Central University of Punjab

पंजाब केंद्रीय विश्वविद्यालय

VOLUME-II

Criteria-wise Analytical Report

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CRITERION-I: CURRICULAR ASPECTS

1.1   Curriculum Design and Development

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

The Central University of Punjab has a vision to attain global standards of teaching, learning and research and to act as a catalyst of change by setting bench-marks for academic excellence, interfacing with stake-holders and service to the surrounding communities.

Its mission is to offer a wide range of academic and research facilities for integrated and cross-disciplines and to create a skilled workforce responsive to regional, national and global needs of academia, industry, administration and the society.

At Central University of Punjab, Bathinda (CUPB), all the academic programmes are designed on pragmatic philosophy of education which makes the teaching-learning process motivating. The design and implementation of the academic programmes keeps the focus on societal needs. Thus, the vision and mission of the university is reflected in academic programmes in multiple ways as below:

- The academic programmes in all the schools have been structured to nurture understanding in the young minds. Special emphasis is laid on:

    i)   Coherent curriculum
    ii)   Hands on practical skills
    iii)   Employability
    iv)   Societal concerns
    v)   Academic flexibility
    vi)   Result oriented teaching

- The CUPB has designed many unique interdisciplinary programmes such as Life Sciences with specialization in Molecular Medicine and Human Genetics to cross-pollinate with new ideas and new technologies. Programmes in Computational Sciences are designed to include Computational Physics, Computational Chemistry and Bioinformatics.

- Programmes like Environmental Science and Technology address the global and national issues, while retaining a focus on environmental problems of this region.

- The programmes on Translational Biomedical Research and Pharmaceutical Sciences are designed to meet the regional, national and global needs of academia and industry.

- The university has established a Centre for South and Central Asian Studies and also has programmes in different languages, laws, social sciences and education to become a global epicentre of knowledge, culture and skills.

- Programmes in Computer Science and Technology and Cyber Security are important to current social and national needs.

Thus, the institutional vision and mission is amply engrossed in CUPB's academic programmes.
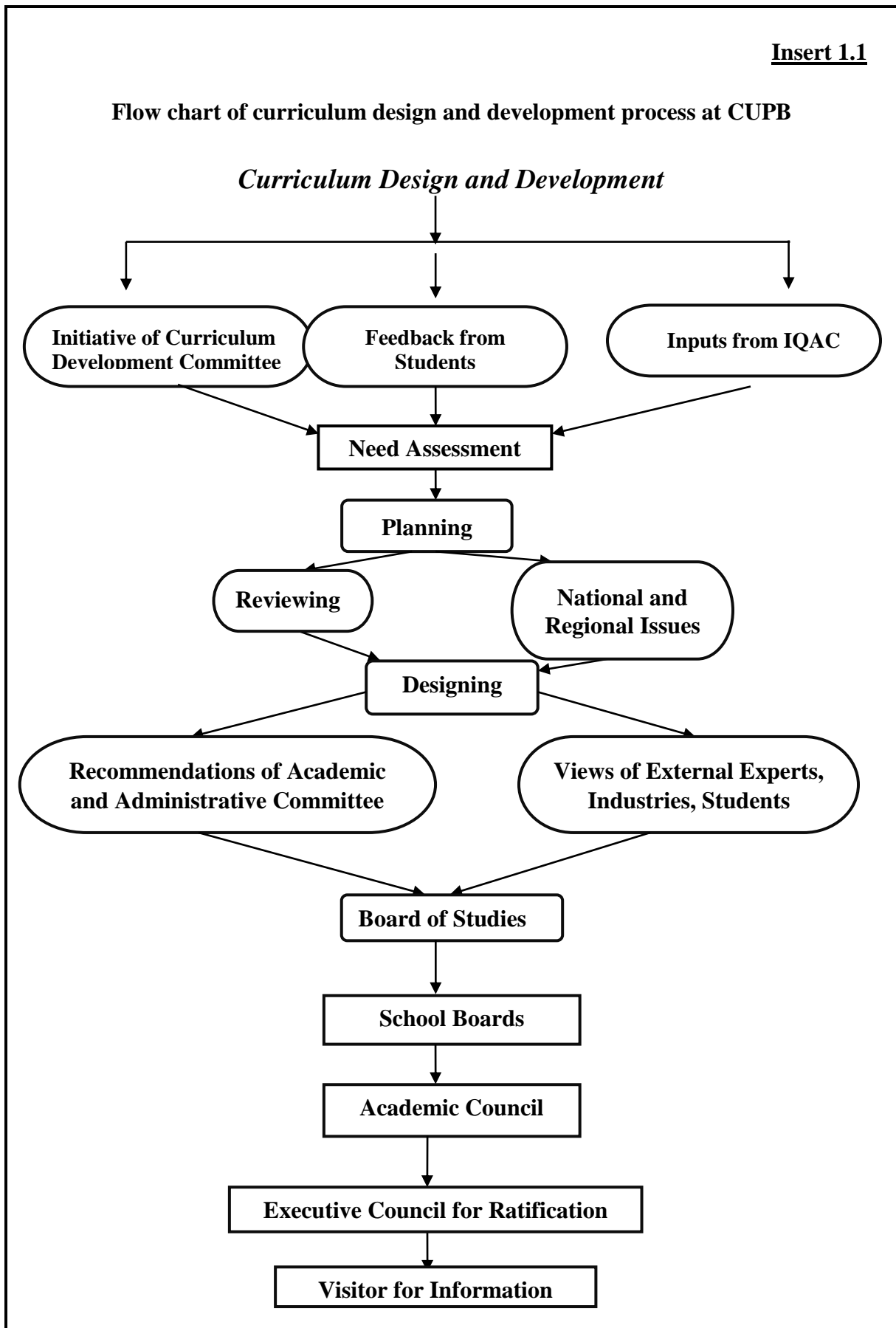
1.1.2 Does the university follow a systematic process in the design and development of the curriculum? If yes, give details of the process (need assessment, feedback, etc.).

Yes, CUPB follows a systematic process in the design and development of the curriculum. The programmes are designed on the basis of academic, regional, national and international needs and are in line with the guidelines of the relevant regulatory bodies like UGC, CSIR, AICTE, BCI, PCI, NCTE etc.

In addition to the National Model Curriculum of UGC and the syllabus of CSIR-UGC NET; CUPB programmes include local, national and global issues. For example, Biosciences and Environmental Science are mandated to work on human health, eco-stability and environment management with a focus on local issues. Every year, the curriculum is revised to include the latest in the subject. For instance, the modern research leading to Nobel prizes in each of the six disciplines (Literature, Economy, Physiology and Medicine, Physics, Chemistry and Peace) are added to the curriculum of the relevant programmes so that the students remain updated. The following process is being followed for designing and developing of curriculum (*Annexure 1.1 and Insert 1.1*):

Insert 1.1

Flow chart of curriculum design and development process at CUPB

Curriculum Design and Development

Initiative of Curriculum Development Committee	Feedback from Students	Inputs from IQAC

Need Assessment

Planning

Reviewing   National and Regional Issues

Designing

Recommendations of Academic and Administrative Committee   Views of External Experts, Industries, Students

Board of Studies

School Boards

Academic Council

Executive Council for Ratification

Visitor for Information

Curriculum Design

Design of courses of study is prepared by the "Curriculum Development Committee" of centre constituted for the purpose. The stepwise procedure involved in curriculum design is as follows:

- Need assessment.

- Planning and designing of programme/course outline by Curriculum Development Committee.

- In-house meeting and recommendations of the Academic and Administrative Committee of Centre.

- Discussions and recommendations of Board of Studies which has faculty from other related centres, external experts, industry representatives and students.

- School Boards with Dean of the school as chairperson and external experts as members, further review the curriculum.

- The Academic Council, a larger statutory academic body of university chaired by the Vice Chancellor with external experts from relevant fields, approves the curriculum.

- The decision of the Academic Council is sent to the Executive Council for ratification and Visitor for information.

Curriculum Development

The curriculum development at CUPB is a multipronged process composed of many steps that include:

- Course-wise feedback from the students at the end of each semester.

- Initiatives from within the centre and school.

- Inputs from University-Industry Council and University-Industry Forum.

- Inputs from the IQAC (Internal Quality Assurance Cell).

1.1.3 How are the following aspects ensured through curriculum design and development?
∗ **Employability**
∗ **Innovation**
∗ **Research**

All the three aspects above are extremely important and are kept in mind while designing the programmes. The inputs and suggestions of students and industry are considered to be of paramount importance.

Employability

University designs the curriculum from the point of view of the employability of the students and response of the employers. A mid-decade review as required by the Act of the university was carried out during November 2014 for all the programmes at CUPB. As a result of this review, many previous courses/programmes have been renamed or changed with altered content, to make these more acceptable to the employers. For example, the following programmes have been renamed/ changed from academic session 2015-16, keeping employability in mind:

- M.Sc. Nanophysics changed to M.Sc. Physics with specialization in Nanophysics

- M.Sc. Medicinal Chemistry to M.Sc. Chemistry with specialization in Medicinal Chemistry

- LL.M. Environmental Law to
     : LL.M. with specialization in Environmental Law
     : LL.M with specialization in Corporate Law
     : LL.M with specialization in Human Rights Law

- M.A. Development Economics to
     : M.A. Economics with specialization in Development Economics
     : M.A. Economics with specialization in Macro Economics
     : M.A. Economics with specialization in Micro Economics

The above programmes have a wider acceptability with the employers compared to the earlier ones. Some other programmes of CUPB like M. Pharm. (Medicinal Chemistry), M.Sc. Chemical Sciences (Medicinal Chemistry) and M.Sc. in Environmental Science and Technology are highly industry oriented and have wide employability.

Further, the following points are synthesised in the curriculum to enhance the employability of the students:

- The curriculum has been designed in such a way that the students acquire hands-on-tools/training, updated knowledge, managerial skill, practical exposure and multi-tasking ability in the area of expertise.

