized by G.N. Studies. GNDU. Amritsar, 26-27 November, 2014
3. Kaur, R. “Aand Ton Brehmand: Guru Nanak Bani Darshan”. National Seminar *Guru Nanak Dev's Contribution to Indian Philosophy*. Organized by G.N.S. GNDU. Amritsar. November 22-23, 2013
4. Kaur, R. “Punjabi Bhashai Registarar Da Vikas: Sahitik Registarar”. National Conference *Punjabi Bhasha, Sahit Ate Sabhichar: Vartman Ate Bhavikh*, Organized by School of Punjabi Studies. G.N.D.U. Amritsar. March 25, 2013
5. Kaur, R. “Punjabi Sankalpik Lokdhara”. National Seminar *Punjabi Loddhara: Badlada Paripekh*. Organized by School of Punjabi Studies. G.N.D.U., Amritsar. March 20-21, 2013
6. Kaur, R. “Vishvikaran Ate Punjabi Bhasha Da Adhian: Samasiavan Te Samadhan”. National Seminar on *Vishvikaran De Yug Vich Punjabi Bhasha Ate Sahit Da Adhiapan*, School of Punjabi Studies. GNDU. Amritsar. Oct. 17-18, 2012
7. Kaur, R. “Sri Guru Granth Sahib Di Koshkari: Sathiti Te Sambhavna”. National Seminar on *Exegesis of Sri Guru Granth Sahib: Nature and Methodology*, Centre on Studies in Sri Guru Granth Sahib, GNDU, Amritsar March 28-29, 2011
8. Kaur, R. “Punjabi Bhasha Da Bhivekh: Chinta Ate Chintan”. National Conference on *Punjabi Bhasha Da Vikas: Chunoitian Te Smadhan* by BBK DAV College, for Women, Amritsar. April 16-17 2010
9. Kaur, R. “Gurudwara Sanstha: Sidhantak Adhar”. 24th Annual Seminar on *Guru Nanak Dev Ji Ate Gurudwara Sanstha Da Arambh*, Deptt. of GN Studies, GNDU, Amritsar. Nov.22-23 2009
10. Kaur, R. “Dasam Granth De Adhiyan Te Khoj: Sarokar Te Sarthikta. National Seminar on *Punjabi Adhiyan Te Khoj: Sarokar Te Sarthikta*. School of Punjabi Studies, G.N.D.U. Amritsar. March 9-10, 2009
11. Kaur, R. “Baba Deep Singh : Shahidi Sarup Di Sancharatmikta”. National Seminar on *Baba Deep Singh: Jivan Te Yogdan*, organised by Deptt. of GN Studies, G.N.D.U. Amritsar. Jan. 29-30, 2009
12. Kaur, R. “The Linguistic Studies In Punjabi: Current Trends”, 26th *Annual International Conference of South Asian Language Analysis*, by CIIL, Mysore. Dec. 19-21, 2006

13. Kaur, R. “A Classic Composition of Linguistic Pluralism In South Asian Literature: The Sikh Scripture”, *26th Annual International Conference of South Asian Language Analysis*, by CIIL, Mysore. Dec. 19-21, 2006
14. Kaur, R. “Sri Guru Nanak Dev Ji: Akal Roop Bimb Di Chinatmkta”, National Seminar on *Guru Nanak Dev Ji Da Jiwan Ate Sikhiawan : Parmukh Sarot da Mulankan*, by Deptt. Of Guru Nanak Studies, G.N.D.U., Amritsar. Nov.22-23, 2006
15. Kaur, R. “Slok Varan Te Vadhik M.1: Guru -Sanchartmak Sarup”, National Seminar on , hosted by Deptt. of Guru, March 6-7, 2006
16. Kaur, R. “Shri Guru Granth Sahib: Prohiti, Pandtau Ate Prtishtit Sanchar”, Forth International Conference on *Guru Granth Sahib : Challenges and Responses in the New Millennium*, hosted by Deptt. of Guru Nanak Studies, GNDU. Amritsar. Dec. 9-11, 2004
17. Kaur, R. “Shri Guru Granth Sahib: Bhashai Sanchartmakta”(Co-author Dr. P.S.Sidhu), A National Seminar on *Guru Granth Sahib* Organized by Shri Guru Gobind Singh College of Commerce, Delhi. Nov. 4-5, 2004
18. Kaur, R. “Gurbani Da Path Vigianak Adhyan”, National Seminar on *Gurbani Da Kav Sashtar* Organized by Deptt. of Literary Studies, Punjabi University, Patiala, May 6, 2004
19. Kaur, R. “Shri Guru Granth Sahib Di Bhashai Vilacsanta” (Co-author Dr. P.S.Sidhu), National Seminar on *Shri Guru Granth Sahib: Bahupakkhi Mahatav Ate Sarthakta* Organized by Punjabi Sahit Academy, Ludhiana. March 11-13, 2004
20. Kaur, R. “Shri Guru Granth Sahib Di Bhasha-Dikh Te Drish”, 20th International Punjabi Vikas Conference on *Shri Guru Granth Sahib : Vibhin pripek*, Organized by Punjabi University, Patiala. Jan 7-9, 2004
21. Kaur, R. “Shri Guru Granth Sahib-Bhashai Sanj”(Co-author Dr. P.S.Sidhu), National Seminar on *Shri Guru Granth Sahib Di sampadna Di Chauthi Shtabadi*, Organized by Gobind Sadan, Gadaipur, Delhi, Nov. 7-8, 2003
22. Kaur, R. “Jaap Sahib : Sarup Te Sanchar”, National Seminar on *Adhunik Punjabi Adhyan De Naveen Rujhan*, Organized by School of Punjabi Studies, GNDU, Amritsar. Nov. 4, 2003
23. Kaur, R. “Shri Guru Granth Sahib-Sikh Surat Da Sanaklpic Adhar”, in *Shri Guru Granth Sahib Interfaith Understanding to Word Peace* International Conference, organized by Deptt. of Guru Nanak Studies, GNDU, Amritsar. March 3-5, 2004
24. Kaur, R. “ Shabad Guru Di Semotics”, International Conference on *Inner Dynamics of Guru Granth Sahib*, organized by GNDU, Amritsar Oct.17-19, 2002
25. Kaur, R. “Impact of Globalization on Punjabi Language”, International Seminar on *Applied Linguistics in A Global World*, Organized by Deptt. of Linguistics, Delhi University, Delhi., Dec. 12-14, 2003
26. Kaur, R. “Shabadwali : Shabad-Roop Ate Arth-Ghera” (Chandi di vaar de adhar te) , A Seminar organized by Regional Centre, GNDU, Jalandhar, July 6, 2002

27. Kaur, R. “Maaru solhe mahala pehla: Bhashai jugat”, National Seminar on *Marru Solhe Mahala Pehla* organized by Deptt. of Guru Nanak Studies, GNDU, Amritsar, Feb 14-15,2002

Dr. Dinesh Babu Panamaram

1. Babu, D. “The Theme of “Passing” in the Novels of James Weldon Johnson and Nella Larsen.” in an International Seminar on “New Directions in African American Literary Studies” held on 23rd of September, 2011 at Osmania University Centre for International Programmes, Secunderabad.
2. Babu, D. “The concept of “Liberated women” in Zora Neale Hurston’s *Their Eyes Were Watching God* and Nella Larsen’s *Quicksand*” in a Two-day UGC National Seminar on Ethnic American Literatures of America: Retrospect and Prospects, held on 26-27th September, 2008 at Department of English, Post-Graduate College, (Osmania University), Secunderabad.
3. Babu, D. “*Shakespeare’s A Mid-Summer Night’s Dream* and N.N Pillai’s *Eeswaran Arastil* as Literary Carnivals in Drama” in a Two- day National Seminar for Research Scholars on Theatre Studies, held on 28-29th March, 2008, under the UGC-ASIHSS Programme, Department of English, University of Hyderabad.

Centre for South and Central Asian Studies (Including Historical Studies)

Dr. Vinay Kumar Rao

1. Rao, V.K. “*Women in Inscriptions of Andhra-Satavahana Period*” Paper presented in Annual Joint Conference of IAS, IHCS and ISPQS, at S V University, Tirupati; 19-22 Dec, 2003
2. Rao, V.K. “*Concept of Avyakrita in Discourses of Buddha*” Paper presented in a National Seminar organized by Department of Philosophy, Assam University, Silchar; 28-29 Nov, 2011.
3. Rao, V.K. “*Problems of Higher Education and its Remedies in Indian Culture Higher Education*” Paper presented in a National Seminar on Contemporary Educational Crisis sponsored by ICSSR and organized by Assam University Silchar at Assam University, Silchar; 20-22 Nov, 2014.
4. Rao, V.K. “*Buddhist Mysticism and Symbolic Representation of Mudrās , Maṇḍalas and Āsanas in Buddhist Art* ” Paper presented in a National Seminar organized by Department of Philosophy, Assam University, Silchar; 26-28 March, 2015.
5. “*Yashpal ki Ātamkathā Sinhāvalokana ka Eitihāsika sandarbha mein Mulyānkan*” Paper presented in National Seminar at Tripura University, Agartala; 30 March, 2015.
6. Rao, V.K. “*Women in Inscriptions of Andhra-Satavahana Period*” Paper presented in Annual Joint Conference of IAS, IHCS and ISPQS, at S V

- University, Tirupati; 19-22 Dec, 2003
7. Rao, V.K. “*Concept of Avyakrita in Discourses of Buddha*” Paper presented in a National Seminar organized by Department of Philosophy, Assam University, Silchar; 28-29 Nov, 2011.
 8. Rao, V.K. “*Problems of Higher Education and its Remedies in Indian Culture Higher Education*” Paper presented in a National Seminar on Contemporary Educational Crisis sponsored by ICSSR and organized by Assam University Silchar at Assam University, Silchar; 20-22 Nov, 2014.
 9. Rao, V.K. “*Buddhist Mysticism and Symbolic Representation of Mudrās , Maṇḍalas and Āsanas in Buddhist Art* ” Paper presented in a National Seminar organized by Department of Philosophy, Assam University, Silchar; 26-28 March, 2015.
 10. Rao, V.K. “*Yashpal ki Ātamkathā Sinhāvalokana ka Eitihāsika sandarbha mein Mulyānkan*” Paper presented in National Seminar at Tripura University, Agartala; 30 March, 2015.
 11. Rao, V.K. “*Women in Inscriptions of Andhra-Satavahana Period*” Paper presented in Annual Joint Conference of IAS, IHCS and ISPQS, at S V University, Tirupati; 19-22 Dec, 2003
 12. Rao, V.K. “*Concept of Avyakrita in Discourses of Buddha*” Paper presented in a National Seminar organized by Department of Philosophy, Assam University, Silchar; 28-29 Nov, 2011.
 13. Rao, V.K. “*Problems of Higher Education and its Remedies in Indian Culture Higher Education*” Paper presented in a National Seminar on Contemporary Educational Crisis sponsored by ICSSR and organized by Assam University Silchar at Assam University, Silchar; 20-22 Nov, 2014.
 14. Rao, V.K. “*Buddhist Mysticism and Symbolic Representation of Mudrās , Maṇḍalas and Āsanas in Buddhist Art* ” Paper presented in a National Seminar organized by Department of Philosophy, Assam University, Silchar; 26-28 March, 2015.
 15. Rao, V.K. “*Yashpal ki Ātamkathā Sinhāvalokana ka Eitihāsika sandarbha mein Mulyānkan*” Paper presented in National Seminar at Tripura University, Agartala; 30 March, 2015.
 16. Rao, V.K. “*Development of Buddhism and Characteristic Features of Pagodas in Pagan, Myanmar*”, Paper presented in International Conference of SOSAA, at Mumbai University, India; 16-18 Dec, 2006.
 17. Rao, V.K. “*Evidences of Asava Pana in Early Buddhist Period*”, Paper presented in International Conference of SOSAA, at Kazeron University, Iran; 25-29 May, 2008.
 18. Rao, V.K. “*Depiction of Atthakathana Scenes in Stone Sculptures of Pagan in Myanmar*”, Paper presented in International Conference of SLABS, at Buddhsvavaka University, Anuradhapura, Sri Lanka; 8-10 Dec, 2008.
 19. Rao, V.K. “*Artistic Elements on Door Jamb of Kyauk Gu Ohn Min*”, Paper presented in International Conference on Buddhist Heritage, at M S University. Baroda, India; 15-17 Jan, 2010.
 20. Rao, V.K. “*Sculptural Depiction of Nativity Scenes through Ages: India to*

- Bagan (Myanmar)*”, Paper presented in International Conference of SOSAA, at Keleniya University, Sri Lanka; 20-21 Aug, 2010.
21. Rao, V.K. “*Women in Early Buddhist Inscriptions*”, Paper presented in International Conference of SLABS, at SLIBA, Kandy, Sri Lanka; 10-12 Dec, 2010.
 22. Rao, V.K. “*Ancient Buddhist Education System: A Substitute for Sustainable Livelihood*”, Paper presented in International Conference at Assam University, Silchar, India; 17 Dec, 2010.
 23. Rao, V.K. “*Depiction of Nibbana Scenes: Comparative Study between India and Myanmar*”, Paper presented in International Conference on Perspective of Buddhism, at Field School of Archaeology, Pyay, Myanmar; 18 Dec, 2010.
 24. Rao, V.K. “*Birth of Buddha: Some Observations in Sculptures of Pyu and Pagan Period in Myanmar*”, Paper presented in International Conference on Buddhism Past and Present, at Garware College, Pune, India; 27-29 Jan, 2011.
 25. Rao, V.K. “*Exploring Cultural Interaction between India and Iran India and Iran: A Case Study of Winged Animals in Early Indian Art*” Paper presented in International Conference at Poona College of Arts, India; 3-5 March, 2011.
 26. Rao, V.K. “*Amorous Scenes in Early Buddhist Sculptural Art of Central India*”, Paper presented in International Conference of Asian Heritage (IAAH), at Keleniya University, Sri Lanka; 7-8 April, 2011.
 27. Rao, V.K. “*Women in Early Buddhist Sculptural Art of Central India*”, Paper presented in International Conference of SOSAA, at State Archaeology, Bhopal, India; 13-14 March, 2012.
 28. Rao, V.K. “*Influence of Indian Esoterism on Sculptures Arakan*” Paper presented in International Conference on Contribution of A. Coomarswamy Memorial Conference at Keleniya University, Sri Lanka; 8-10 Sept, 2012.
 29. Rao, V.K. Chaired a session and presented a paper “*Elements of Theravadi Buddhist Art in Myanmar*” in academic session on Asian Art and Culture (South East Asia), at Ananda Coomarswamy Memorial Conference, Keleniya University, Sri Lanka; 8-10 Sept, 2012.
 30. Rao, V.K. “*Heritage Management Strategy: An Urgent Need to Preserve Tangible and Intangible Cultural Heritage of Rakhine (Myanmar)*”, Paper presented in International Conference on Archaeology of Al Ula at SCTA, Kingdom of Saudi Arab; 11-13 Feb, 2013.
 31. Rao, V.K. “*Level of Consciousness in Theravada Buddhism Consciousness of Mind*”, Paper presented in International Conference on Consciousness of Mind organized by and at Department of Philosophy, Assam University, Silchar; 21-24 Nov, 2013.
 32. Rao, V.K. “*Some of the Episodes from Life of Buddha: Sculptural Depiction on stone from Arakan*”, Paper presented in International Conference of SOSAA, at RSS University, Raipur; 15-18 Feb, 2014.
 33. Rao, V.K. “*Stone Reliefs of Hindu Gods in Myanmar*”, Paper presented in

- International Conference of SEALG, at Goethe University, Frankfurt, Germany; 27-28 June, 2014.
34. Rao, V.K. “*Evolution of Stūpa and Pagodā in India and Myanmar: Architectural Plan and Ceremonial Practices*” Paper presented in International Conference on Evolution of Stupa organized by Ministry Of Defence and Ministry of Urban Development of Sri Lanka at Anuradhapura, Sri Lanka; 22 Nov, 2014.
 35. Rao, V.K. “*Historical Dimensions of 1857s Revolt in Rahul’s Kanaila Ki Kathā*”, Paper presented in International Conference organized by and at Department of History, Assam University, Silchar; 5-6 Feb, 2015.
 36. Rao, V.K. “*Development of Buddhism and Characteristic Features of Pagodas in Pagan, Myanmar*”, Paper presented in International Conference of SOSAA, at Mumbai University, India; 16-18 Dec, 2006.
 37. Rao, V.K. “*Evidences of Asava Pana in Early Buddhist Period*”, Paper presented in International Conference of SOSAA, at Kazeron University, Iran; 25-29 May, 2008.
 38. Rao, V.K. “*Depiction of Atthakathana Scenes in Stone Sculptures of Pagan in Myanmar*”, Paper presented in International Conference of SLABS, at Buddhsravaka University, Anuradhapura, Sri Lanka; 8-10 Dec, 2008.
 39. Rao, V.K. “*Artistic Elements on Door Jamb of Kyauk Gu Ohn Min*”, Paper presented in International Conference on Buddhist Heritage, at M S University. Baroda, India; 15-17 Jan, 2010.

Dr. Nishtha Kaushiki

1. Kaushiki, N. Sino-Russo Strategic Relations in International Politics: New Directions for Indo-US Relations. Presented at an International Conference on Indo-US Relations and South Asia organized by Rajiv Gandhi National University of Law, Punjab in association with the Embassy of the U.S., New Delhi on 29th and 30th October 2014.
2. Kaushiki, N. The China Factor in Indo-Japan Relations. Presented at Gujarat National Law University at an International Seminar on International Conference on India’s Foreign Relations in Southeast Asia and the Indian Ocean on 12-13th September 2014.
3. Kaushiki, N. Geopolitics of Responsibility to Protect and Responsibility while Protecting: India at the Crossroads of Principles and Reality. Presented at an International Seminar on Re-imagining Indian Foreign Policy: Emerging Challenges and Strategies. Organized by Department of Political Science, Banaras Hindu University, Varansai on 04th-05th April 2014.
4. Kaushiki, N. Asia Pivot and the Security Dilemma: Strategic Imperatives for India. Presented at International Conference on Law and Political Science organized by National Law University, Delhi on Feb. 6-8, 2014.
5. Kaushiki, N. Challenges for India’s Strategic Manoeuvring in Asia. Presented at 2nd International Interdisciplinary Conference organized by

Choice Institute of Management and Research, Pune on 16th September 2013.

6. Kaushiki, N. New Dimensions of Indo-Japan Strategic Relations: Scope and Challenges. Presented at 2nd International Interdisciplinary Conference organized by Choice Institute of Management and Research, Pune on 16th September 2013.
7. Kaushiki, N. The Road to Syrian Crisis: A Geostrategic Perspective. Presented at 2nd International Interdisciplinary Conference organized by Choice Institute of Management and Research, Pune on 16th September 2013.

Dr. Bawa Singh

1. Singh, B. Changing Dynamics of Strategic Relationship between China and Nepal: Theorizing India's concerns. Presented at International Conference on India-China-Nepal: Redefining Historical Relations in contemporary times, organized on 16 & 17 October, 2014 in JNU.
2. Singh, B. India's Look-East Policy: Mapping Myanmar's Reciprocation. Presented in International Conference on India's Foreign Relations- South East Asia and the Indian Ocean: Strengthening the Political, Economic Security and Cultural Prospects, organized on 12 & 13 September, 2014 in Gujarat National Law University.
3. Singh, B. Presented at International Conference on Indo-US Relations and South Asia, organized on 29 & 30 October, 2014 in Rajiv Gandhi National University of Law, Punjab.
4. Singh, B. India's Look East Policy: Emerging Equation in South East Asia. Presented in National Seminar on Indian Foreign Policy in the 21st Century: Challenges and Prospects, organized on 25-26 March 2010 in Panjab University, Chandigarh.
5. Singh, B. SAARC: Mapping Role and Relevance in the Changing Geopolitical and Geo-Strategic Landscape. Presented at National Seminar on SAARC: Problems and Prospects, organized on 24 & 25 March 2014 in Panjab University, Chandigarh.

Dr. Sudheer Singh Verma

1. Verma S.S. Presented paper entitled "Indo-South Korea: Shifting Strategic Relationship" for presentation in International Conference "Indo-South Korea Relations in the Context of South Asia" to be held on 27-28 March 2015 organised by Researchers' Association for the Study of Korea.
2. Verma S.S. Presented paper entitled "Locating India in International Climate Change Negotiations" in International Conference on 'Relevance of Policy Reforms on Development: Challenges before Emerging Economies' held at Jamia Millia Islamia (a Central University) from

February 24-26, 2011.

3. Verma S.S. Presented paper entitled “Interrelationship between Development and Climate Change in the Globalized World” in a seminar on Globalization and Development: Current Trends’ Organized by Institute of Foreign Policy Studies and United Nations Academic Impact Initiative (UNAI), University of Calcutta, on 18th August 2011.
4. Verma S.S. Presented paper entitled “Discourses on Global Climate Change” in the Research scholar seminar on ‘Democracy, Development and Security in Post-Soviet States: Twenty Years After’ organised by the Centre for Russian and Central Asian Studies, School of International Studies, Jawaharlal Nehru University, New Delhi- 67, on 7th September 2012.
5. Verma S.S. Presented paper entitled “Debating Global Climate Change” for International conference on ‘Global Environmental Politics’ organised by Gandhian Thought and Peace Studies, University of Allahabad, Uttar Pradesh, from 8-9 December 2012.

Centre for Economic Studies

Dr. Pabitra Kumar Mishra

1. Mishra, P.K. Presented a paper titled “Financial Inclusion: A Catalyst to Economic Growth of Odisha”, in 47th Annual Conference of Orissa Economics Association during 21st – 22nd Feb 2015, held at Centurion University of Technology and Management, Bhubaneswar, Odisha
2. Mishra, P.K. Presented a paper titled “Economic Impact of Labour Migration on Education – A Case Study of Khunti District in Jharkhand” in International Business Research Conference during 6th -7th Feb 2015, at International Management Institute, Bhubaneswar, Odisha
3. Mishra, P.K. Presented a paper titled “Indian Capital Market and Adaptive Market Hypothesis”, in the 3rd National Management Convention during 5th – 7th Feb 2015, at Asian School of Business Management, Bhubaneswar, Odisha
4. Mishra, P.K. Presented a paper titled “An Econometric Study of Ad Expenditure and Aggregate Consumption Spending in India”, in the International Conference on “The Next Leap: Exploring New Paradigms in Business” on 6 – 7 Feb 2014 at Central University of Jharkhand, Ranchi
5. Mishra, P.K. Presented a paper titled “Interest Rate Derivatives in India: Challenges and Opportunities”, in the International Conference on “Debt and Debt Derivatives” at Pondicherry University from 23 – 25 January 2014, Pondicherry, India
6. Mishra, P.K. Presented a Paper titled “Inclusive Growth: The Role of Financial Inclusion”, in the International Management Convention, 2013 Organized by Asian School of Business Management, Bhubaneswar in collaboration with AMDISA during 7-9 February 2013

7. Mishra, P.K. Presented a paper titled “Relationship between Spot and Index Futures Market in India”, in the International Conference on Competitiveness & Innovativeness in Engineering, Management and Information Technology (ICCIEMI-2012), held at Pune, India, 29 January 2012
8. Mishra, P.K. Presented a paper titled “Structural Problems of US and Europe: The Problems Inherited from the Recent Global Slowdown”, in the UGC sponsored National Seminar on “Debt Crisis of West – Concerns & Opportunities for India”, from 21st to 22nd January 2011, Organized by Department of Economics, Ispat Autonomous College in Collaboration with Department of Humanities & Social Science, NIT, Rourkela
9. Mishra, P.K. Presented a paper titled “The Impact of Western Debt Crises on India”, in the UGC sponsored National Seminar on “Debt Crisis of West – Concerns & Opportunities for India”, from 21st to 22nd January 2012, Organized by Department of Economics, Ispat Autonomous College in Collaboration with Department of Humanities & Social Sciences, NIT, Rourkela
10. Mishra, P.K. Presented a paper titled “ Global Financial Meltdown and Capital Market Volatility in India”, in the AICTE sponsored National Seminar on “Global Economic Meltdown: Challenges for the New Age Managers” from 17th to 18th December 2010, Organized by Institute of Business and Computer Studies, Faculty of Management, Siksha O Anusandhan University, Bhubaneswar
11. Mishra, P.K. Presented a paper titled “Soft Computing Applications in Economic Forecasting”, in the AICTE sponsored National Conference on “Artificial Intelligence and Emerging Technologies in Finance and Accounting” held on 27th and 28th January 2003, organized by Institute of Business and Computer Studies, an affiliated institution of Utkal University, Orissa.