- Exposure to different parameters mentioned above, helps the students in getting employability in varied fields: industries (like pharmaceuticals, energy technology, computers, etc.) government agencies, banking sector, agro industries, insurance sector, computer applications, corporate offices, professional accounting; management, mass communication, civil services, press and print media, teaching and research.

Thus, CUPB's approach to enhance employability includes appropriate curriculum, right nomenclature, a correct proportion of hands on practical training and theoretical knowledge base, high professional abilities, communication skills and computing skills.

Innovation

- CUPB firmly believes in complete academic freedom to its scholars and faculties in order to stimulate thinking and evolving innovative ideas leading to novel findings. In order to promote innovation, curriculum, ensures programmes that are multi-disciplinary, as well as, inter-disciplinary. For example in M.Sc. Physics, students study advance courses like Nanophysics, as well as, inter-disciplinary course such as Computational Methods. Students of M. Sc. in Molecular Medicine are exposed to bioinformatics, drug discovery, regenerative medicine and molecular basis of human diseases.

- The curricula of all the programmes are designed with a focus on practical experience, industrial exposure, research aptitude and contemporary knowledge, thereby, assisting in generating new ideas.

- Seminars, term papers and class projects are a mandatory part of CUPB programmes to develop higher order training skills to innovate.

Research

- A mandatory course on "Research Methodology" has been designed and introduced for all the students at post graduate and doctorate level. This part of the curriculum exposes them to area of research in the field concerned and orientation to methodology of research. It helps in developing interest and attitude towards research.

- At the postgraduate level, project/dissertation work/industrial training and seminar are mandatory. Through this, students acquire research experience and also contribute towards research output.

- CUPB has state of the art facilities in the areas where research programmes have been initiated and practical courses lay strong emphasis on training students to be researchers of tomorrow.

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

- Development and restructuring of curricula at CUPB always fall within the guidelines of the UGC, CSIR, AICTE, BCI, PCI and NCTE. In addition to the National Model Curriculum of UGC, the syllabus of CSIR-UGC NET/ ICAR NET and ICMR NET is kept in mind while designing curriculum.

- Feedback is obtained from outside experts through Board of Studies and the School Boards.

- Curriculum restructuring has been done by many centres to prepare students for important national level competitions.

Some programmes of CUPB like Molecular Medicine and Computational Sciences and also the examination reforms are likely to have wide impact.

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

Yes, the university interacts with industry and research bodies and in the curriculum revision process.

- Various centres like Chemical Sciences, Pharmaceutical Sciences and Natural Products, Environmental Science and Technology, Human Genetics and Molecular Medicine, Computer Science and Technology have made efforts to explore the requirements of the following industries: Panacea Biotech, Zydus, Cadila, Biocon, Sun Pharma, Lupin Laboratories, Thermax India, Merck Speciality, IBM, HP etc.

- Centre for Pharmaceutical Sciences and Natural Products sought feedback from Cipla and Novartis and modified the curriculum of Basics of Drug Design and Drug Action (PMC.513)

- On the advice given by Punjab Pollution Control Board, the Centre for Environmental Science and Technology modified courses of Environmental Pollution (EVS.603), Profiling Environmental Issues (EVS.604), Water Pollution and Control Test (EVS.508) and Air and Noise Pollution and Management (EVS.509).

- CUPB faculty interacts with industry through its advisory bodies like University-Industry Council and University-Industry Forum (*Annexure 1.2*). Input from corporate bodies helped to include their ideas in the curriculum of the following courses:

  i)   Concepts in Molecular Medicine (LMM.510)

  ii)   Cancer Biology (LMM.552)

  iii) Radiation Biology (LMM.553)

- CUPB has been benefitted through interactions with the stakeholders in updating the curriculum according to their requirement in the area of anti-cancer medicine, environmental pollution and climate change.

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

As per the Act of Parliament for newly established Central Universities, CUPB has no affiliated college.

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

At present CUPB has no affiliated college as per the Act.

1.2 Academic Flexibility

CUPB provides for academic flexibility at various levels. UGC guidelines on Choice Based Credit System to provide flexibility to students in designing their programmes were accepted by the Academic Council of CUPB in the sixth meeting held on March 5, 2015 and subsequently approved by the Executive Council in its 14th meeting held in 16.03.2015 (***Annexure 1.3***). Choice Based Credit System has been implemented from the academic session 2015-16.

CUPB offers flexibility in the following areas:

- Flexibility in selection of elective courses
- Flexibility in taking advance courses
- Flexibility in opting open electives.
- Flexibility to allow change of streams in related centres, subject to availability of seats.
- Flexibility in schedule of surprise tests and end semester examinations.
- Flexibility in number of times a student can take online exams within a week.
- CUPB has framed a specific policy that provides flexibility to students to transfer the credits while shifting to other institutions or while coming to CUPB from other organizations. (***Annexure 1.4***)

1.2.1 Furnish the inventory for the following:

i. Programmes taught on campus:

CUPB has been introducing new programmes every year. Year-wise details of the programmes of the last four years are shown in ***Table 1.1***. The number of programmes offered at CUPB increased to 71 in the academic year 2015-16, from 25 in the previous year. These include:

Postgraduate programmes =	34	M. Phil. programmes =	06
Ph.D. programmes =	15	Integrated Ph.D. programmes =	07
Certificate course =	01	Diploma =	01
Short term courses =	07		

The details of the programmes offered in current academic session are shown in ***Table 1.2***.

ii.   *Overseas programmes offered on campus*

No overseas programmes are offered at CUPB, but lectures of leading experts of different fields are conducted through A-VIEW software, which is indigenously built video conferencing software and provides opportunity to get connected with others in real time.

iii.   *Programmes available for colleges to choose from:*

CUPB is a non-affiliating university as per the Act.

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

a.   Core / Elective options: Yes
b.   Enrichment courses: Yes
c.   Courses offered in modular form: Yes
     (Course on Green Farming Technology is a modular course)
d.   Credit accumulation and transfer facility: Yes
e.   Lateral and vertical mobility within and across programmes, courses and disciplines: Yes
     (Available only within the Programme)

Lateral entry and lateral exit is available in M.Phil.-Ph.D. programmes.

At CUPB, core, foundation, elective and open elective/interdisciplinary courses are offered in different programmes in different compositions. The details of this are given in ***Table-1.3***.

Table-1.1: Programmes offered at CUPB in the last four years

Sr. No.	Name of the Centre	2011-12	2012-13	2013-14	2014-15
1.	Environmental Science and Technology	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	-
		M.Sc. (EVST)	M.Sc. (EVST)	M.Sc. (EVST)	M.Sc. (EVST)
		--	--	--	M.Phil.
2.	Comparative Literature	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	--
		--	--	M.A. Punjabi and Comparative Literature	M.A. Punjabi and Comparative Literature
3.	South and Central Asian Studies	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	-
		-	-	-	M.Phil.
4.	Biosciences	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	M.Phil.-Ph.D. Integrated	-
		M.Sc. Biosciences	M.Sc. Biosciences	M.Sc. Biosciences	M.Sc. Biosciences
		-	-	M.Sc. in Molecular Genetics	M.Sc. in Molecular Genetics
		-	-	-	M.Phil.
5.	Chemical and Pharmaceutical Sciences	M.Pharm.-Ph.D. Integrated	-	-	-
		M.Pharm. Pharmaceutical Sciences (Medicinal Chemistry)	M.Pharm. Pharmaceutical Sciences (Medicinal Chemistry)	M.Pharm. Pharmaceutical Sciences (Medicinal Chemistry)	M.Pharm. Pharmaceutical Sciences (Medicinal Chemistry)
		M.Sc. Chemical Sciences (Medicinal Chemistry)	M.Sc. Chemical Sciences (Medicinal Chemistry)	M.Sc. Chemical Sciences (Medicinal Chemistry)	M.Sc. Chemical Sciences (Medicinal Chemistry)
6.	Environmental Law	L.L.M-Ph.D.Integrated	L.L.M-Ph.D. Integrated	L.L.M-Ph.D. Integrated	L.L.M-Ph.D. Integrated
		-	-	-	L.L.M.(Environmental Law)

7.	Computer Science and Technology	-	M.Tech. (Computer Science and Technology)	M.Tech. (Computer Science and Technology)	M.Tech. (Computer Science and Technology)
		-	-	M.Tech. Computer Science and Technology (Cyber Security)	M.Tech. Computer Science and Technology (Cyber Security)
8.	Economic Studies	M.Phil.-Ph.D. Integrated-Development Economics	M.Phil.-Ph.D. Integrated-Development Economics	M.Phil.-Ph.D. Integrated-Development Economics	-
		-	-		M.Phil. in Economics
9.	Physical and Mathematical Sciences	-	-	M.Phil. Physics	M.Phil. Physics
		-	-	M.Sc. Physics (Spl in Nanophysics)	M.Sc. Physics (Spl in Nanophysics)
10	Genetic Diseases and Molecular Medicine	-	-	-	M.Sc. in Genetic Diseases and Molecular Medicine
11.	Human Genetics	-	-	-	M.Sc. in Human Genetics

Note: M.Phil.-Ph.D. Integrated Programmes have been replaced with separate M. Phil. and Ph.D. programmes because integrating the two was technically not possible.

Table-1.2: Programmes offered at CUPB during Academic Session 2015-16

M.Phil-Ph.D- Integrated Programmes	
1.	Biosciences
2.	Environmental Science and Technology
3.	South and Central Asian Studies
4.	Comparative Literature
5.	Development Economics
M.Pharm.-Ph.D. Integrated Programmes	
1.	Pharmaceutical Sciences (Medicinal Chemistry)
LL.M.-Ph.D. Integrated Programme	
1.	Environmental Law
Ph.D.	
1.	Physical Sciences
2.	Human Genetics
3.	Plant Sciences
4.	Geography and Geology
5.	Molecular Medicine
6.	Environmental Science and Technology
7.	Animal Sciences
8.	Biochemistry and Microbial Sciences
9.	Chemical Sciences
10.	Computational Sciences
11.	Education
12.	Law
13.	Classical and Modern Languages
14.	Mathematics and Statistics
15.	Pharmaceutical Sciences and Natural Products
M.Phil.	
1.	Biosciences
2.	Environmental Science and Technology
3.	South and Central Asian Studies
4.	Comparative Literature
5.	Economics
6.	Physics
M.Sc.	
1.	Biosciences
2.	Environmental Science and Technology
3.	Chemical Sciences (Medicinal Chemistry)
4.	Molecular Genetics
5.	Genetic Diseases and Molecular Medicine
6.	Human Genetics
7.	Life Sciences with specialization in Animal Sciences
8.	Life Sciences with specialization in Plant Sciences

9.	Life Sciences with specialization in Bioinformatics
10.	Life Sciences with specialization in Microbial Sciences
11.	Life Sciences with specialization in Molecular Medicine
12.	Life Sciences with specialization in Biochemistry
13.	Life Sciences with specialization in Human Genetics
14.	Chemical Sciences with specialization in Organic Chemistry /Inorganic Chemistry/ Computational Chemistry/Physical Chemistry
15.	Physics
16.	Computational Physics
17.	Chemistry (Computational Chemistry)
18.	Mathematics
19.	Earth and Geological Sciences
20.	Geography
21.	Statistics
M.A./M.Ed.	
1.	English
2.	Education
3.	Sociology
4.	Political Science
5.	Geography
6.	History
7.	Economics
8.	Punjabi
9.	M. Ed.
LL.M.	
1.	Law (specialization in Environmental Law/Corporate law Human Rights Law)
M.Pharm.	
1.	Medicinal Chemistry
M.Tech.	
1.	Computer Science and Technology
2.	Computer Science and Technology (Cyber Security)
Diploma	
1.	Diploma in Green Farming Technology
Certificate Courses	
1.	Certificate Course in Human Rights and Duties
Short term courses	
1.	Vermicomposting
2.	Apiculture
3.	Mushroom cultivation
4.	Sericulture
Value added short term courses	
1.	Communication and Soft Skills Development
2.	Introductory Punjabi Language Course
3.	Japanese Language Course

Table-1.3: Elective, core, foundation and interdisciplinary courses at CUPB

Sr. No.	Name of the Centre	Name of the Programme	Type of Courses		
			Foundation %	Core %	Elective/ Open Elective (ID) %
1.	Centre for Animal Sciences	M.Sc. Life Sciences with specialization in Animal Sciences	5.5%	80%	14.5%
2.	Centre for Plant Sciences	M.Sc. Life Sciences with specialization in Plant Sciences	5.5%	80%	14.5%
3.	Centre for Biochemistry and Microbial Sciences	M.Sc. Life Sciences with specialization in Microbial Sciences	5.5%	80%	14.5%
		M.Sc. Life Sciences with specialization in Biochemistry	14.8%	66.66%	18.15%
4.	Centre for Human Genetics and Molecular Medicine	M.Sc. Life Sciences with specialization in Molecular Medicine	7%	68%	25%
		M.Sc. Life Sciences with specialization in Human Genetics	11%	64%	25%
5.	Centre for Physical Sciences	M.Sc. Physics	10.42%	64.58%	25%
6.	Centre for Chemical Sciences	M.Sc. Chemical Sciences with specialization in Medicinal Chemistry	12.5%	64.58%	22.91%
7.	Centre for Pharmaceutical Sciences and Natural Products	M.Pharm. Pharmaceutical Sciences (Medicinal Chemistry)	10.41%	64.58%	25%
8.	Centre for Computational Sciences	M.Sc. Chemistry (Computational Chemistry)	12.50%	64.58%	22.91%
		M.Sc. Life Sciences with specialization in Bioinformatics	8%	59%	33%
9.	Centre for	M.Tech. Computer	14.70%	58.82%	26.47%

	Computer Science and Technology	Science and Technology			
		M.Tech. Computer Science and Technology (Cyber Security)	14.71%	61.71%	23.53%
10.	Centre for Environmental Science and Technology	M.Sc. Environmental Science and Technology	16.67%	66.67%	16.76%
11.	Centre for Mathematics and Statistics	M.Sc. Mathematics	10.4%	65%	20.6%
		M.Sc. Statistics	8.3%	70.8%	16.7%
12.	Centre for Law	LL.M. with specialization in Environment Law / Human Rights Law / Corporate Law	14.28%	28.57%	57.14%
13.	Centre for Economic Studies	M.A. Economics	15%	60%	25%
14.	Centre for Comparative Literature	M.A. English (Comparative Literature and Translation)	12.5%	62.5%	25%
15.	Centre for South and Central Asian Studies	M.A. Political Science	11.12%	61.12%	27.79%
		M.A. History	11.12%	61.12%	27.79%
16.	Centre for Sociology	M.A. Sociology	16.6%	62.5%	20.8%
17.	Centre for Education and Physical Education	M.A. Education	-	66.60%	33.40%
		M.Ed.	-	69.20%	30.80%
18.	Centre for Geography and Geology	M.Sc. Earth and Geological Sciences	10.4%	66.6%	23%
		M.A. Geography	17%	62%	21%
19.	Centre for Classical and Modern Languages	M.A. Punjabi	12.5%	62.5%	25%

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

Yes, the university has a well-defined policy and procedure for admission of international students in its programmes by creating supernumerary seats (*Annexure 1.5*). CUPB's strategy is to admit international students through embassies or respective High Commissions. Also, for attracting the foreign students, the university has made provisions for scholarships from ICSSR/earn-while-learn assistantship and under R and D projects, as per the prevailing norms.

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

CUPB is open to offering courses specifically targeting international students. The School of Education has plans to start two programmes under MHRD's Madan Mohan Malviya Scheme having international mentors. However, a need assessment shall be done for offering such programmes.

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

Yes, the university facilitates dual degree programmes as M.Phil.-Ph.D. integrated programme in various centres, as below:

- M.Phil. and Ph.D. in Biosciences.

- M.Phil. and Ph.D. in South and Central Asian Studies

- M.Phil. and Ph.D. in Environmental Science and Technology

- M.Phil. and Ph.D. in Comparative Literature

- M.Pharm. and Ph.D. in Chemical and Pharmaceutical Sciences

- LL.M. and Ph.D. in Environmental Law

- M.Phil. and Ph.D. in Development Economics

A proposal for B.Ed.-M.Ed. dual degree programme has been sent to NCTE for approval. CUPB also has the plan to start M.A.-M.Sc. dual degree programme

in Geography. A policy of dual degree programmes has been approved (*Annexure 1.7*).

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

A policy has been put in place for implementation of self-financing courses (*Annexure 1.8*).

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

The university is not allowed to have any distance education programmes as per its Act. However, it has initiated and has registered for the Massive Open Online Courses (MOOC) which will be made available online for a wide usage. MOOC programme is being initiated in accordance with the instructions from MHRD. Thirty faculty members of CUPB have been identified as experts for developing the MOOC programme in their respective areas. As soon as the courses under the programme become available, the students will be allowed to integrate these courses into their programmes. Three faculty members recently had training in Moodle and a two-day workshop on Moodle was conducted on September 11-12, 2015 for training CUPB faculty.

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

- The Choice Based Credit System (CBCS) has been introduced at Central University of Punjab, Bathinda in all the programmes (without exception). It permits the students to choose the courses of their choice, learn at their own pace, undergo additional courses, and adopt an interdisciplinary approach to learning. The policy is at *Annexure 1.3.*

- CUPB is not entitled to affiliate colleges at the moment.

1.2.9 What percentage of programmes offered by the university follow:

- Annual system: 0%
- Semester system: 100% (for all the programs)

- Trimester system: 0%
- Certificate/ Short term courses: 3 months

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

- CUPB promotes interdisciplinary programmes by encouraging the students to choose their courses in different centres.

- Advertisements in newspapers, posters and banners in the different parts of the country, website display and notice boards of different centres are used to publicize these courses.

- Interdisciplinary programmes enable students to appreciate different disciplines, lead to flexibility in the change of discipline at higher levels and enhance the employability. Students are explained these strengths. For example, they are made to understand the importance of learning Computational Physics, Computational Chemistry, Bioinformatics, Environmental Science, Medicinal Chemistry, Chemistry of Natural Products and other interdisciplinary courses such as Earth and Geological Sciences.

1.3   Curriculum Enrichment

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

- The centres review the curriculum frequently and update it in order to maintain social relevance and employability. A major revision of all programmes was carried out during 2014 and implemented from session 2015-16. Another major revision is planned during October/ November 2015. Currently each centre is geared up to call meetings of Curriculum Development Committees, Board of Studies and School Boards for up gradation of curriculum for session 2016-2017. Details of the curriculum review carried out by different centres given in the ***Table-1.4***, shows that most centres of CUPB revised their curriculum every year.

- Newly joined faculty adds a huge resource to the university and proposes new courses in areas of their specialization.

- Feedback from students and industry from employability point of view is an important consideration in each review.

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

The number of programmes at CUPB has been increasing each year. The number of programmes introduced at PG levels during last four years is given in *Table-1.5*.