Dr. Sandeep Kaur Bhatia

1. Kaur, S. (2010) Assessing Competitiveness and Intensity in International Trade among ASEAN Countries and India. November 19-20, 2010, Shri Ram College of Commerce, New Delhi.
2. Kaur, S. (2010). Export Potential of India with SAARC Nations: Evidence from Gravity Model Approach. December 16-17, 2010, Indian Institute of Foreign Trade, New Delhi.
3. Kaur, S. (2011). Poverty and Economic Growth in India: An Interstate Analysis. March 10-11, 2011, Kurukshetra University, Kurukshetra.
4. Kaur, S. (2011). Employment Intensity of Government Expenditure in INDIA. March 24, 2011, Guru Nanak Dev University, Amritsar.
5. Kaur, S. (2012). Growth and Performance of India’s trade with Central Asia. National Seminar on India and Central Asia: Perspectives on Bilateral and Regional Cooperation, CRRID, Chandigarh, October 17-19, 2012.
6. Kaur S. (2012) Macro Economic impact of remittances in South Asia,

- CAG2012 Annual Meeting, Wilfrid Laurier University and the University of Waterloo, Waterloo, Ontario, Canada, May 28-June 2, 2012.
7. Kaur, S. (2012). Prospects of India's initiatives towards the revival of silk route. Conference On Revisiting the Silk Road Centre for Russian Studies, Jawaharlal Nehru University, New Delhi, November 5-7, 2012.
 8. Kaur, S. (2013) Migration, trade and economic development in South Asia: A Panel data analysis, Indian Institute of Foreign Trade Commerce, Kolkata, January 10-11, 2013.
 9. Kaur, S. (2013). Impact of SAFTA: Evidence from India's Trade with other South Asian Countries. First South Asia History Conference at Punjabi University Patiala on 25-26 October, 2013.
 10. Kaur, S. (2014). Migration and Bilateral Trade Flows: Evidence from India. National Conference on Trade in services in India and inclusive growth paradigm: emerging opportunities and future challenges at Indian Institute of Foreign Trade, New Delhi on 22-23 August 2013.
 11. Kaur, S. (2014). South south free trade agreements in Asia: Where does SAFTA stand? University of Copenhagen, Asian Dynamics conference, 22-24 October, 2014
 12. Kaur, S., Singh, G. and Sonam (2014) Panchayati Raj Institutions and Common Land- A case study of Four Villages of Sangrur district. At seminar on Panchayati Raj as an Instrument of Rural Development with Support from Financial Institution at CRRID, Chandigarh on November 27-28, 2014.

Dr. Naresh Kumar Singla

1. Singla, N. (2014). Linkages between small scale producers and Fresh Food Supermarkets in India: Impacts on Income, Efficiency and Diversification. International conference on Innovations in Indian Agriculture: Ways Forward' organized by IEG-IFPRI at India International Centre, New Delhi on December 4-5, 2014.
2. Singla, N. (2014). Linking MGNREGA with PRIs for Inclusive Development in India. Seminar on Panchayati Raj as an Instrument of Rural Development with Support from Financial Institution at CRRID, Chandigarh on November 27-28, 2014.
3. Singla, N. (2014). Special Economic Zones in India: Principles, Practices and Prospects. UGC sponsored national seminar on Special Economic Zones: Prospects and Challenges at DAV College, Chandigarh on November 21, 2014.
4. Singla, N. and M. Kumar (2014). Inter-State Income Disparities and Convergence in India: A Study of Pre and Post Reform Period. 18th Annual conference of Indian Political Economy Association at Giri Institute of Development Studies, Lucknow on 15-16th November, 2014.
5. Singla, N. (2014). Linkages between Fresh Food Supermarkets and Farmers in India: A Case Study from Punjab. ICSSR Sponsored National Seminar on

- Agro-Processing Industry in N-W States of India-Performance, Prospects and Problems, on 28-29 March, 2014 at Guru Nanak Dev University, Amritsar.
6. Singh, S. and Singla, N. (2013). Linking Small Farmers to New Markets in India- A Case Study of Fresh Food Retail Chain in Karnataka. 27th Conference of Indian Society of Agricultural Marketing held on 18-20 December, 2013 at University of Agricultural Sciences (UAS), Dharwad.
 7. Singla, N. (2013). Organized Retailing in Fresh Fruits and Vegetables in India: A Case Study from Punjab. CESP Young Scholar's Seminar at Centre for Economic Studies and Planning, Jawaharlal Nehru University (J.N.U.) on 1-3 March, 2013, New Delhi.
 8. Singla, N. (2013). Role of Contract Farming in Agricultural Development in Punjab. National Seminar on Punjab Economy: Opportunities and Challenges on 13 February, 2013 at D.A.V. College, Sector-10, Chandigarh.
 9. Singla, N. (2012). Inclusive Fresh Food Retail Chains in India: A Case study from Punjab. International Seminar on Organized Retailing vis-à-vis Farm Economy of India on 21-22 September, 2012 at Centre for Economic and Social Studies (CESS), Hyderabad.

Dr. Jainendra Kumar Verma

1. Verma, Jainendra K. & Kumar, Jeetender; A Study of Selected Entrepreneurial Dimensions in India: An Exploratory Study; An ICSSR Sponsored National Seminar on Entrepreneurship for Economic Development in India with a Special Reference to its North Eastern Region: Challenges and Opportunities organized by Department of Management, Mizoram University Aizawl, Mizoram, India on 26–27 February 2013
2. Verma, Jainendra K. & Kumar, Shailendra; Entrepreneurship for Economic Development in India with a Special Reference to its North Eastern Region: Challenges and Opportunities; An ICSSR Sponsored National Seminar on Entrepreneurship for Economic Development in India with a Special Reference to its North Eastern Region: Challenges and Opportunities organized by Department of Management, Mizoram University Aizawl, Mizoram, India on 26–27 February 2013
3. Verma, Jainendra K. & Kumar, Jeetender; FDI in India: Challenges in Business and Other Sectors; An ICSSR Sponsored National Seminar on FDI in Retail Sector in India: Myth and Reality organized by Department of Applied Economics, Lucknow University, Lucknow, India on 20-21 April 2013

Dr. Jajati Keshari Parida

1. Parida, J.K. “Rural to urban migration and wage differentials in Urban India”, International Conference on “Internal Migration, Urbanization, Poverty and Inequality in Asia”, Siem Reap, Cambodia, during 5th to 7th November, 2014, Organized by the Asian Development Bank.
2. Parida, J.K. “Migration, Employment and Household Consumption in India”, International Workshop “Urbanization and Migration in Transnational India: Work and Family Life from a Welfare Perspective”, Bangalore, during 5th to 7th March, 2013, Organized with the collaboration of Swedish South Asian Network (SASNET), Nordic Centre in India (NCI), Lund University and Institute for Social and Economic Change (ISEC).
3. Parida, J.K. “Migration, Remittance and Household Consumption Behaviour in India”, 48th Annual Conference of the Indian Econometric Society (TIES) held in the University of Pondicherry, Pondicherry; 1st to 3rd March 2012.
4. Parida, J.K. “Determinants of Migration and Remittance in India: An Empirical Evidence”. 52nd Annual Conference of the Indian Society of Labour Economics (ISLE) held in the Karnataka University, Dharwad, Karnataka; during 17- 19th December, 2010.

Centre for Education

Professor S. K. Bawa

1. Bawa, S.K. National Conference of PLAI at Ferozabad on 25-26 March 1995. “Research in Creativity. Creativity and Academic Achievement in Different Subjects of 10 Graders.”
2. Bawa, S.K. National Conference of Indian Science Congress at Patiala on 3-8 January 1995. “Educational and Psycho-social Impact on Female Foeticide”.
3. Bawa, S.K. National Conference of AIAER at Madras on 4-6 June, 1996. “Impact of Education on Decision Making Pattern.”
4. Bawa, S.K. National Conference of AIAER at Chandigarh on 29-31 May, 1997. “Psychiatric Problems of Educated Women.”
5. Bawa, S.K. National Conference of PLAI at Tripuri on 20-22 November, 1997. “Aids Awareness amongst Truck Drivers of Punjab.”
6. Bawa, S.K. National Conference of Praachi Psycho-cultural Research Association at Patiala on April 3-4, 1998. “Generation Gap Among Women: An Attitude towards Modernization.”
7. Bawa, S.K. National Conference of AIAER at Sidhwan Khurd on 28-29 September (1998) on Updating Teacher Education.
8. Bawa, S.K. National Conference of PLAI at Meerut on 24-25 October (1998). “Emotional Maturity of Daughters of Working and Non-Working Mothers.”

9. Bawa, S.K. 12 Annual Conference of All India Association for Educational Research at Sohan Lal DAV College of Education, Ambala December, 15-17, 1998, “Issues in Teacher’s Education”
10. Bawa, S.K. Seminar on Role of Teachers in National Reconstruction at Amritsar by Punjab Chapter of AIAER on 6 February 1999.
11. Bawa, S.K. Seminar on Parental Behaviour and Child Development at Agra on 24 September 1999 organized by Praachi Psycho Cultural Research Association.
12. Bawa, S.K. National Seminar on Interactive Techniques for Distance Education at Shimla on 27-28 October, 1999 organized by IGNOU-ICDEOL
13. Bawa, S.K. Seminar of Punjab Chapter of AIAER at Patiala on Educational Research in the Next Decade on October 15, 2K.
14. Bawa, S.K. Annual Conference of Psycho Linguistic Association of India at Banasthali Vidyapith on 29-30 December 2K. “Psycho-social Impact on Modernization.”
15. Bawa, S.K. Panel Discussion of Punjab Chapter of AIAER at Kot Fatuhi on February 3, 2K1 on “New Trends in Educational Research.”
16. Bawa, S.K. Bawa, S.K. Conference of AIAER on Issues, Policies, Problems & Research in Information Technology on May 27-29, 2001 at Ghaziabad.
17. Bawa, S.K. Seminar on Reporting of Research of Praachi Psycho Cultural Organization at Agra September 2001.
18. Bawa, S.K. Conference on Gender Equality and Development at Punjabi University, Patiala on 23-24 Feb., 2001. “Decision Making Pattern of Employed Women.”
19. Bawa, S.K. Seminar of Punjab Chapter of AIAER at Ludhiana on 5 October 2001 on Value Education.
20. Bawa, S.K. Conference on Information Technology of AIAER on 27-30, May 2002 at Vishakapatnam. “Thinking Pattern of Teachers as a Function of Teaching Effectiveness Attitude of young Generation Towards Religious Values”
21. Bawa, S.K. Conference on Teacher Education at Agra on 20-22 September 2002 of Psycho_linguistic Association of India.
“Barriers in the Professional Growth of Womens Teachers Changing Value Pattern through Women Oriented TV Programmes”
22. Seminar of Punjab Chapter of AIAER at Amritsar on 23 Nov., 2002.
“Educational Research in Punjab”
23. Bawa, S.K. National Seminar at GHGH College of Education Sidhwan on Women Empowerment on 1-2 Dec., 2002. “Status of Women and Women Empowerment.”
24. Bawa, S.K. International Conference at Khalsa College of Education, Amritsar on 20-22 March, 2003 on Education for Peace and Development.
“Social Problems of Educated Working Women”
25. Bawa, S.K. International Conference of All India Association for Educational Research on Fourth Wave Education at in Department of Education,