Table-1.4: Curriculum review by different centres of CUPB

Name of the Centre	Name of the Programme	Syllabus (First approval	1st Revision/ Upgrade	2nd Revision/ Upgrade	3rd Revision/ Upgrade
Environmental Science and Technology	M.Phil.	Feb, 2010.	July, 2011	Feb, 2013.	November, 2014
	M.Sc.	Jul, 2011.	Aug 2012	Feb, 2013.	Nov., 2014
	Ph.D.	Coursework was approved in Aug 2012	November, 2014	-	-
Biosciences	M.Phil.-Ph.D. Integrated	2011	Aug. 16, 2011	July 17, 2012	-
	M.Sc. Biosciences	2011	July 17, 2012	Nov. 2014 (changed nomenclature)	-
	M.Sc. in Molecular Genetics	June 02, 2014	-	-	-
Comparative Literature	M.Phil.-Ph.D. Integrated	December 2009	July-Aug 2011	July-Aug 2011(Course Work)	-
	M.A. Comparative Literature	June 2012	November 2014 (changed the nomenclature of programme)	-	-
South and Central Asian Studies	M.Phil.-Ph.D. Integrated	2009-10	November, 2014 (M.Phil. Standalone)	-	-
	M.A. International Studies	2009-10	June 5, 2012	November 2014 (changed the Nomenclature of programme)	-
Economics	M.Phil. Economics	June, 2011	November 2014	-	-
	M. A. Economics	2013	November 2014	-	-
Environmental Law	LL.M. - Ph.D. Integrated	April, 2011	-	-	-
	LL.M. in Environmental Law (one year)	March 2013	Dec.2014 (two year and add more specializations)	-	-

Physical and Mathematical Sciences	M.Sc. Physics (Nanophysics)	August, 2013	July, 2014	November, 2014 M.Sc. Physics (specialization in Nanophysics)	-
	M.Phil. Physics	August, 2013	July, 2014	November, 2014	-
Human Genetics	M.Sc. Human Genetics	Feb.2014	Nov. 2014	-	-
Genetic Diseases and Molecular Medicine	M.Sc. in Genetic Diseases and Molecular Medicine	Feb.2014	Nov. 2014	-	
Bioinformatics	M.Sc. in Bioinformatics	Feb.2014	Nov. 2014	-	-
Computer Science and Technology	M.Tech. (Computer Science and Technology)	July, 2012	Nov. 2014	-	-
Education	M.Ed./M.A. Education	Feb14	Nov. 2014	-	-
Punjabi Language, Literature and Culture	M.A.(Hons) Punjabi and Comparative Literature	July, 2013	Nov.2014 (changed the nomenclature)	-	-

Table-1.5: Master degree programmes introduced in last four years

2011-12	2012-13	2013-14	2014-15	2015-16
M.Sc. Biosciences	M.Sc. Environmental Science and Technology	M.A. (Hons) Punjabi and Comparative Literature	M.Sc. Genetic Diseases and Molecular Medicine	M.Sc. Life Sciences (Plant Sciences, Animal Sciences, Microbial Sciences, Biochemistry, Molecular Medicine)
M.A. Comparative Literature	M.Pharm. Pharmaceutical Sciences (Medicinal Chemistry), M.Sc. Chemical Sciences with specialization in Medicinal Chemistry	M.Sc. Physics (Sp in Nanophysics)	M.Sc. Human Genetics	M.Sc. Chemistry with specialization in Organic Chemistry / Inorganic Chemistry / Physical Chemistry
-	M.Sc. Chemical Sciences (Medicinal Chemistry)	M.Sc. Computational Sciences	LL.M (Environmental Law)	M.Sc. Mathematics
-	M.Tech. (Computer Science and Technology)	-	M.A. Punjabi	M.Sc. Statistics
-	M.Tech. Computer Science and Technology (Cyber Security)	-		M.Sc. Earth and Geological Sciences
-	M.A. in International Studies	-		M. A. Education M.Ed.
-	-	-	-	LL.M. with specialization in Environment Law /

				Human Rights Law / Corporate Law
-	-	-	-	M.A./M.Sc. Geography
-	-	-	-	M.A. Political Science/ History/ Sociology

List of interdisciplinary programmes

Name of the Centre	Name of Programmes	Interdisciplinary subjects included
Biosciences	M.Sc. Biosciences	Computer Application, Chemistry, Botany, Zoology, Microbiology and Biotechnology
South and Central Asian Studies	M.A. International Studies	History, Political Science and Geography
Human Genetics and Molecular Medicine	M.Sc. Human Genetics; M.Sc. Molecular Medicine	Genetics, Molecular Biology, Bioethics, Immunology, Radiation Biology
Environmental Law	LL.M.	Law, Environmental Science
Computational Sciences	M.Sc. Chemistry (Computational Chemistry), M.Sc. Physics (Computational Physics)	Chemistry, Bioinformatics, Physics
Centre for Pharmaceutical Sciences and Natural Products	M.Sc. Medicinal Chemistry	Chemistry, Medicine, Natural Products

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

Curriculum revision is a continuous process and the centres focus on achieving academic excellence by modifying the syllabus to suit the global and regional needs/trends. Review of existing programs and brainstorming with the help of external experts is the primary means for revision. In November 2014, nearly all courses (90%) were revised for the session 2015-16 and again a major revision is planned during 2015 for the session 2016-17 using the strategies as given in curriculum design and development.

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

CUPB has started short term value added courses of direct relevance to current needs as in Table 1.2:

These courses are offered every semester. Classes for these courses are held in the evening (after working hours) and can be taken up by the students in addition to their course work. At present, all these courses are offered free of cost. Details of some of these courses are:

- *Communication and Soft Skills Development Course:* In today's global scenario, it becomes imperative that the students have a good command of the languages for communicative, professional and academic purposes. With an aim of improving the reading, writing and speaking skills of students of the university, Communication and Soft Skills Development classes are held in the Language Lab in evening on week days. Courseware includes English grammar, academic and technical writing and additionally students are groomed for facing interviews, group discussions, etc. This course is very popular with the students. Amongst various batches (Nov. 2011, June 2013, Dec. 2013 and Feb. 2015), 62 students have improved their English and communication skills through this course and 25 are currently registered.

- *Certificate Course in Human Rights and Duties:* This course has been designed to disseminate the human rights awareness in the society. CUPB started the course under UGC scheme (Human Rights Education) in February, 2015. The duration of this programme is three months and frequency is two courses per annum. Maximum seats in this programme are 30 and there is no age limit to join this programme. For being eligible, a candidate should have passed graduation in any discipline

from a recognized university. The main objective of this course is to provide the participant not only with subject knowledge, but also to make them morally, ethically, intellectually strong. The programme is sketched in such a manner that it will generate new positive thoughts, stimulate debate on social issues and at the same time sensitize the participants on human rights. The course received a good response within and outside the university with 70 applications against 30 seats for the first batch.

- *Vermicomposting, Apiculture, Mushroom cultivation and Sericulture:* These four short courses together form a certificate programme in vocational training. The course module includes pamphlets, lecture notes, power point presentations, practical training, field visits, and visits to nearby locations for practical training and project reports. Fifty five students have registered for the year 2015.

- University has plans to start more certificate courses in Photography, Musical Instruments, Languages, Web Design and Computer Applications, Accountancy, Museum Curatorship and Library Management Systems.

- Competitive Examination Cell provides coaching and guidance for IAS/NET/CSIR free of cost to enhance the employability of students.

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

CUPB offers skill-oriented programmes relevant to regional needs with the objective to train specialized manpower.

Diploma in Green Farming Technologies

CUPB proposed and got approval for a grant of Rs. 65.96 lacs for the two years to start a programme under the "UGC scheme for Community Colleges" from the academic session 2015-16. Under the scheme 40 students have been admitted for diploma in "Green Farming Technologies". University had received 107 applications.

The aim of the programme is to provide entrepreneurial orientation along with required certifiable skills based on National Occupational Standards (NOSs).

The curricula and system of certification of the diploma course aligns with the National Occupational Standards and National Skills Qualification Framework (NSQF) of Govt. of India. The programme admits students with 10+2 or equivalent qualification in any stream. The course is open to students of any age and a scholarship of Rs. 1000/- per month is provided to all eligible students. After completing the one year diploma course, the students will be eligible for advanced diploma or B. Voc. Course.

1.3.6 Higher Order Skill Development Programmes

B. Voc. Programme

CUPB submitted a proposal to UGC for the following B.Voc. Programmes:

> B.Voc. in Food Processing Technology
> B.Voc. in Theatre and Stage Craft
> B.Voc. in Medical Technology and Health Sciences

The proposal has been approved and the programmes will be started from academic session 2016-17.

1.4 Feedback System

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

- Yes, the students' feedback is obtained after completion of their course through feedback form (***Annexure 1.6***). It is mandatory for all students to give the feedback for every course.

- The feedback form is filled by students for each course and for every teacher teaching that course. The feedback by the students is considered while revising the curriculum.

- A programme is being prepared to permit a student to submit the feedback related to syllabi and curriculum anytime and any number of times online.

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

- The Board of Studies of each Centre, which approves the curricula and the syllabi, has experts of national and international repute.

- When an international faculty visits CUPB, the suggestions are sought for the improvement of syllabi. The Centre for Plant Sciences recently had syllabi of two courses reviewed by Professor R. Chibbar from University of Saskatchewan during his visit to CUPB.

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

At present university has no affiliated institution.

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

- Quality is sustained through academic audits. The syllabi are revised by experts serving as members of the Board of Studies who scrutinise the content specifically at the centre level. Faculty members of all disciplines attend workshops, seminars and conferences organised at the state, national and international levels. This enables them to be abreast with the most recent developments in their disciplines. This, in turn, helps them to introduce advancements in the curriculum. Further, in-house meetings of Curriculum Development Committee in each centre bring out development in their respective disciplines.

- Some of the quality sustenance and enhancement measures followed at CUPB are:

    (a) Continuous efforts to enrich academic and human resources.

    (b) Academic audit of curriculum by CUPB's Academic Audit and Monitoring Unit.

    (c) Revising curriculum after feedback from students, teachers and other stakeholders.

(d)   Time to time revision/amendment/restructuring based on requirement, of industries and corporate sector obtained through University-Industry Forum and Council.

(e)   Following the regulatory norms prescribed by relevant bodies like UGC, ICAR, AICTE, BCI, MCI, NCTE etc.