- Saurashtra University, Rajkot (Gujarat) on Jan. 10-12, 2004. “Perceptions of Women Regarding the Changing Scenario of Religious Values”
26. Bawa, S.K. NAAC Sponsored Seminar on Education for Peace at Malwa Central College of Education for Women, Ludhiana on 5th March, 2004. “Role of Women in Developing Culture of Peace”
 27. Bawa, S.K. International Conference of All India Association for Educational Research at ICLORD, Bangkok on April 18-24, 2005 on Learning Organization. “Freezingness in Learning Organization: A Study of Senior Secondary Schools of Punjab.”
 28. Bawa, S.K. Seminar of All India Association for Educational Research, Moga on GATS and Education on Sept. 24, 2005. “GATS and Education.”
 29. Bawa, S.K. International Conference of All India Association for Educational Research at Punjabi University, Patiala on GATS and Education on December 28-30, 2005.
 30. Bawa, S.K. National Conference of PRAACHI and PIMG at Gwalior on April 21-23, 2006 on the theme Total Quality Management and Better Health Strategies. “Life styles of Young Generation.”
 31. Bawa, S.K. Seminar-cum-Workshop on Journey towards Self Culture on Oct 15, 2007
 32. Bawa, S.K. International Conference of AIAER on Internationalizing Higher Education at Lovely Professional University on Jan 28-30, 2008
 33. Bawa, S.K. Annual Seminar of AIAER on Utilizing Research: A new wave in Quality Education on 11 October, 2008
 34. Bawa, S.K. Seminar-cum-workshop at Malwa college of Education, Ludhiana on Ethical culture
 35. National Seminar on Teacher Education at GHG College of Education Sadhar on e-learning on Jan, 17, 2008
 36. Bawa, S.K. National Seminar on Enriched Teaching Learning at Kamala Nehru College for women Phagwara on March 8, 2008 on Quality Assurance.
 37. Bawa, S.K. WERA meeting at Nanyang University, Singapore on 23-24 Nov, 2008.
 38. Bawa, S.K. An International conference on Higher Education: Need for Priam Variate Reforms at LPU Phagwara Aug 3-5, 2009
 39. Bawa, S.K. National Seminar on Innovative Pedagogical practices; Promotion of teaching and Learning process on March, 8. 2009 at babe ke college of Education Daudhar
 40. Bawa, S.K. National Seminar on Education: Today and Tomorrow at Agra on 29-30 August 2009.
 41. Bawa, S.K. Era seminar on quality concerns in Teaching Practice at LLRM college of Education, dhudike on 29 january, 2010
 42. Bawa, S.K. National conference on Global Perspectives of teacher Education at K C College of Education on April 21, 2010 as resource person.
 43. Bawa, S.K. ERA Seminar at DAN College of Education on Innovations in Teaching Practice on 4 Oct, 2010 at Nawanshahar

- world conference on professional development of teachers and teacher educators at LPU on 12-13 Nov 2010
44. Bawa, S.K. State seminar at A S College of Education Khanna on 15 March 20, 2011 on comprehensive and continuous evaluation
 45. Bawa, S.K. National Seminar on Role of Distance Education in Higher Education on 14 October,2011 at Punjabi University , Patiala
 46. Bawa, S.K. International Conference on learning Communities: Global Education Reforms on 18-20 Nov 2011 at IPS Gwalior
 47. Bawa, S.K.National Seminar on Perspective in Teacher Education on Feb 6,2012 at Rayat Bahra College of Education, Hoshiarpur as resource person
 48. Bawa, S.K. International conference at Phuket Feb29-2 March,2012 on Learning Innovation in Science and technology as chairperson, World conference on A future classroom- a global Perspective, April LPU 2012
 49. Bawa, S.K. International Workshop on Adventures in Academic Leadership on 3-4 may 2012 at LPU, Phagwara Sikh National conference on 10 nov, 2012 as a resource person on Quality Education at Ludhiana
 50. Bawa, S.K. AIAER national conference on Challenges for education in Knowledge society on 17 Nov,2012 as Chairperson at Rayat Bahra College of Education, Mohali
 51. Bawa, S.K. CELD International conference on Rise of women in the Workplace- challenges and prospects at Atlantis, Dubai
 52. Bawa, S.K. National seminar on Exploring Quality Assurance in Higher Education at Doaba college of Education Kharrar on 18 April, 2013
 53. Bawa, S.K.National seminar at Punjab university Chandigarh on Reviewing and restructuring Teacher Education curriculum on 22 March, 2013
 54. Bawa, S.K. National Seminar on Teacher Education in Indian Perspective at KCS College of Education, Jammu on 15 March 2013
 55. Bawa, S.K. International Conference of GERA on 2-3 Sep 2013, at Nepal on Gandhian Thought Globalization and Education
 56. Bawa, S.K. International Conference on Women and Development on 22-23 Nov 2013 at Punjabi University, Patiala
 57. Bawa, S.K. National Seminar on Inclusive Education-Vision to Practice on 1 March, 2014 at LLRM College of Education Moga
 58. Bawa, S.K. National Conference on Threats to Human Rights on 21-22 Sept, 2014 at Agra.
 59. Bawa, S.K. International Conference on GDP, Gross National Happiness, and Education at Paro College of Education, Bhutan on 27-28, June 2014

Dr.Satvinderpal Kaur

- 1 Kaur, S. Research Paper Entitled Women' Education in India: Current Scenario is published by Publication Bureau Punjabi University Patiala in the Proceedings of International Conference on Women Issues and Initiatives in 2011

- 2 Kaur, S. Quantitative Expansion and issues of Equality and Equity in Higher Education Quality Assurance in Higher Education vis-a-vis Human Resource
- 3 Kaur, S. Gender Disparities in Education International Conference by Women Study Centre published by Publication Beuro Punjabi Uni Patiala.

Dr. Shamshir Singh Dhillon

1. Dhillon, S.S. Critical Analysis of present B.Ed Curriculum- Paper presented in National Seminar organized by Rashoba . College of Education, SIRSA, 3rd May 2009.
2. Dhillon, S.S. Paper presented in Two Day National Seminar on topic: Code of Professional Ethics and Accountability in Teacher Education organized by Ch.kapoori Ram College of Education, Panipat, 23-24th Jan. 2010
3. Dhillon, S.S. Paper presented in National Seminar on topic: Guidance and counseling in Secondary Schools organized by Ladwa College of education, Ladwa on 13th Feb. 2010.
4. Dhillon, S.S. Paper presented at National conference of Environmental Degradation: Effects, Challenges & Remedies on the topic Transboundary Pollution from vegetation fires: Politicized problems from Feb. 25-27, 2010 organized by JCD College of Engg. Sirsa.
5. Dhillon, S.S. Paper presented in Two Day National Seminar on topic: Need, Role and importance of Hypothesis in Educational Research organized by JCD (PG) College of Education, Sirsa, 22-23rd March 2010.
6. Dhillon, S.S. Paper presented in Two Day National Seminar on topic: Teachers Preparation for Inclusive Education sponsored by Higher Education Commissioner and organized by Deptt. Of Education B.P.S. Mahila Vishwavidyalya khanpur kalan, 26-27th March 2010.
7. Dhillon, S.S. Paper presented in National Seminar on topic: Determinants of Quality Teacher Education organized by Tulsi College of Education, Ambala City on 17th April 2010.
8. Dhillon, S.S. Paper presented in Two Day National Seminar on topic. Professionalism and Code of Ethics in Higher Education. Organised by MHD. College of Education, Odhan (Sirsa), 22-23 May 2010.
9. Dhillon, S.S. Paper presented at World conference of AIAER on Professional Development of Teachers and Teacher Educators organized by Lovely Professional University, 12-13 Nov, 2010.
10. Dhillon, S.S. Participated in Workshop on Continuous and Comprehensive Evaluation Scheme on 6th Dec.2010, Organised by Rashoba College Of Education Sirsa.
11. Dhillon, S.S. Paper presented in UGC sponsored National Seminar on topic, Women & Issue of human rights organized by women cell of CMK national PG.college Sirsa on March 8, 2011.
12. Dhillon, S.S. Paper presented in National Seminar on topic: Class Room Teaching & Learning Behaviorism to Constructivism on March 18, 2011.
13. Dhillon, S.S. Paper presented in National Seminar organized by GJU on:

- Quality concerns among higher education on March 22nd 2011.
14. Dhillon, S.S. National Workshop on “Patent Awareness: Issues and Challenges” Organized by Deptt. Of Bio tech. C.D.L.U. Sirsa, 10th Aug.2011.
 15. Dhillon, S.S. Paper presented in International Conference organized on the Quality Concerns in Education; Issues&Challenges on the Topic ICT-Boon to Quality Education on 30th sept-Oct 1st 2011.
 16. Dhillon, S.S. Paper presented in National Seminar organized by UGC cell for coaching schemes on the topic Communal Harmony, Peace and Social Justice on 6th Dec.2011.
 17. Dhillon, S.S. Paper presented in National Seminar organized by Ch.R.R.Memorial College of education on the Topic; Today’s Education: Tomorrow’s Nation Feb 10-11, 2012.
 18. Dhillon, S.S. Paper presented in National Conference organized on the Topic; Recent advances in engg.technology and environmental issues in Feb 22-24, 2012 on the topic Non-Conventional Energy Sources byJCD college of Engineering Sirsa.
 19. Dhillon, S.S. Paper presented in UGC sponsored National Seminar on topic Right to EducationAct.-2009 Implementation and Future Challenges, 25th March 2012.
 20. Dhillon, S.S. Paper Presented in International Seminar on Educational Psychology-An Innovative Approach In Teaching-Learning process on the topic Constructivist Approach in Teaching: An Emerging Trend in Educational Psychology, Organized by C.R.College of Education, Rohtak March24th -25th, 2012.
 21. Dhillon, S.S. Paper presented in DHE sponsored National Seminar on topic Innovative Strategies of Learning & Motivation organized by C.R.College of Education, Hisar, March 31st 2012.
 22. Dhillon, S.S. Paper presented at International conference organized by Lovely Professional University on Shaping a Future Classroom: A Global Perspective, 6th -8th April 2012.
 23. Dhillon, S.S. Paper presented in One Day National Seminar on Teacher Education in Global Perspective on the topic: Role of ICT in shaping future classroom .Organized by MHD.College of Education, Odhan (Sirsa), 22-23 May 2012.
 24. Dhillon, S.S. Paper presented in National Seminar on Relevance of Interdisciplinary Approach in Higher Education on the topic: Social Media in Higher Education organized by Chaudhary Ranbir Singh University, Jind on 12-13th November 2014.
 25. Dhillon, S.S. Paper presented at International Conference on Changing Environmental Trends and Sustainable Development on Feb 9-11, 2009. Organized by Guru Jambheshwar University of Science & Technology, Hissar.
 26. Dhillon, S.S. Paper presented at International World conference on “Professional Development of Teachers and Teacher Educators” Lovely Professional University, Phagwara (Punjab), November, 12-13, 2010.

27. Dhillon, S.S. Paper presented at International conference organized by Lovely Professional University on Shaping a Future Classroom: A Global Perspective, 6th -8th April 2012.
28. Dhillon, S.S. Paper presented at International Conference on “Quality Concerns in Education: Issues & Challenges.” Shivalik Institute of Education & Research, Mohali.
29. Dhillon, S.S. Paper presented at National Conference on Emerging perspectives in Indian Teacher Education organised by CTE on 2nd Nov. 2014 at Kurukshetra.
30. Dhillon, S.S. Intel Teach Programme sponsored by N.C.T.E. organized by Kurukshetra University, Kurukshetra and conducted by D.M.A. National College of Education, SIRSA. 13-18th October 2008.
31. Dhillon, S.S. Participated in Workshop on Environmental Education for Teachers organized by S.I.D. College of education, Radaur, Yamunanagar in collaboration with CEE from 7th -9th Dec. 2009.
32. Dhillon, S.S. Participated in National Workshop on Research Methodology in Management organized by Deptt of Business Administration in C.D.L.U. Sirsa, 12- 13th Dec. 2009.
33. Dhillon, S.S. Participated in National Workshop on Quality Assurance in Higher Education organized by CIRD conducted by K.M. College of education, Bhiwani, 19th Dec. 2009.

Dr. Shireesh Pal Singh

1. Singh, Shireesh Pal (2007): “Mulyo Evam Manvadhikaro Ka Sikshak Prasikshan Pathyakram Me Samaklan.” The sovenior of UGC Sponsored National Seminar, organised by IASE University, Sardarshahr, (Raj).
2. Singh, Shireesh Pal (2008): “Madhyamic Adhyapako Ki Sikshan Prabhavsilta Evam Vyavsayic Santusti Ka Adhyan.” The Sovenior of National Seminar, Organised by Aklia College of Education, Bathinda. (Punjab).
3. Singh, Shireesh Pal (2008): “Introduction, Elements and Implementation of TQM in Education”, The Sovenior of UGC Sponsered National Seminar, Organised by IASE University, Sardarshahr. (Rajasthan).
4. Singh, Shireesh Pal (2008): “Teacher Empowerment and Its Various Dimensions”. The Sovenior of UGC Sponsered National Seminar, Organised by SGK Teacher Training College, Jodhpur (Rajasthan).
5. Singh, Shireesh Pal, Padhan, Anand (2010): “E-Resources for Professional Development of Teacher and Teacher Educators” In International conference proceeding of AIAER World conference on “Professional Development of Teacher and Teacher Educators” Organized by Lovely Professional University, Jalandhar, Punjab.
6. Singh Shireesh Pal, Dangwal Kiran Lata (2011). WEB TOOLS in Globalizing Teacher Education Published In Proceedings of UGC Sponsored National Seminar On Globalization of Teacher Education Organized by S,G.K.T.C College, (C.T.E), Jodhpur, Rajasthan,

7. Singh, Shireesh Pal, Participated in UGC Sponsored National Seminar-cum-Workshop on Quality Assurance in Practice Teaching” at L.T.T.T.C., Dabok, Udaipur.
8. Singh, Shireesh Pal, Participated & Presented a paper entitled "Integration of Population Education in Teacher Training Curriculum" in the UGC Sponsored National Seminar on “Dyanmics of Population Explosion : Role of Teacher-Education in its Mitigation” (Nov. 4-5, 2005) at Hindu College, Moradabad.
9. Singh, Shireesh Pal, Participated in National Seminar on “Evolving Curriculum for Teacher Education in New Millennium” at R.N. Institute of Management Education & Research Center (C.C.S. University), Meerut. 11 Feb. 2007.
10. Singh, Shireesh Pal, Participated in National Seminar on “Quality in Teacher Education: Present Status & Prospects “at Sanjay Gandhi (P.G.) College, Sarurpur Khurd, Meerut. 18 Feb. 2007.
2. Singh, Shireesh Pal, Participated in Faculty Development Programme organized be ICFAI University, Dehradun. 28 Feb. 2007.
3. Singh, Shireesh Pal, Participated & Presented a paper on Women Empowerment in I.C.S.S.R. Sponsored Naional Seminar on Gender Equity Through Women Empowerment: Myth or Reality organized by S.M.J.N. (PG) college Haridwar (U.K.) . 11 March 2007.
4. Singh, Shireesh Pal, Participated and presented a paper in UGC Sponsored National seminar on Educational Consultant on Human Rights”, at IASE Deemed University, Sardarshahar, Rajasthan. 26-27 March 2007.
5. Singh, Shireesh Pal, Participated and presented a paper in National Seminar on “Quality Improvement in Teacher Education” at Dr. Shadhi Lal College of Education. Meerut. 29-30 April 2007
6. Singh, Shireesh Pal, Participated in National Seminar cum Workshop on “Programme instruction and new practices in teacher education” at D.W.T. (PG) College, Dehradun. 15-16 June 2007.
7. Singh, Shireesh Pal, Participated in National Seminar cum Workshop on “Research in Education-Doubts and solutions” at D.W.T. (PG) College Dehradun. 3-5 July 2007.
8. Singh, Shireesh Pal, Participated in Faculty Development Programme organized be ICFAI University, Dehradun. 16 Nov. 2007.
9. Singh, Shireesh Pal, Participated in National Seminar on “Teachers Education- In search of Quality improvement” at Aklia College of Education, Bathinda. March 7, 2008.
10. Singh, Shireesh Pal, Participated and presented a paper in UGC Sponsored National Seminar on “TQM in Education” at IASE Deemed University, Sardarshahr, Rajasthan. 11-13 Oct. 2008.
11. Singh, Shireesh Pal, Participated and presented a paper in UGC Sponsored National Seminar on “Teacher Empowerment” at SGKTC, Jodhpur, Rajasthan, 26-28 Oct 2008.
12. Singh, Shireesh Pal, Participated and Presented a Paper in National Seminar

- on Teacher Education in ITE Kadrabad, Modinagar.(U.P.).
13. Singh, Shireesh Pal, Participated in National Workshop on Creativity and Creative Teaching Methods at Trinity College of Education, Dehradun.(U.K.).
 14. Singh, Shireesh Pal, Participated in National Workshop Sponsored by National Testing Service (NTS), Maassor. On Testing and Evaluation in Education at SGRR(P.G.) College, Dehradun. 31 March to 2 April 2009.
 15. Singh, Shireesh Pal, Participated and Presented a Paper Entitled "Application Of Information and Communication Technology in Education: A revolution In Teacher Education" In the International conference on Quality of Professional Education in The Present Era." At The Institute of Engineers, Dehradun, in collaboration with IATE.
 16. Singh, Shireesh Pal, Participated and Present a paper entitled "Mulya Siksha Ka Sikshan Presikshan Pathyakram Me Samakalan." In the National Seminar on Value Education
 17. Singh, Shireesh Pal, Participated in 5 Days Orientation Programme on Research Methodology At NUEPA New Delhi, from 23-27 Nov. 2009.
 18. Singh, Shireesh Pal, Participated in National Workshop Sponsored by National Testing Service (NTS), Maassor Under GOI, MHRD, on "Process and Tehniques of Itam Writing at SGRR (P.G.) College, Dehradun, March 18-20, 2010.
 19. Singh, Shireesh Pal, Participated & Presented a paper entitled "Impact of Globalization on Higher Education: With Special Reference to Quality and Innovations: in I.C.S.S.R. Sponsored Naional Seminar on Globalization and Higher Education at Institute Of Teacher Education, Modinagar (UP), April, 24-25 2010.
 20. Singh, Shireesh Pal, Participated in Indo-European International conference, on Quality Assurance in Higher Education, Conference Centre, University of Delhi May, 6-7, 2010.
 21. Singh, Shireesh Pal, Participated & presented a paper entitled-"Vishva Santi ke Liye Vidhya ka Bhartiyakara" in National Seminar Organized by Bhartiya Siksha Shodh Sansthan, Lucknow In Collaboration with Uttarakhand Technical University, Dehradun at Institutes of Engineers, Dehradun, October, 22-24-2010
 22. Singh, Shireesh Pal, Participated in an International Conference and presented a paper entitled "E-Resources for Professional Development of Teacher and Teacher Educators" In AIAER World conference on "Professional Development of Teacher and Teacher Educators" Organized by Lovely Professional University, Jalandhar, Punjab
 23. Singh, Shireesh Pal, Participated and Presented a paper entitled "Women empowerment: an extreme necessity for making India developed country" in International Conference on Women and Child Issue: National and International Perspectives." In International Conference Organized by Women's' Studies Centre, Punjabi University, Patiala, February 11-12, 2011.
 24. Singh, Shireesh Pal, Participated & presented a paper entitled "Professional Development of Teachers and Teacher Educators: Role of Open and Distance

- Learning in the national seminar organized by DEP-SSA (An IGNOU-MHRD Govt. of India Project) New Delhi, March 22-24, 2011.
25. Singh, Shireesh Pal, Participated and presented a paper entitled " ICT For Women Empowerment" in an International Conference Organized by Singhania University In collaboration with TIMES and BBS, U.K. on "Education Awareness for Social Sector Issues in India" at Aligarh July 24, 2011.
 26. Singh, Shireesh Pal, Participated and presented a paper entitled " Humanizing Global Education Through Blended Approach" in an International Conference of AIAER Organized by Institute of Professional Studies, Gwalior, M.P on Learning Community for Global Education Reform November 18-20, 2011.
 27. Singh, Shireesh Pal, Participated & Presented a paper entitled "Blending: Quality Enhancement Tool in Teacher Education" in the UGC Sponsored National Seminar on Quality Teacher Education Organized by Rajeev Gandhi College, Bhopal, November 25, 2011.
 28. Singh, Shireesh Pal, Participated & Presented a paper entitled "Adolescence Education for the development of life skills" in the UGC Sponsored National Seminar on 'Skill Development in Adolescence Education Organized by Rajeev Gandhi College, Bhopal, January, 24, 2012.
 29. Singh, Shireesh Pal, Participated & Presented a paper entitled "Enhancing Values in Modern System of Education" in the National Seminar on Revamping Indian System of Education Organized by Unity Degree College, Lucknow , In collaboration with Department of Education, University of Lucknow, Lucknow, February, 4-5, 2012
 30. Singh, Shireesh Pal, Participated in an International Seminar on "Teacher Education for Peace and Harmony" at New Delhi, Organized by IASE Deemed University, In Collaboration with Gujarat Vidhyapeeth, Jain Vishva Bharti University and Global Harmony Association, February 11-13, 2012.
 31. Singh, Shireesh Pal, Participated in an International Seminar on" Human Rights in the 21st Century: Global Prospective, National Challenges." Held at India International Centre, Lodhi Road, New Delhi, February 14-15, 2012.
 32. Singh, Shireesh Pal, Participated as resource person for the session on" Examinations in IGNOU" In the coordinators Meeting –cum-Orientation Programme on Diploma in Elementary Education (D.El.Ed) & Bachelor of Education (B.Ed) for programme in charge posted at various DIETs and PGBTs of Madhya Pradesh. Held on 05th March 2012.
 33. Singh, Shireesh Pal, Participated as a Resource Person & Presented a paper entitled "Information and Communication Technology Based Pedagogy Integration " in a National Seminar Sponsored by UGC on Recommendations of National Knowledge Commission (NKC): Directions for Implementation" Organized by D.A.V College of Education, Abohar(Pb.) March 23-24, 2012
 34. Singh, Shireesh Pal, Participated & Presented a paper entitled "Creation of Learning Communities" in an International Seminar on the theme "Shaping a Future Class Room: A Global Perspective" organized by Global Educational Research Association at Lovely Professional University, Phagwara, April 6-8,

2012.