(f)   Establishment of Internal Quality Assurance Cell (IQAC) for development and application of quality benchmarks/parameters for various academic activities.

•   Another important quality sustenance measure followed by the university to ensure effective development of curricula is training to faculty for curriculum development. As many as 25 faculty members have attended orientation programmes, 6 have attended refresher courses and 2 each have attended special summer and special winter schools, organised by different universities and academic institutions. The details are given in *Table-1.6*.

Table 1.6: Orientation and refresher programmes attended by CUPB faculty

Sr. No.	Name	Designation and Centre	Type of Course	From	To	Place
1.	Er. Surinder Singh Khurana	Assistant Professor, Centre for Computer Science and Technology	Orientation programme	19-06-2014	16-07-2014	UGC-ASC, Guru Jambeshwar University of Science and Technology, Hisar
2.	Dr. Zameerpal Kaur	Assistant Professor, Centre for Comparative Literature	Orientation programme	23-06-2014	20-07-2014	UGC-ASC, North-Eastern Hill University Shillong
3.	Dr. Alpna Saini	Assistant Professor, Centre for Comparative Literature	Refresher Course	17-11-2014	06-12-2014	ASC Punjabi University Patiala
4.	Dr. Sunil Mittal	Assistant Professor, Centre for EST	Orientation programme	01-12-2014	27-12-2014	ASC Punjabi University Patiala
5.	Dr. Jai Prakash	Assistant Professor, Centre for Physical and Mathematical Sciences	Special Winter School	03-12-2014	03-12-2014	UGC-ASC, Aligarh Muslim University
6.	Dr. Felix Bast	Assistant Professor, Centre for Biosciences	Orientation programme	08-12-2014	02-01-2015	ASC-University of Delhi
7.	Dr. Sandeep Kaur	Assistant Professor, Centre for Economic Studies	Orientation programme	11-12-2014	07-01-2015	ASC- Guru Nanak Dev University Amritsar
8.	Dr. Mahesh Kulharia	Assistant Professor,	Special Winter	15-12-2014	03-01-2015	Academic Staff College,

		Centre for Bioinformatics	School			University of Rajasthan
9.	Dr. Achchhe Lal Sharma	Assistant Professor, Centre for Physical and Mathematical Sciences	Orientation programme	01-01-2015	28-01-2015	UGC-ASC, University of Lucknow
10.	Dr. Sanjeev Kumar	Assistant Professor, Centre for Biosciences	Orientation programme	08-01-2015	04-02-2015	UGC-ASC, University of Hyderabad
11.	Dr. Vinod Kumar	Assistant Professor, Centre for Chemical and Pharmaceutical Sciences	Orientation programme	08-01-2015	04-02-2015	UGC-ASC, University of Hyderabad
12.	Dr. Rajinder Kumar	Assistant Professor, Centre for Comparative Literature	Orientation programme	12-01-2015	07-02-2015	Academic Staff College, University of Rajasthan
13.	Dr. Kamlesh Yadav	Assistant Professor, Centre for Physical and Mathematical Sciences	Orientation programme	12-01-2015	07-02-2015	Academic Staff College, University of Rajasthan
14.	Dr. Puneet Pathak	Assistant Professor, Centre for Environmental Law	Orientation programme	12-01-2015	07-02-2015	Academic Staff College, University of Rajasthan
15.	Dr. Raj Kumar	Assistant Professor, Centre for Chemical and Pharmaceutical Sciences	Orientation programme	10-02-2015	09-03-2015	Panjab University Chandigarh
16.	Dr. Sunil	Assistant	Refresher	15-02-	07-03-	ASC Punjabi

		Mittal	Professor, Centre for Environmental Science and Technology	course	2015	2015	University Patiala
17.	Dr. Nishtha Kaushiki	Assistant Professor, Centre for South and Central Asian Studies	Orientation programme	06-04-2015	01-05-2015	Academic Staff College, JNU New Delhi
18.	Dr. Sanjeev Kumar	Assistant Professor, Centre for Biosciences	Refresher course	12-05-2015	02-06-2015	UGC-ASC, University of Hyderabad
19.	Dr.Kousik Giri	Assistant Professor, Centre for Computational Sciences	Orientation programme	18-05-2015	13-06-2015	HRDC, University of Rajasthan, Jaipur
20.	Dr. Shamshir Singh Dhillon	Assistant Professor, Centre for Education	Orientation programme	17-05-2015	14-06-2015	UGC-HRDC, Guru Jambeshwar University of Sciences and Technology, Hisar
21.	Dr.Yogalakshmi K N	Assistant Professor, Centre for EST	Orientation programme	14-05-2015	13-06-2015	UGC-Academic Staff College, University of Madras
22.	Dr. Kiran K. Singh	Assistant Professor, Centre for Geography and Geology	Orientation programme	03-06-2015	30-06-2015	BHU, Varanasi
23.	Dr. Sandeep Kaur	Assistant Professor, Centre for Economics	Refresher course	09-06-2015	29-06-2015	UGC-HRDC, Guru Nanak Dev University,

		Studies				
24.	Dr. Deepak Kumar	Assistant Professor, Centre for Environmental Law	Special Summer School	10-06-2015	30-06-2015	UGC-HRDC, Guru Nanak Dev University, Amritsar
25.	Dr. Surinder Singh Khurana	Assistant Professor, Centre for Computer Science and Technology	Special Summer School	10-06-2015	30-06-2015	UGC-HRDC, Guru Nanak Dev University, Amritsar
26.	Dr. Preeti Khetarpal	Assistant Professor, Centre for HGMM	Orientation programme	15-06-2015	11-7-2015	UGC-HRDC, Punjabi University, Patiala
27.	Dr. Sandeep Singh	Assistant Professor, Centre for HGMM	Orientation programme	15-06-2015	11-7-2015	UGC-HRDC, Punjabi University, Patiala
28.	Dr. Harish Chander	Assistant Professor, Centre for HGMM	Orientation programme	15-06-2015	11-7-2015	UGC-HRDC, Punjabi University, Patiala
29.	Dr. Vikas Jaitak	Assistant Professor, Pharmaceutical Sciences and Natural Product	Orientation programme	15-06-2015	11-7-2015	UGC-HRDC, Punjabi University, Patiala
30.	Dr. Naresh Singla	Assistant Professor, Centre for Economics	Orientation programme	15-06-2015	11-7-2015	UGC-HRDC, Punjabi University, Patiala
31.	Dr. Bawa Singh	Assistant Professor, Centre for South and Central Asia	Orientation programme	15-06-2015	11-7-2015	UGC-HRDC, Punjabi University, Patiala
32.	Dr. Zameerpal	Assistant Professor,	Refresher Course	27-06-2015	17-07-2015	UGC-HRDC, Punjab

	Kaur	Centre for Comparative Literature				University, Chandigarh
33.	Dr. Rajinder Kumar	Assistant Professor, Centre for Comparative Literature	Refresher Course	06-07-2015	25-07-2015	UGC-HRDC, University of Rajasthan
34.	Dr. Amandeep Singh	Assistant Professor, Centre for Comparative Literature	Orientation programme	29-07-2015	25-08-2015	UGC-HRDC, Panjab University Chandigarh
35.	Dr. Pankaj Bhardwaj	Assistant Professor, Centre for Plant Sciences	Orientation programme	29-07-2015	25-08-2015	UGC-HRDC, Panjab University Chandigarh

CUPB'S POLICY FOR CURRICULUM DEVELOPMENT AS APPROVED BY ACADEMIC COUNCIL

1.0   PROCESS OF CURRICULUM DEVELOPMENT

1.1 DESIGN

All preliminary work should be carried out to ensure that the curriculum is relevant, appropriate and workable. The curriculum is to be conceptualized and attention paid to arrangement of the varied components. It should focus on the goals, objectives, subject matter, learning experiences and evaluation in consultation with stakeholders.

1.1.1   Need assessment

While assessing the need to design and develop curriculum, following parameters are to be kept in mind:

1.1.1.1   Vision and mission of CUPB

While developing the curriculum, the vision and mission of CUPB should be taken into consideration for attaining excellence in teaching, learning and research. It should aim at achieving regional, national and global needs in tune with the requirements of academics, industry, business and administration.

1.1.1.2   Needs of the learner

As the needs of the learners change with time and development in technology, thus, curriculum for CUPB programmes should be framed keeping in mind the needs of the learner.

1.1.1.3   Changing policies
The policies of governing bodies, state governments and central government change with time, which should be considered while framing the curriculum.

1.1.1.4   Societal need

There is always social change occurring in the society which has an impact on societal needs. The curriculum should help in satisfying the social and employability needs of its citizens.

1.1.1.5   Regulatory authorities and stakeholders

The needs of regulatory authorities like, BCI, PCI, NCTE, AICTE, UGC etc. and stakeholders of the concerned programme and others must be explored before framing the curriculum. The existing curriculum framework at national level should also be explored.

1.1.2   Interaction

The following groups are supposed to interact before the development of curriculum:
- Faculty
- Students
- Members of Alumni
- Industry
- Experts (external and internal)
- Stakeholders
- Policy makers

1.2 DEVELOPMENT

This stage involves the development of the curriculum which includes planning, developing content, finalising the curriculum and its implementation

1.2.1   Planning
Each Centre of CUPB should form a curriculum development committee consisting of following members:
- COCs as Chairperson
- Teachers of different courses
- Two student toppers of the concerned programmes
- Member from industry
- Representative from Alumni association

1.2.2 Content development

It involves developing the content of the curriculum and includes the following;

- Objectives of the Programme/ Expected outcome after undergoing the courses.
- Calculation of credits for the programme
- Scheme of the programme
- Selection of the content for each course
- Transaction mode (teaching strategies to be adopted while transaction)
- Criteria for evaluation
- Instructions to paper setters
- Suggested Readings
- Webliography

1.2.3 Discussion and revision through workshops

In house workshops including all the members of the curriculum team will discuss each and every point in the curriculum. The final draft should be prepared in consultation with the experts.