Dr. Jubilee Padmnabhan

1. Padmnabhan J, Resource person for a *Workshop on Design and development of pedagogical tools and materials for school attachment programme of integrated pre- service teacher education course at secondary level at Regional Institute of Education (NCERT), Mysore, 8th to 11th September 2014 and 5th to 8th January 2015*
2. Padmnabhan J, Resource person at PSSCIVE (NCERT), Bhopal on *Developing module for Post Graduate Diploma in Vocational Education* from 3rd to 7th March, 2014
3. Padmnabhan J, Resource person at RIE, Bhopal for '*Development of training material and formats on internship in constructivist model*', from 12th to 16th September 2013 and also from 26th to 29th November 2013, co-ordinated by Prof. Ramesh Babu, Regional Institute of Education, Bhopal.
4. Padmnabhan J, Resource person at Regional Institute of Education, Mysore for "*Workshop on Development of material on Education for sustainable development at Upper Primary level for teachers- under Population education project*" coordinated by Dr. Manjula P. Rao from 24th to 26th March 2010 and 14th to 18th February 2012.
5. Padmnabhan J, Resource person at RIE, Bhopal for '*Development of questionnaire on instruments and infrastructures in laboratory of Secondary Schools for Maharashtra and Madhya Pradesh*', coordinated by Prof. Reeta Sharma, Dean, Regional Institute of Education, Bhopal.
6. Padmnabhan J, Resource person for 5 day Induction Training Programme for First Grade College Lecturer of Karnataka, organized by Department of Collegiate Education, Government of Karnataka at Regional Institute of Education, Mysore and delivered a lecture on "*Education for sustainable development*" on 10th April 2011.
7. Padmnabhan J, Resource person for a 6 day workshop on Development of life skills and Bio curriculum from 6.4.2011 to 12.4.2011 at Regional Institute of Education, Mysore coordinated by Dr. Geetha G. Nair
8. Padmnabhan J, Resource person in a workshop at Regional Institute of Education, Mysore for '*Development of Training Package for Junior Lecturers in enrichment of content and classroom transaction in biology*', coordinated by Dr. K. Sukumar on 27th and 28th December 2010
9. Padmnabhan J, Resource person for the preparation of module for Biology textbook of Karnataka state under Rashtriya Madhyamik Shiksha Abhiyan at Regional Institute of Education, Mysore.
10. Padmnabhan J, Presented a collaborative paper in a conference by CIES (Comparative and International Education Society) from 10-15 March 2014, at Toronto, Canada on theme '*Revisioning Education for All*'. Title of the paper is "*Developing an in-service training programme for teachers in English-medium schools in rural India*", <http://cgisd.columbia.edu/>
11. Padmnabhan J, Presented a paper at Centre of Advanced Study in Education

- (CASE), Baroda in a ‘National Seminar on Teacher competency’ on 28th February and 1st March 2014. Paper entitled as “*Training in-service elementary school teachers on Science Process skills*”.
12. Padmnabhan J, Presented a paper in a National conference on “Education at crossroads” at Regional Institute of Education (NCERT), Bhopal from 29-31st July 2013. The paper was entitled as ‘*Integrating ESD in the curriculum towards enhancing critical thinking on sustainable development*’.
 13. Padmnabhan J, Presented a paper in a National Conference on Assessment Practices in schools at Regional Institute of Education (NCERT), Mysore from 15- 17th May 2013. The paper was entitled as ‘*Assessment for learning: An approach for continuous assessment*’
 14. Padmnabhan J, Presented a paper in a National Education Seminar on ‘Value Education: Issues and challenges’ 14th and 15th April 2012 at Christ P.G. College of Education, Bhopal. Paper was entitled as “*Value inculcation in the context of Sustainable Development.*”
 15. Padmnabhan J, Presented a paper at Centre of Advanced Study in Education (CASE), Baroda in a ‘National Seminar on Taxonomy of Educational Skills’ on 26th and 27th March 2012. Paper entitled as “*Development and standardisation of a critical thinking test*”.
 16. Padmnabhan J, Presented a paper in a ‘National Seminar on Skill Development in Adolescence Education’ on 24th January 2012 at Rajeev Gandhi College, Bhopal. Paper was entitled as “*Relationship between Emotional Maturity and Classroom adjustment of Higher Secondary School Students*”
 17. Padmnabhan J, Presented a paper at Centre of Advanced Study in Education (CASE), Baroda in a ‘National Seminar on Current issues in Teacher Education’ on 14th and 15th March 2011. Paper entitled as “*Preparing sensitized teachers for transacting Education for Sustainable development*”.
 18. Padmnabhan J, Presented a paper in the ‘National seminar on Pedagogy for schools’ held at the Regional Institute of Education (NCERT), Mysore from 2nd to 4th March 2011. Paper was entitled as “*Strategies for transacting science in a constructivist classroom*”
 19. Padmnabhan J, Presented a paper in ‘National Meet of Researchers in Education’ at Centre of Advanced Study in Education, Department of Education, Faculty of Education and Psychology, The M S university of Baroda, Vadodara, Gujarat, from 27th February to 1st March 2011. Paper was entitled as “*Effectiveness of an integrated approach to Education for Sustainable Development on Problem solving among upper primary students*”
 20. Padmnabhan J, Presented a paper entitled “*Changing environment and human health- Problems and challenges*” in a National conference on Promotion of Health: Perspectives and concerns in purview of social justice by PKM College of Education, at Kannur university on 2nd and 3rd March 2010.

Dr. Sesadeba Pany

1. Pany S, Presented the paper titled Reaction of Parents Towards the Secondary Teacher Education programme in Himachal Pradesh, in the international seminar on Learning Community for Global Education Reforms, Nov 18-20, 2011, AIAER, Gwalior, Madhya Pradesh.
2. Pany S, Presented the paper titled Innovations in Higher Education, Internationalization of Higher Education, in the international seminar on 25th and 26th November, 2012, Vivek College of Education, Bijnor, U.P. India
3. PanyS, Presented the paper titled Role of Management, Administrators & Teachers in Nurturing IQAC in Higher Education Institutions in the international seminar on 8th& 9th Nov 2014, Trisha P.G. College of Education, Hamirpur, Himachal Pradesh.
4. PanyS, Presented the paper titled Peace Education for National Development in the international seminar on 29th& 30th Nov.2014, Vivek College of Education, Bijnor, U.P. India.
5. Pany S, Presented the paper titled Introducing Thinking Skills in Curriculum, in the national seminar on Researches in Curriculum on May 28-30,2000, AIAER at S.N.D.T.Univ, Mumbai
6. Pany S, Presented the paper titled Parent-Child Interaction and Creative Thinking, in the national seminar on Research Issues in Thinking and Values, May 31st-June 2nd 2002, AIAER at Dept.of Edu, Andhra Univ. Visakhapatnam
7. Pany S, Presented the paper titled Quality Teacher Education Programme in India –A Myth or Reality, in the national seminar on Development of Education in Global Perspectives: Challenges and Opportunities, 6th March, 2010, Abhilashi P.G.College of Education, Nerchowk, Mandi
8. Pany S, Presented the paper titled Teacher Education Institutions-The Centres for Social Transformations, in the national seminar on Contemporary Issues In Teacher Education, 29th& 30th March,2010, Thakur P.G. College of Education, Kangra, Himachal Pradesh
9. Pany S, Presented the paper titled Changing Face of Our Value System and Environmental Threats, in the national seminar on Environmental Education: Need, Priorities & Future Challenges, 14th Oct,2011, MLSM College, Sundernagar, Himachal Pradesh
10. Pany S, Presented the paper titled The Existing Process of Recognition & Accreditation of Teacher Education institutions-Some considerations, in the national seminar on Quality Teacher Education-Problems & Issues, 10th & 11th Nov 2011, Krishma P.G. College of Education, Nerchowk, Himachal Pradesh
11. Pany S, Presented the paper titled Professional Ethics of Teachers: Some Considerations, in the national seminar on Professional Ethics of Teachers, 15th & 16th Jan 2012, UGC, Bijupatnaik College, Antei, Kendrapara, Odisha.
12. Pany S, Presented the paper titled Linking Theory & Practices in the Process of Education, in the national seminar on Education for National Development, 30th March, 2012, Nalanda college of Education, Jhaniari, Hamirpur, Himachal Pradesh.

13. Pany S, Presented the paper titled Universal School Education in the Context of Right to Education Bill-2009, in the national seminar on Effectiveness of Rights to Education Act, 2009 in Human Rights Perspective, 4th & 5th Aug 2012, Sri Jayadev College of Education & Technology, Odisha.
14. Pany S, Presented the paper titled Tribal Development and Primary Education, in the national seminar on Recent Trends in Education towards tribal Development in Odisha, 23rd and 24th Sept 2012, S.V.M. (Auto) College, Jagatsinghpur, Odisha.
15. Pany S, Presented the paper titled Quality Process in Teacher Education and Role of Teacher Educators, in the national seminar on Ensuring Quality Management in Education- A Road Map, 24th and 25th Dec 2012, Indira Gandhi Women's College, Cuttack, Odisha.
16. Pany S, Presented the paper titled Right to Education Act: Some Challenges, in the national seminar on Right to Education Act-How far &, 23rd March 2013, Ravenshaw University.
17. Pany S, Presented the paper titled Parameters of Student Friendly Campus in Higher Education Institutions, in the national seminar on Student Friendly Colleges- Need of the Hour, 30th & 31st March 2013, Indira Gandhi Women's College, Cuttack, Odisha.
18. Pany S, Presented the paper titled Innovations in Higher Education, in the national seminar on Quality Concerns in Teacher Education: Challenges & Opportunities, 26th April 2013, Vijay Memorial College of Education.
19. Pany S, Presented the paper titled Extension & Outreach Functions of Teacher Education Institutions for improving School Education, in the national seminar on Teacher Education Vis-à-vis School Education, 19th May 2013, Shiva College of Education.
20. Pany S, Presented the paper titled Teacher Education Institutions-Some Pedagogic Concerns for Social Transformations, in the national seminar on Quality Teacher Education-Issues & Challenges, 26th May 2013, Krishma P.G.College of Education.
21. Pany S, Presented the paper titled Role of Students in Quality Enhancement of Teacher Education Institutions, in the national seminar on Accreditation of Academic Institutions-Need of the Hour, 15th & 16th Feb 2013, Dronacharya College of Education.
22. Pany S, Presented a paper titled Teacher Educators for the 21st Century Society and NCFTE-2009, in the national Seminar on Quality Initiatives in Teacher Education with reference to Secondary Education, 5th April, 2014, Institute of Education, Haldia, West Bengal.
23. Pany S, Presented a paper titled Reforms in Teacher Education in the context of Verma commission Report in the national seminar on 13th & 14th June 2014, All India Association For Educational Research at BJB English Medium School, BBSR, Odisha
24. Pany S, Presented a paper titled Schooling for Learning to Live Together in the seminar on 22nd & 23rd Nov.2014, Shiksha Vikash Samiti, Odisha.

25. Pany S, Presented a paper titled Challenges for Maintaining the Quality of Teacher Education in the national seminar on Right to Education Act, 2009: Implementation, Challenges & Remedies, 25th Nov. 2014, at Vijay Memorial College of Education, Ner Chowk, Mandi, Himachal Pradesh.
26. Pany S, Presented a paper titled Promotion of Excellence in Teacher Education Institutions on 26 to 28th Dec 2014, at Department of Education, Ravenshaw University, Odisha in collaboration with AIAER.
27. Pany S, Presented a paper titled Quality Education for Tribal Children-Need of the Hour, on 19th January, 2015, at Govt. College Koraput and Council of Analytical Tribal Studies, Koraput.
28. Pany S, Presented a paper titled Best Practices in Creating Conducive Environment for teaching-learning Process, on 14th February, 2015 at Shiva College of Education, Bilaspur, Mandi, Himachal Pradesh.