1.2.4 Approval by Board of Studies

The developed curriculum should be discussed in the duly constituted Board of Studies with external experts for recommending to the Academic Council.

1.2.5 Approval by Academic Council

The curriculum recommended by the Board of Studies should be submitted to duly constituted Academic Council for its approval.

1.2.6 Procuring resources before implementation

All the required infrastructure, human resources, books, journals, labs, resources and tools etc. should be procured before implementing the course.

1.2.7   Periodic Assessment and Improvement

1.2.7.1   Regular improvement :
The same procedure as of development is required to be adopted for regular improvement/revision of the curriculum every year

1.2.7.2   Mid-Decadal Assessment :
After every 5 years the performance of the students and the feedbacks should be subjected to thorough analysis keeping in mind the objectives, relevance, changed scenario, changed policies, if any, industrial or employer's demand.

Annexure 1.2

Ref No: CUPB/CC/15/EC-15/28   Dated: 05-8-2015

Notification No 28

In pursuance to Item No. EC:15:15:22 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No:AC:7:2015:17) is hereby conveyed to the establishment of university Industry Forum and Council as per details given below:

    i.   Chairperson: Vice Chancellor CUPB
    ii.   Prof. A. K. Dhawan, Professor
    iii.   Prof. P. Ramarao, Dean Academic Affairs
    iv.   Prof. A. K. Jain, Professor (Convener)
    v.   Members:

The following are the members of University-Industry Forum for the present:

S.No.	Name of the Person	Organization
1.	Mr. B.S. Anand Director	Jupiter Aqua lines
2.	Mr. Upkar Singh Ahuja Joint Secretary	Chamber of Industrial and Commercial Undertakings, Ludhiana
3.	Mr. Dilip Sharma Head	PHDCCI, Punjab
5.	Ms. Suman Preet Singh	CII, Chandigarh
6.	Mr. J. K. Dudani Mr. Puneet Kaura	Samtel HAL Display System Limited, Greater Noida.
8.	Mr. Hyun Chil Hong	Samsung India Electronics Ltd, Block B, Sector 81, Noida, Uttar Pradesh 201305
9.	Mr. R.K. Harna Director Technical	Nitin Life Sciences Ltd. Paonta Sahib, Himachal Pradesh
10.	Dr. Arvind Kapoor CEO	Vegetable Division Rasi Seeds Ltd.
Centre for Chemical and Pharmaceutical Sciences		
9.	Dr. L. Wadhwa R and D manager	Ind-Swift Laboratories, Chandigarh
10.	Mr. Mohanji Saxena R and D manager	Daburm AyurVet, Sahibabad
11.	Dr. Manu Chaudhary Joint Manager Director	Venus Remedies, Baddi
Centre for Computer Science and Technology		

12.	Mr. Anil Munjal Associate General Manager	Godrej and Boyce Mfg. Co. Ltd., Mohali
Centre for Environmental Science and Technology		
13.	Wg. Cdr. I.S. Sachdeva Managing Director	BDS Décor and Prefab, Chandigarh
Centre for Biosciences		
14.	Dr. S.S. Marwaha Chief Executive Officer	Punjab Biotechnology Park, Ltd. Biotechnology Incubator, Mohali
15.	M/s Anil Enviro	C-203, Industrial Focal Point, Patiala (Pb) 147001
16.	M/s Kartik Technologies of India	C-5, Model Town Patiala (Pb) 147001
17.	M/s Green Plant Energy Pvt. Ltd.	Registered office, Vill. Birpind, Tehsil Nakodar, Distt. Jalandhar SCO 42, First Floor, Sector 41-D, Chandigarh.
18.	M/s Lehra Fuel-tech Pvt. Ltd.	Ludhiana-Malerkotla Road, Opposite BP Petrol Pump, V.P.O. Jagera(PB) 141117
19.	M/s VishivKarma Solar Energy Corporation	G.T. Road Phillor (Punjab) Managing Partner
20.	M/s Universal Biomass Energy Pvt. Ltd.	Channu (Punjab)
21.	M/s Viaton Energy Pvt. Ltd.	Vill. Khokhar Khurd, Distt. and The. Mansa (Punjab)
22.	M/s Electro Tech	E-61, Industrial Area, Phase VIII, Mohali (PB)
23.	M/s Punjab Biomass Power Ltd.	Village Swai Singh Wala, Tehsil and Distt. Patiala (PB
24.	M/s Bhajan Agriculture and Engg. Works	Near Ajaib Singh Aartia Complex,G.T. Raod, Doraha-141421,Ludhiana (PB)

The university realizes the importance of corporate resources and of industry connect in its functioning, in the present global scenario. It would therefore, attempt to establish a strong link with industries relevant to its domain areas. UGC has also emphasized the same often.

UNIVERSITY-INDUSTRY FORUM AND COUNCIL OF CUPB

In view of the above, two bodies have been created as detailed below:

(a) *A University-Industry Forum* in which 50 to 100 important industries will be enrolled as members. The number may exceed with the approval of Vice Chancellor, CUPB.

(b) *The University-Industry Council* which will consist of five industries selected from the forum members for a closer interaction.

University-Industry Forum and Council will serve the Policy Advisory Body's role for CUPB.

COMPOSITION

The Forum and Council will consists of representatives of Micro, Small, Medium and Large Industries in different domains of CUPB and the members of CUPB Faculty.

(a) The University-Industry Forum will consists of fifty or more industries in the subject areas related to CUPB in the following manner:
- Industries to be included in the Forum will be proposed by CUPB Faculty, through Dean Academic Affairs and approved by the Vice Chancellor, CUPB.
- CoCs of all the relevant departments will be the members
- A senior faculty member will be nominated by the Vice Chancellor as coordinator of the Forum.
- The tenure of the University-Industry Forum will be 3 years.

The Vice Chancellor CUPB may also nominate Officers from the Department of Industries/ Pollution Control Boards and other Govt. Bodies as members of Industries Forum or Council

FUNCTIONS

Industry Forum and Council will be the policy advisory bodies of CUPB in the matters related to Teaching, Research, Consultancy, Skill Development, Entrepreneurship Development and Students placements etc.

PERIODICITY OF MEETINGS

The Forum will meet once a year and the Council will meet twice a year. The coordinator of the Forum and Council will compile the minutes for approval of the Vice Chancellor and circulate.

The names of industries to be included as members of the Forum and the Council will be approved by the Vice Chancellor, CUPB and **Academic Council apprised of it.**

This is issued with the approval of the Competent Authority.

Annexure 1.3

Ref. No: CUPB/CC/15/EC-15/29   Dated: 05-8-2015

<u>**NOTIFICATION NO 29**</u>

In pursuance to Item No. EC:15:15:45 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No:AC:7:2015:40) is hereby conveyed for implementation Choice Based Credit System based on the guidelines of UGC as enclosed with the notification.

Competent Authority approved the constitution of the Choice Based Credit System Committee comprising of members as detailed hereunder**:**

1. Prof. P.Ramarao, Dean Academic Affairs - **Chairperson**
2. Prof. A. K. Dhawan, Invited Professor
3. Prof. R.G. Saini, Invited Professor - **Convener**

This is issued with the approval of the Competent Authority.

CHOICE BASED CREDIT SYSTEM

The guidelines of UGC on Choice Based Credit System were adopted for implementation at CUPB by the Academic Council in its 6th meeting held on 05.03.2015 and subsequently approved by the Executive Council in its 14th meeting held on 16.03.2015. Different Centres of CUPB have been asked to prepare their courses for implementation of Choice Based Credit system in Academic Session 2015-16.

In order to implement the CBCS, the following procedure will be followed:

1.   Each Centre shall prepare a list of Core courses, Elective Courses and Foundation courses.

   (a)   *Core Courses* include those courses which have to be compulsorily studied by a student as a core requirement to complete the programme in the chosen discipline of study. These shall form 50 to 65% of the total credit requirement of the programme.

   (b)   *An elective course* is a course which can be chosen from a pool of courses. It may be:

   - Supportive to the discipline of study
   - Providing an expanded scope
   - Enabling an exposure to some other discipline/domain
   - Nurturing student's proficiency/ skill

   An elective are generally interdisciplinary i.e. from another Centre, but may be from the same discipline of study. Elective courses may be between 25 to 35% of the total programme requirements.

   (c)   The Foundation Courses are the courses that lead to Knowledge enhancement. They are mandatory for all disciplines in a School (e.g. Research methodology, Statistics etc.). These will be 10-15% of the programme requirements.

   However, sometimes students admitted to a programme may have deficiencies in their preparedness to pursue a programme, because of the differences in courses studied by the student in previous organization. Such students shall be given additional

"Deficiency Foundation courses" to make up the deficiency. These courses will be over and above the normal requirements of the programme.

2.   The CoCs will assign experienced faculty members as "Programme Advisors" for each programme of the department. These advisors shall meet the students to guide them in preparing the courses for successful completion of the requirements of the programme. It will be the responsibility of programme advisors to ensure that students are guided properly, so that by the time of completion of the programme they are not left with small deficiencies in the requirements of the programme. As far as possible, the Programme Advisors shall give their advice in writing or through e-mail.

3.   When a student is in the last semester, he/she shall approach the Academic Audit and Monitoring unit for audit of the degree. This unit shall certify that the student has completed all requirements of the programme for award of the degree.

POLICY OF CUPB ON STUDENTS' MOBILITY: TRANSFER OF STUDENTS TO CUPB FROM OTHER UNIVERSITIES

The UGC vide Gazette notification dated 24.05.2014 has amended the clause 2.5 of Principal regulations and substituted it with the following:

"Depending upon the academic and physical facilities available in the institution, the university may allow an institution to admit a certain number of students directly to second year of the master's degree programme, if the student has successfully completed the first year of the same programme in another institution"

This is an important step in the direction of students' mobility and academic flexibility. It is therefore proposed that the following be approved as a policy matter for CUPB:

1. Students who have completed one year of a master's degree programme at another Central University, may seek admission to CUPB on the following terms and conditions:

    - The request for transfer to CUPB must be forwarded from the parent university where student has completed the first year.