Centre for Law

Dr. Tarun Arora

1. Tarun Arora, Role of Indian Judiciary in Environmental Protection at International conference of jurists on Rule of Law organized by International Council of Jurists in collaboration with Indian Council of Jurists, New Delhi. Dated November 25-25, 2007.
2. Tarun Arora, Role of Indian Judiciary in Intensifying Constitutional Mandate Regarding Environmental Protection at International conference organized by International Congress of Environmental Research, Bhopal. Dated December 28-30, 2007.
3. Tarun Arora, Indian Parliament Responding to the Call of Nations Regarding the Rights of Mentally Retarded People in India at International Conference on Human Rights organized by Panjab University, Chandigarh in collaboration with Oxford Brooks University U.K. at Chandigarh on 15-16 February, 2010.
4. Tarun Arora, Good Governance in India: A Challenge in 21st Century presented at International Conference on Judicial Reforms organized by Bar Council of Punjab and Haryana and International Council of Jurists at Chandigarh on March 14, 2010.
5. Tarun Arora, 'Relationship between the Judiciary, Legislature and Executive: A Critique' presented at International Conference on Judicial Reforms organized by Bar Council of Punjab and Haryana and International Council of Jurists at Chandigarh on March 13, 2010.
6. Tarun Arora, Reproductive Justice in India: Issues and Realities, presented at International Conference on Women, Peace and Security organized by Punjab University, Patiala on October 26-27, 2012.
7. Tarun Arora, From IEL to ISDL: Kaleidoscopic Emergence of Anthropocentric Ecological World Order in International Conference on

Mitigating Climate Change with Special Reference to Developing Countries organized by Dr Rammanohar Lohiya National Law University, Lucknow on March 28-30, 2014

8. Tarun Arora, Legislative and Judicial Attempts Towards Environmental Protection Bringing Social Change with Special Reference to Indian Context at All India Law Teachers Conference at National Law University, Jodhpur on the Topic *Democracy, Development and Social Change*. Dated January 29-30, 2006.
9. Tarun Arora, Whether Judiciary Activism Has Caused Disturbance in the Balance Established under Indian Grand Norm at National Seminar on Judicial Activism Vs. Judicial Restraint by M.S. University, Baroda. Dated March 11-12, 2006.
10. Tarun Arora, 'Judicial Activism- Disturbance in Balance of Powers or Striking Balance' at National Seminar by PURC Ludhiana on *Relations in working of Legislature, Executive and Judiciary- an Introspection and Prospective Vision*. Dated February 24-25, 2006.
11. Tarun Arora, Fundamental Concepts of International Environmental Law: Compliance Thereof in Indian Scenario at National Workshop on Environmental Law by Amity Law Centre, New Delhi. Dated December 3, 2005.
12. Tarun Arora, A Critique of Separation of Powers with Special at 53rd All India Political Science Conference. Dated 27-29 December 2006.
13. Tarun Arora, Indian Parliament: Responding to International Obligations Regarding the Rights of Mentally Ill People at National Seminar organized by Department of Law, Punjabi University, Patiala on the topic "Law in India : Emerging Trends". Dated November 14-15, 2006.
14. Tarun Arora, The Voyage of Indian Judiciary in Quest of Environmental Justice at National Seminar organized by Department of Law, Punjabi University, Patiala on the topic "Growth of Law in India : Role of Indian Judiciary". Dated 14-15 November 2007.
15. Tarun Arora, Right to Bail Assuring Dignity of Life at National Seminar organized by Department of Law, Punjabi University, Patiala on the topic "Growth of Law in India : Role of Indian Judiciary". Dated 14-15 November 2007.
16. Tarun Arora, Emerging Paradigms of Consumer Protection Act, 1986 at National Seminar organized by Department of Public Administration, Punjabi University, Patiala on the topic "Consumer Protection and Welfare". Dated 24-25 March 2008.
17. Tarun Arora, Environmental Protection in Punjab: A Challenge for Good Governance in 21st Century at National Seminar organized by Department of Public Administration, Punjabi University, Patiala on the topic "Public Administration in the Twenty First Century: Major Trends and Challenges". Dated 16-17 February 2009.

18. Tarun Arora, Process Of Rehabilitation As A Responsibility And Accountability With Special Reference To Therapeutical Jail Administration In Ahmedabad: An Analysis at National Seminar on the topic "New Dimensions of Prison Reforms" organized by Institute of Correctional Administration, Punjab in collaboration with Department of Laws, Panjab University, Chandigarh. Dated 18-19 September 2009.
19. Tarun Arora, Rationale Behind the Compulsory License under Law of Patents In India at National Seminar on the Topic Intellectual Property Rights – Prospects & Retrospects organized by Faculty of Juridical Sciences, Mody Institute of Technology and Science, Laxmangarh, Rajasthan. Dated April 17-18, 2010.
20. Tarun Arora, 'Emerging Paradigm of Social Justice with Special Reference to Reproductive Justice in India: A Critique' at National Seminar on the Topic Contribution of Indian Judiciary in Social Justice organized by Amity Law School, Amity University, Jaipur on October 11, 2010.
21. Tarun Arora, 'Human Rights in India: on the Threshold' at National Seminar on the Topic Multidimensional Aspects of Human Rights in the Era of Globalization: Theory and Practice organized by N. M. Law P. G. College, Hanumangarh (Rajasthan). Dated February 19-20, 2011.
22. Tarun Arora, 'Compliance of United Nations Environment Programme: A Case Study in Indian Milieu', at National Seminar on the topic Environment Pollution and Law organized by Department of Law, M. D. U. Rohtak (Haryana).
23. Tarun Arora, 'Recent Trends on Law of Abortion in India', at National Seminar on Emerging Dimensions of Law in India, organized by Department of Law, Punjabi University Regional Centre, Bathinda. Dated March 7-8, 2011.
24. Tarun Arora, 'Dichotomy of Redefining Prostitution as Sex Work in Cross Cultural Era' at National Seminar on the topic Changing Facets of Criminal Law organized by Army Institute of Law, Mohali. March 12-13, 2011
25. Tarun Arora, 'Dawn of Reproductive Justice in India' at National Colloquium on the Topic Right to Health with special reference to the rights of women organized by Modi Institute of Technology and Science, Laxmangarh in collaboration with National Human Rights Commission. Dated April 16-17, 2011.
26. Tarun Arora, 'Social and Economic Reforms: Concordance with Directive Principles of State Policy under the Constitution of India' at Golden Jubilee National Seminar on the topic 'Economic and Social Reforms: Role of Law' organized by Punjabi University, Patiala. Dated November 20, 2011.
27. Tarun Arora, 'A Critique of Environmental Laws in India' at National Seminar on the topic 'Environmental Laws in India' organized by University School of Law and Legal Studies, Guru Gobind Singh Indraprastha University, Dwarka, New Delhi, January, 2012.
28. Tarun Arora, 'Judicial Activism and Judicial Self Restraint: Constitutional and Jurisprudential Implications in Indian Context' at National Seminar on

- the topic ‘Constitutional Governance in India’ by University School of Law and Legal Studies, Guru Gobind Singh Indraprastha University, Dwarka, New Delhi, November 16-17, 2012.
29. Tarun Arora, Participated in National Education Summit-2014 organized by Gujarat Knowledge Consortium in collaboration with Government of Italy held at Gandhinagar, Gujarat on January 9-10, 2014.
 30. Tarun Arora, Methods and Techniques of Collecting Electronic Evidence in Administration of Criminal Justice with special reference to Cyber Crime at National Seminar on Socio-Legal Developments in India: Issues and Challenge organized by Department of Law, Guru Nanak Dev University, Amritsar. Dated 22 February, 2014.
 31. Tarun Arora, Enforcement of International Environmental Laws: High In Words Low in Deeds at National Seminar on Changing Dimension of Law: Some Expanding Horizons organized by Department of Law, Guru Nanak Dev University, Amritsar. Dated 22-23 March, 2014.
 32. Tarun Arora, Recent Trends in Law Relating to Offences Against women at National Seminar on Human Rights, Jurisprudence, Gender Justice: Problems and Prospects organized by Department of Law, Jai Narain Vyas University, Jodhpur on March 30- 31, 2014.
 33. Tarun Arora, ‘A Critique of Separation of Powers in India with Special Reference to Judicial Activism and Judicial Restraint’ *Proceedings of 53rd All India Political Science Conference, Jaipur* held on 27-29 Dec. 2006. P 161.
 34. Tarun Arora, ‘Analysis of Working of Governor in India Since Independence’, *Compendium of Seminar Papers, National Seminar on Federalism and Constitutional Governance in India: Emerging Challenges*, organized on February 2-3, 2007 by Department of Public Administration, Punjabi University, Patiala. P 64.
 35. Tarun Arora, ‘Role of Indian Judiciary in Intensifying Constitutional Mandate Regarding Environmental Protection’, *Souvenir and Abstract-Social Sciences, International Congress of Environmental Research-07, Bhopal*, P 32.
 36. Tarun Arora, ‘Emerging Paradigms of Consumer Protection Act, 1986’, *Compendium of Abstracts on Consumer Protection and Welfare*, March 24-25, 2008, published at Principal’s Conference cum National Seminar organized by Department of Public Administration, Punjabi University, Patiala. P 53.
 37. Tarun Arora, ‘Environmental Protection In Punjab: A Challenge for Good Governance in 21st Century’, *Proceedings of National Seminar on Public Administration in the Twenty First Century: Major Trends and Challenges* organized on February 16-17, 2009 organized by Department of Public Administration, Punjabi University, Patiala, P 72.
 38. Tarun Arora, ‘Right to Environment Protection: A Third Generation Right’, *Souvenir of National Seminar on Human Rights and Duties Education*,

organized on January 18-19,2010 by Department of Public Administration, Punjabi University, Patiala, P 21.

39. Tarun Arora, 'Judicial Activism: Bulwark of Human Rights' *Souvenir of National Seminar on Human Rights and Duties Education*, organized on January 18-19, 2010 by Department of Public Administration, Punjabi University, Patiala. P 37.

Dr. Puneet Pathak

1. Puneet Pathak, Presented a Paper "Linking Corruption and Human Rights" in International conference on "Contemporary Issues and Challenges of Human Rights in the Era of Globalization" on August 2-3, 2014 organised by Gujarat Law Society, Ahmedabad.
2. Puneet Pathak, Presented a Paper "Environmental Movements in India: Issues and Concerns" in National Seminar on Water and Biodiversity: Issues and Challenges organised by DDM Sai Law College Hamirpur. (30 - 31 May, 2014)
3. Puneet Pathak, Presented a Paper "Climate Change and Human Rights" in International Conference on Mitigation of Climate Change: Law, Policy and Governance" organised by Campus Law Centre, University of Delhi, Delhi. (25 - 27 April, 2014)
4. Puneet Pathak, Presented a Research Paper entitled "Human Rights Approach to Climate Change Regime" in International Conference on Mitigating Climate Change with special reference to Developing Countries (28-30 March 2014) organized by Ram ManoharLohia National Law University, Lucknow.
5. Puneet Pathak, Presented a Research Paper entitled "Internatioanl Environmental Crime: Problems and Prospects" in 37th All India Criminology Conference of Indian Society of Criminology (28 Feb.-02 March, 2014) organized by Rajeev Gandhi National University of Law, Patiala.
6. Puneet Pathak, Lecture delivered as a Resource Person on the topic "Social Justice under Indian Constitution" in National Workshop on Human Rights and Social Justice (07 Dec. 2013) organized by Dept. of Law, S. K. Saket P. G. College Faizabad.
7. Puneet Pathak, Presented a Research Paper entitled "Human Right Approach to Environmental Protection" in International Conference on Sustainable Development (04-05 Dec. 2013) organized by RGNUL, Patiala in collaboration with OIDA, Toronto, Canada.
8. Puneet Pathak, Presented a Research Paper entitled "The Human Right to Health" in National Seminar on "Human Rights, Equality and Health: Role Of states and the Citizens" (25th March, 2013) organized S.G.G.S. Khalsa College, Mahilpur (Hoshiarpur).
9. Puneet Pathak, Presented a Research Paper entitled 'Inclusive and Qualitative Expansion of Higher Education in India' in National Seminar on Emerging Policy Regime in Indian Higher Education on 18-19 February 2013 organized by Department of Education, Punjabi University Regional Centre, Bathinda.