    - Student must be in "Good Academic" standing at the time of application and will produces a no dues certificate from the parent university before joining CUPB

    - Student will be admitted to the same or very related programme at CUPB, only against the vacant seats

    - The nomenclature of the course, the student has studied at parent university, must match with that of CUPB.

    - The student must have been admitted to the parent university through an entrance test.

    - Students will be allowed to transfer to CUPB only at the beginning of a semester.

    - Since CUPB follows Choice Based Credit System, the course already passed by the student will be excluded from the requirements of the

programme at CUPB and the student will have to complete the remaining course requirements.

- Transferred credits from the other organization will be maximum of 50% of the total credit requirements of the degree

2. The application for transfer of a student, when received duly forwarded by the parent university, will be evaluated by CoC in detail and a proposal prepared for course wise exemption. CoC will list the credit hours that can be treated as equivalent to the courses in CUPB and the credit hours/ courses to be taken by the student to meet the requirements of the programme at CUPB.

3. The CoCs will make a recommendation to the Dean Academic Affairs who will seek approval of the Vice Chancellor, CUPB for transfer of the student.

4. For the purpose of fee, hostel and all other rules and regulations, transferred students will be treated at par with CUPB students of the programme in which they are admitted.

5. The transcript of the student shall include courses taken at both the organization and the calculation of CGPA shall also include all these courses.

6. When a CUPB student makes an application for transfer to another Central University, the same will be considered subject to the following:

- The student should have completed at least one year at CUPB
- He/she should be in good academic standing

7. The doctorate students from other Universities intending to migrate to CUPB will be accepted after completion of the course work in parent organization. However, the CoCs will determine equivalence and deficiency courses to be taken if required. Similarly, CUPB students will be allowed to migrate after completion of course work. The procedure for migration of Ph.D. students will be the same as for MSc. Students.

8. The policy of student mobility for B.PEd./B.Ed.-M.Ed. integrated programmes will be same as the policy for Master degree programmes.

Annexure 1.5

Ref. No: CUPB/CC/15/Notification/20   Dated: 04/08/2015

<u>**NOTIFICATION-20**</u>

Approval of the Competent Authority is hereby conveyed for the constitution of Committee for admission of International Students in Central University of Punjab, comprising of the members as detailed hereunder, as per the policy approved by the Executive Council in its 15th meeting (Copy of the Policy enclosed for reference).

1.   Prof. P. Ramarao, Dean Academic Affairs - **Chairperson**
2.   Dr. Pankaj Khare, Registrar
3.   Prof. R. C. Sharma, Dean Students Welfare
4.   Prof. S. K. Bawa, Coordinator of International Education Division - **Convener**

POLICY FOR ADMISSION OF INTERNATIONAL STUDENTS

(A)   INTERNATIONAL STUDENTS
International Students will include the following:

- **Foreign Nationals**: Candidates holding citizenship of any foreign country.
- **Persons of Indian Origin (PIO):** A person who or whose any of ancestors was an Indian national and who is presently holding another country's citizenship/ nationality i.e. he /she is holding foreign passport.
- **Non Resident Indians (NRI):** An Indian citizen who is residing outside India and holds an Indian Passport.
  Only those Non-Resident Indian students who have studied and passed the qualifying examinations from schools or colleges in foreign countries will be included as international students. Dependants of NRIs studying in India will not be considered as international students.

(B)   ADMISSION PROCEDURE
International students will be admitted directly against the supernumerary seats, without appearing in the Entrance Test.
These students shall be admitted to various Degree Programmes under the following categories:

- *Direct Applicants (Full Time Programme):* International students, who wish to join under Self-financed category, are required to submit their application to Admissions Office CUPB. The institute's decision after scrutinizing the applications will be communicated to the respective student. Authorized copies will be marked to the Embassy/ Visa Offices as required by the student.
  However, in case of students from restricted countries i.e. Pakistan, Afghanistan, China, Bangladesh and Sri Lanka, the application MUST be forwarded through their respective Embassy.
- *ICCR Cultural Exchange Fellowship Programmes (Govt. of India):* Candidates desirous of admission under this Fellowship Programme are required to apply through the Indian High Commission/Embassy as the case may be, in their respective countries. Application to ICCR should be forwarded to CUPB for consideration. In case the applicant is found suitable, admission offer letter will be sent to him/her through Indian Council for Cultural Relations (ICCR), New Delhi. Candidates are not eligible for getting any financial assistance from CUPB.
- *Embassy sponsored candidates:* Candidates sponsored by the High Commissions/ Embassies of Foreign countries.

International students seeking admission to CUPB in any one of the aforesaid categories will have to satisfy the minimum eligibility criteria for admission to the programmes as prescribed by the University.

OTHER REQUIREMENTS FOR ADMISSION OF INTERNATIONAL STUDENTS

a) All international students will require a 'Student VISA' endorsed to this institution for joining CUPB courses. No other endorsement is acceptable. The visa should be valid for the prescribed duration of the course.

b) Any statutory clearances from MHRD, Govt. of India, if required, shall be applicable.

EQUIVALENCE OF FOREIGN DEGREES FOR ELIGIBILITY QUALIFICATIONS IN CUPB

The qualifications required for admission to different Courses in CUPB will be included in admission brochure. Only those Students who have qualified from foreign universities recognized as equivalent by the 'Association of Indian Universities' (AIU) are eligible for admission. When required, a reference will be made to AIU to check the equivalence. Degrees obtained from Universities approved by the Department of Education/ other statutory bodies of concerned country will also be acceptable. If necessary, the Board of Studies of the concerned department in CUPB may be asked to determine Equivalence of Foreign degrees.

ELIGIBILITY:

a) **For Masters Programmes**

A Bachelor's Degree in relevant discipline. Subject requirements for admission to a programme will be the same as for Indian nationals seeking admission to CUPB in that programme.

b) **For Ph.D. Programmes**

Master's degree in relevant discipline with proven academic/research aptitude. Detailed programme wise requirements are same as Indian nationals.

Requirements common for both Maters and Ph.D. programme:

- Being a national level university, the medium of instruction at CUPB is English. Applicants, who have obtained a valid IELTS or TOEFL score, will get preference.

- Those without a valid IELTS or TOEFL score shall have to pass CUPB English Proficiency Test (CEPT) after joining the University. A student deficient in English will be asked to study language courses.
- A valid GRE/GMAT (for candidate applying to Food Business Management and Entrepreneurship Development department) score is not mandatory for admission. However, students with a valid GRE/GMAT score/grade will get preference.
- Applicants have to submit a brief essay of 300 words (approximately) stating the reason/s why she/he seeks admission to CUPB and the purpose of study.

FEES

International students will pay fees as applicable and announced in the admission brochure. For the current year fees for international students shall be as below:

Masters programmes in Humanities: US$ 1000 per annum
Masters programmes in Sciences: US$ 1200 per annum
Ph.D. programmes: US$ 1400 per annum

- Hostel accommodation furnished with basic facilities is included in the above fee.
- However, International students may seek additional facilities on payment basis.
- There will be 10% cumulative increase in fee every year.
- Students from SAARC countries will be charged fees same as for Indian students.

STEPWISE PROCEDURE FOR ADMISSION OF INTERNATIONAL STUDENTS

The procedure for admission to a programme at CUP will be as given below. Students may submit their *curriculum vitae* directly to the university or through ICCR or through the embassy as the case may be.

Step 1:
- Interested International students must read the admission brochure carefully to check the eligibility
- International students should submit their *curriculum vitae* (as per attached format clearly indicating their academic achievements along with self-signed copies of the documents to the Admissions office, CUPB by post or by email.

- A brief essay of 300 words (approximately) stating the reason/s why she/he seeks admission to CUPB and the purpose of study should form a part of CV.
- Photocopies of the following documents are required along with the application on a prescribed format:
    - Proof of date of birth.
    - Certificate and Mark-sheet of qualifying examination. (Mark-Sheet/Degrees in a language other than English should be got translated into English)
    - Copy of passport for foreign citizens or Dual citizenship card for PIO or NRI status certificate
    - Softcopies of passport size photograph. (JPG format)
    - Two letters of Recommendation to be enclosed in sealed covers.
- **Application Timelines:** Applications of foreign students for the academic year beginning July/August will be accepted beginning January 1 of the year. Applications will be reviewed as received and hence should be made well in time, so that the student is able to obtain the VISA and NOC before the start of the academic session.

Step 2:
The Admission Cell after checking the eligibility criteria and other relevant information will inform the applicant by email, if found eligible. Now, the applicant will make payment of non-refundable advance amount equivalent to US$ 100. The application will then be reviewed and if found suitable a 'Provisional Admission Offer Letter' will be issued to enable the student to obtain the VISA.

Step 3:
Submit the 'Provisional Admission Offer Letter' to the Indian Embassy of the respective country for obtaining the 'VISA'.

Step 4:
Report at CUPB on the notified date for orientation. Bring all above mentioned documents in original and get them verified by the Admission Cell. The original certificates will be returned to the students immediately after making an endorsement to this effect.

Step 5:
Students are required to undergo the medical fitness examination (at CUPB) and get the medical fitness certificate. Government of India rules for international

students entering India on 'Student VISA' for testing for HIV shall apply. They are also required to produce HIV test report to the Doctor. All international students will be required to obtain medical insurance.

Step 6:
Admission of International/PIO/NRI students will be confirmed after verification of original certificates, medical fitness test and payment of required fees. Even after the admission, at any stage if it is noted that the qualifying Degree/ Certificate is not recognized by AIU, the admission of the candidate will be cancelled. Withdrawal of admissions/ refund of fees cases will be dealt as per the guidelines of CUPB.