10. Puneet Pathak, Presented a Paper on ‘India’s International Human Rights Obligations’, in National Seminar on Emergence of Modern Society: Rule of Law on 3-4 November 2012 organized by Department of Law, Punjabi University, Patiala.
11. Puneet Pathak, Presented a Paper ‘Environmental and Health Impact of Genetically Modified Foods’ in National Seminar on Emerging Environmental Issues: Legislative & Judicial Approach on 22-23 October 2012 organized by Department of Law, Punjabi University Regional Centre, Bathinda.
12. Puneet Pathak, Presented paper on ‘Freedom of Expression on the Internet’ in National Seminar on Emerging Dimension of Law in 21st Century held on 27 September 2012 organized by Department of Law, Guru Nanak Dev University, Amritsar.
13. Puneet Pathak, Presented a Paper on ‘Corruption as a violation of Human Rights in India’, in National Seminar on Corruption: Serious Challenges for Rule of Law and Human Rights, held at Law Department, Bundelkhand College, Jhansi on 18 & 19 Feb. 2012.
14. Puneet Pathak, Presented a Paper on ‘Evolution of Human Rights in India’ in National Seminar on Human Rights, Indian Constitution and Judicial Approach, held at Swami Shukdevanand Law College, Shahjahanpur, U.P. on 17 & 18 Dec. 2011
15. Puneet Pathak, Presented a Paper on topic ‘Human Rights under Indian Constitution’ in National Seminar on Human Rights: Issues and Various Dimensions held at Karmakhetra Post Graduate College, Etawah on 25-26 November 2011.
16. Puneet Pathak, Presented a Paper on topic ‘Human Values & Human Rights’ in National Seminar on Human Values & Human Rights held at Agra College, Agra on 30 March 2011.
17. Puneet Pathak, Presented a Paper on topic ‘Human Rights of Women: International Perspective’ in National Seminar on Gender Equality: Human Rights perspective, held at SRSM Mahavidyalaya, Bareilly, 20-21 December 2010.
18. Puneet Pathak, Presented a Paper on topic ‘Terrorism and Human Rights in India’ in National Seminar on Terrorism in India: Challenges and Solution held at M.G.K.V.P. Varanasi, 25-26 February 2007.
19. Puneet Pathak, Presented a Paper on topic ‘Violence against Women: Obstacle in Human Rights of Women’ in National Seminar on Women’s Rights as Human Rights: Obstacle and Opportunities sponsored by UGC held at VasantKanyaMahavidyalaya, Varanasi on 20-21 Feb. 2003’.

Dr. Deepak Kumar

1. Deepak Kumar, Participated in the ‘International Conference on Current Developments in Air and Space Law’ jointly organized by the National Law

- University, Delhi & International Foundation for Aviation, Aerospace and Development Held on 13-14 November at N L U, Delhi.
2. Deepak Kumar, Presented a paper entitled “Special Provisions for the Protection of Women: International, Regional and National Framework” in National Seminar on ‘Right to Equality: Emerging Trends’ sponsored by Dean Students Welfare, M D University Rohtak on 26-27 November 2010 at M D U, Rohtak, Haryana.
 3. Deepak Kumar, Presented a paper entitled “Agriculture in India: Some Issues and Challenges” in the National Seminar organized by M M Institute of Management, Mullana on February 18, 2011 at MMU, Mullana (Ambala), Haryana.
 4. Deepak Kumar, Presented a paper entitled “Effects of Climate Change: Environmental Policy and Laws on Agriculture Protection” in National Seminar on ‘Environment Protection and the Law’ sponsored by ICSSR N. W. Regional Centre, Chandigarh on February 26-27, 2011 at M D U, Rohtak, Haryana.
 5. Deepak Kumar, Presented a paper entitled “Constitutional Safeguards for Women Empowerment in India” in the National Seminar on ‘Women Empowerment in India’ organized by Geeta Institute of Law and Education, Karhans, Samalkha, Panipat on March 12, 2011 at Geeta Institute of Law and Education Panipat, Haryana.
 6. Deepak Kumar, Presented a paper entitled “Sustainability of Fresh Water Resources: Legal and Institutional Mechanism in India” in the National Conference on ‘Recent Trend in Environment and Development’ organized by Society for Environment and Development (India) and supported by Petroleum Conservation Research Association, Ministry of Petroleum & Natural Gas, Govt. of India at HAPPRC, H N B Garhwal University, Srinagar, Uttarakhand.
 7. Deepak Kumar, Participated in National Seminar on Environment and Health on September 27, 2011 organized by the Central University of Punjab at Central University of Punjab, Bathinda.
 8. Deepak Kumar, Presented a paper entitled “Agriculture Structure and Climate Change: Some Challenges & Policy Framework” in National Seminar on ‘Environment Development and Human rights’ at ShriGovind Singh University Inderprasth Delhi on dated 19-20 Jan 2012.
 9. Deepak Kumar, Presented a paper entitled “Bio-Medical Waste & Policies in India” in National Seminar on ‘Emerging Trends in Law and Social Justice’ at Dept. of Law G N D U Amritsar on dated 4-5 Feb 2012.
 10. Deepak Kumar, Presented a paper entitled “Ethical and Cultural Policies for the protection of Environment in Hindu Religion” in National Seminar on ‘Environmental Pollution and the Sustainable Development: Statutory Realities, Social Chaos and Scientific Challenges’ at Dept. N. M. Law P. G. College, Hanumangarh Town (Rajasthan) on dated February 25-26, 2012.
 11. Deepak Kumar, Presented a paper entitled “Environmental Management: Hindu Religious and Ethical Consciousness” in Interfaith National

- Conference on ‘Environment Management’ held on 24th March 2012 at GSSDGS Khalsa College, Patiala.
12. Deepak Kumar, Presented a paper entitled “Empowerment of Women for Sustainable Development” in National Seminar on ‘Discrimination against Girl Child in Northwest India’ organized by Department of Geography, Mata Gujri College, Fatehgarh Sahib, Punjab on dated April 25, 2012.
 13. Deepak Kumar, Presented a paper entitled “The Problem of Illegal Migration from Bangladesh into Assam: An Analysis” in National Seminar on ‘Emerging Dimensions of Law in the 21st Century’ organized by Department of Laws, Guru Nanak Dev University, Amritsar on dated September 27, 2012.
 14. Deepak Kumar, Presented a paper entitled “Green Economy: A Tool to Achieve the Goal of Global Environment Sustainability” in International Seminar on ‘Economic, Social and Environmental Challenges of Globalization’ organized by Department of Economics, St. Bede’s College Shimla in collaboration with Indian Economic Association, new Delhi on dated 5-6 October, 2012.
 15. Deepak Kumar, Presented a paper entitled “Legal Aid and Its Legislative Measure in India: An Analysis” in National Seminar on ‘Emergence of Modern Society: Role of Law’ organized by Department of Law, Punjabi University, Patiala on dated 03-04 November, 2012.
 16. Deepak Kumar, Presented a paper entitled “Environmental Sustainability: The Emerging Discourse of Judicial Activism in India” in National Seminar on “Population, Environment and Sustainable Development in India: Issues and Challenges’ organized by Department of Geography, CCS University Meerut and Sponsored by ICSSR, December 22-23, 2012.
 17. Deepak Kumar, Presented a paper entitled “Redressing Women Rights Violations: Dimensions of Contemporary Social Movements in India” in National Seminar on “Violence Against Women’ organized by Department Law and Economics, Himachal Pradesh University Shimla, August 21-22, 2013.
 18. Deepak Kumar, Presented a paper entitled “Socio-Legal Dimensions of Environment Protection in the 21st Century: An Analysis” in 1st International Conference of Association of Punjab Geographers on “ Disasters, Natural Resource Management and Socio-economic Development” organized by Department of Geography, Kurukshetra University, Kurukshetra, Haryana, India, October 4-5, 2013.
 19. Deepak Kumar, Presented a paper entitled “Impact of Right to Education in Enhancing Women’s Capabilities in India: An Analytical Study” in First South Asian History Conference organized by Department History, Punjabi University Patiala, October 25, 26 & 22, 2013.
 20. Deepak Kumar, Presented a paper entitled “Role of Urbanisation and Environment Protection in Context to Sustainable Development” in a seminar on ‘Urbanisation and Environmental Changes in India’ organized by Dept. of Geography, Meerut College Meerut, March 29-30, 2014.

21. Deepak Kumar, Presented a paper entitled “Sustainable Development and Agriculture Land management Laws in India” in a seminar on ‘Urbanisation and Environmental Challenges in India’ organized by Dept. of Geography, Meerut College Meerut, March 29-30, 2014.
22. Deepak Kumar, Presented a paper entitled “Legitimacy of Judicial Law Making in Respect of Directive Principles And Fundamental Rights” in a seminar on ‘Judicial Activism vis a vis Judicial Restraint’ organized by Baba Farid Law College Faridkot, April 5, 2014.
23. Deepak Kumar, Presented a paper entitled “Social-legal Dimensions of Environmental Crisis in India: Issues and Challenges for Social Work Practice” in a seminar on ‘Social Work Practice: Scope and Challenges in Present Context’ organized by Dept. of Social Work Kurukshetra University Kurukshetra, HR, November 14-15, 2014.
24. Deepak Kumar, Presented a paper entitled “Reflection on Women’s Rights as Human Rights in India: An Evaluation” in a seminar on ‘Uniform Civil Code’ organized by N.M. Law P.G. College, Hanumangarh Town (Rajasthan), December 13-14, 2014.

Dr. Surender Mehra

1. Surender Mehra, Presented a paper on the topic “Shikshake Adhikarki Vastavik Maulikta” in international conference on the Status and trend of Value Oriented Education in various subjects regarding Globalization ” on October 23 and 24 2010 organised by MSSDC, Allahabad
2. Surender Mehra, Presented a paper on the topic “Competition Law and International Perspective” in international conference on Indian Conference of international and comparative law on 22 January, 2014 organised by BHU and Soochow university Taipei and Chinese society of comparative law
3. Surender Mehra, Presented a paper on the topic “Development of Trade law “in international conference on international Environmental law, Trade law ,Information Technology law and Legal Education on 2-3 March 2013 organised by BHU
4. Surender Mehra, Presented a paper Competition Law and Consumer law Tools for Consumer Welfare in national seminar on Legal Protection of Consumers in a Global Economy recent approaches and the way forward on 29- 30 March 2014 organised by BHU law school
5. Surender Mehra, Presented a paper Legal and Ethical Dimension of Human Rights Act 1994 in national seminar on Science Technology and Law reform on 3-4 November 2012 organised by BHU law school
6. Surender Mehra, Presented a paper Legal Education and Malviyaji on contemporary relevance of Mahatma vision and thought

Dr. Sukhwinder Kaur

1. Sukhwinder Kaur, Presented a paper “Dowry Death: An Analysis” in international Conference on “Women and Development: Issues and

- Initiatives” on March 26-27, 2010 Organized by Women’s Studies Centre, Punjabi University, Patiala.
2. Sukhwinder Kaur, Presented a paper “Child Labour : Causes, Government Policy and Role of Education” in international Conference on “Women and Child Issue: National and International Perspectives”, on February 11-12,2011 Organized by Women’s’ Studies Centre, Punjabi University, Patiala.
 3. Sukhwinder Kaur, Presented a paper “ Women’s Right in Adoption & Guardianship” in international Conference on “Women , peace and security” on October 26-27,2012 Organized by Women’s’ Studies Centre, Punjabi University, Patiala.
 4. Sukhwinder Kaur, Presented a paper “Role of Election Commission” in national Seminar on “Legal Regulation of Elections In India” on November 11-12,2008 Organized by Department of Law, Punjabi University, Patiala.
 5. Sukhwinder Kaur, Presented a paper “Violation of Human Rights of Dalits” in national Seminar on “Human Rights and Duties Education” on January 18-19,2010 Organized by Department of Administration, Punjabi University, Patiala.
 6. Sukhwinder Kaur, Presented a paper “Constitutional Framework for Safeguarding the Interest of Scheduled Castes and Scheduled Tribes ” in national Seminar on “Weaker Sections and Law” on March 29-30-2011 Organized by Punjab school of law, Punjabi University, Patiala.
 7. Sukhwinder Kaur, Presented a paper “Laws relating to Air Pollution in India” in national Seminar on “Emerging environmental issues: legislative & Judicial Approach” on October 22-23,2012 Organized by Department of Law, Punjabi Regional centre, Bathinda.
 8. Sukhwinder Kaur, Presented a paper “Weaker Section and Law in India” in National Seminar on “Emergence of Modern Society: Role of Law” on November 03-04,2013 Organized by Department of Law, Punjabi University, Patiala.
 9. Sukhwinder Kaur, Presented a paper “Reservation Policy: Constitutional Perspective” in national Seminar on “Growth and Development of Law : Post Independence era” on March 20-21,2009 Organized by Faculty of Law, Chaudhary Devi Lal University Sirsa, Haryana.
 10. Sukhwinder Kaur, Presented a paper “Atrocities against Scheduled castes and Scheduled Tribes.” In National Seminar on “Facets of Justice Delivery System” on March 17-18 2010 Organized by Punjab School of law, Punjabi University, Patiala.