Step 7:
Within a week of arrival in India, students are required to register their names with the police in the 'Foreigner Regional Registration Office (FRRO) and submit a proof of such registration to the Admission Cell.

DISCIPLINE

The International Students will abide by all the rules of the University and code of conduct as applicable to Indian students undergoing the same course. Anti-social and anti- national activities, misbehaviour, violence and unethical activities involving international students will be dealt in accordance with state and central laws that are in force. CUPB will not take any responsibility for any criminal or non-criminal acts committed inside or outside the campus by the international students.

SCHOLARSHIP

Foreign Students admitted under direct applicant category (refer description at Admission Procedure under this section) are eligible to get 'merit' scholarship/'earn-while-learn' assistantship as per the prevailing norms.

ADVISORY COMMITTEE FOR INTERNATIONAL ADMISSION

The following will form advisory committee for international admissions:
- Dean Academic Affairs
- Registrar
- Dean Students Welfare
- Dean of International Education Division

Annexure 1.6

FEEDBACK PERFORMA FOR STUDENTS

Dear students,

Teaching and learning is a continuous process in which teacher and student develops a bond. Teachers keep getting new students year after year and with the passage of time gains rich experience. In order to improve her/his competence in teaching and/ or research she/he needs your honest feedback about her/him. You are requested to help in this regards without any apprehension or fear. In case you want to hide your identity you may. In case you are honest and fearless you are advised to write your name/Roll No. It is a promise that your identity will never be exposed.

Name of the course :   **Class:**
Name of the teacher :   **Name of the student (optional):**

Sr. No.	Dimension	RATINGS (Level of encouragement of discussion or seeking questions)				
	TEACHING	1	2	3	4	5
1	Teaches with confidence					
2	Use of teaching aids					
3	Pace of delivery of content					
4	Interaction with students					
5	Quality of the content					
6	Explanation skill					
7	Clarity and loudness of voice					
8	Language proficiency					
9	Application of the concept taught					
10.	Completion of the course					
	CLASSROOM MANAGEMENT					
11	Discipline					
12	Wittiness					
13	Behaviour with the students					
14	Punctuality and regularity					
	EVALUATION					
15	Biases					
16	Continuous regularity in evaluation					
17	Level of comprehensiveness					
18	Satisfaction					
	CURRICULUM					

19	Innovative					
20	Comprehensive					
21	Challenging					
22	Fulfils the needs of society					
23	Job oriented					
24	Needs modification					
25	Meets national standards					
26	Meets international standards					

Tick mark on the rating scale as per your observation, 1 denotes lowest and 5 the highest level.

S. No.	Dimension	Yes	Sometimes	Never
1	Seeks gifts/money in exchange of guidance/help.			
2	I was invited by the teacher at his/her residence for personal favours?			
3.	I was harassed/exploited by the teacher.			
4.	I was compelled to stay in the department after working hours for no work.			

- You include your opinion on infrastructure, administration, hostel, mess, wardens, non-teaching staff, security staff and even about Dean, Registrar and the Vice Chancellor. Your inputs are really valuable for the growth of the university. Our endeavour is that you should always feel proud of your university. Anything you want to share or suggest to the university please feel free to do so.

  _____
  _____
  _____
  _____
  _____
  _____

Signature
(In case of hard copy)

CUPB POLICY ON DUAL DEGREE

Integrated Dual degree programmess at CUPB:

(a) CUPB had started a vertically integrated dual degree program of M Phil-PhD, M Pharm-PhD in the University from 2009. The courses offered under this program were:

> M Pharm-PhD integrated programme in Pharmaceutical Sciences
> M Phil-PhD integrated programme in Biosciences
> M Phil-PhD integrated programme in Comparative Literature
> M Phil-PhD integrated programme in Development Economics
> M Phil-PhD integrated programme in Environmental Science and Technology
> M Phil-PhD integrated programme in South and Central Asian studies

However admissions for these programs are not being done presently because of practical and technical problems involved.

(b) The University has planned following certificate courses:
- Computer Literacy Programme
- Self-Defence
- Laboratory Assistant
- Accounts Assistant using Tally
- Soft Skills/ Spoken English/Communication Skill
- Laboratory Technician
- Certificate Course in Library Orientation: Introduction to Information Literacy
- Certificate Course on Natural History, Curation including herbarium maintenance
- Short hand and typing
- Current Affairs

These courses can be taken up by the students in addition to their course work if desired.

UGC Guidelines:

UGC guidelines on dual degree state:
1. That Integrated / dual degree programmes to be introduced with caution and judiciously and without compromise on program length and papers.
2. For an integrated / dual programme with an option for interim exit, the duration of the two programs must not be less than the sum of individual programs.

Vertical dual degree Programme
PG-Doctoral

Based on the above it is proposed:
(i) To encourage integrated programs in various disciplines: Different Centres may be encouraged to plan integrated programmes and prepare detailed proposals for approval by the Board of Studies of the Centre and Academic Council. These may include M.Sc.- Ph.D. for all Centres and M. Phil-Ph.D. for humanities

Horizontal dual Degree Programme
RG-PG in related field

(ii) Also horizontally, students shall be allowed to do M.Sc. degree in two subjects, but they will have to complete the requirements for the degree in both the subjects.

For example, a student doing a degree in the subject "A" can do another degree in subject "B". However, if the courses done for obtaining first degree in subject "A" satisfy the requirements of subject "B" also, then these shall be exempted.

For Example
MSc.-Life Sciences specialization Plant Science
4 Semester Programme
A student can also opt for specialization in Animal Sciences with one additional year i.e. in a span of 3 years she/he can have two related degrees. M.Sc. Life Sciences – Plant Science and Animal Science.
M.Sc. Life Sciences
Specialization: Plant Science

Semester 1   Common for specialization in Plant Science, Animal Science, Life
                  Science Micro/Biology
Semester 2

Semester 3   Specialization
Semester 4   Sp+Seminar+CSIR-UGC NET

For Dual Degree
Semester 5   Zoology   Semester 5   Microbiology
Semester 6   Semester 6

It is expected that the students shall have to do Core courses of both the subjects "A" and "B", but some of the Elective and Foundation courses done for the degree in subject "A" shall also satisfy the requirements of subject "B". Such courses will be exempted and there will be no need to repeat these.

POLICY FOR SELF-FINANCING CENTRES

The system of higher education in India is predominately publicly funded.   At this juncture, where the country is striving hard to establish or assert its position in context of poverty alleviation, improvement in literacy status and index of human development, it is expected that the institutes of higher learning shall support themselves by mobilizing resources through various means such as innovative courses generating more funds, higher fees, support from alumnus and other agencies for their survival, sustenance and contribution in the cause of education.

The word "tuition" means instruction and "tuition fee" refers to the cost of instruction. The salaries of teachers are counted among the cost of instruction. Besides teachers' salary, there are other recurring expenditures associated with the cost of instruction such as library, laboratory, equipment, teaching-learning material etc.

In addition to the cost of instruction as above, there are non-instruction expenses related to hostel facilities, transportation services, canteen facilities, sports services, admission processing, examination charges, etc which may be subsidized or a fee may be levied upon students to recover expenses. Non-instruction cost is distinguished from instruction cost and usually "fees" refer to the former category and "tuition fee" is charged for the instruction cost.

There are four types of tuition fee policies:

(i)   Upfront tuition fee policy is the one where tuition is paid upfront and it is the responsibility of the parents to cover some portion of the educational cost of their children;

(ii)   No tuition fee policy is based on the assumption that primarily, it is the responsibility of the state to pay for all instructional costs;

(iii) Deferred tuition fee policy assumes that tuition fee is deferred for payment in the future. Family of the student does not have to pay the tuition fee in the present. State may pay for the tuition fee in the present or banks advance loans in the present, equivalent to the tuition fee. In the future it is the responsibility of students to repay, the tuition fee out of the income earned, to the state in the form of tax or to repay the loan to the banks;

(iv) Dual track tuition fee policy is applicable where there is resistance to tuition fee. Under the policy, a certain number of free (or low) tuition university places are awarded by the government to meritorious students and other places are available to low scoring students on a tuition fee paying basis.

India follows a low tuition fee policy to be paid upfront in most government and aided institutions. In private institutions, on the other hand, there is tuition fee on full cost basis to be recovered upfront from the present family income of the student. Deferred tuition fee approach hardly exists. Dual track tuition policy is available in engineering education. For CUPB, we have upfront tuition fee system. But with every passing year the formal help from the government is reducing and expenditure increasing. Gap in income and expenditure is widening every year. After competitive examination at the central or state level, a student securing better percentage of marks gets entry at relatively lower tuition.

The promotion of Self-financing courses depends on the initiatives taken by the colleges/ departments. UGC has been supporting the self-financing courses in terms of supplying curriculum design and funding support for books, libraries and equipment. There has been a variety of courses that have been launched by the universities in the last ten years. Overall response to the courses has been quite good. Institutions that have such large courses are also able to generate internal resources. However, the pattern of self-financing courses across universities and colleges has been quite uneven and irregular. The course fees are not standardized.

Objective

The main objective of this document is to provide policy guidelines for introduction of self-financed courses at the Central University of Punjab, Bathinda

Policy Guidelines
1. The Self Financing certificate/degree courses that have high demand from the students, and at the same time have market value are to be encouraged.
2. The recurring cost such as teachers/instructor salary/honorarium, consumables in the laboratories, teaching learning material etc. for running the Self Financing courses as for as possible will be met from the fee paid by the students.
3. Fee structure for these courses will be different from that of the regular courses. Each course will have different fee structure.

4. Infrastructure facilities such as laboratory, equipment and library, computer Centre etc. for running Self-Financing courses will be provided by the university.

5. The students admitted in the Self Financing courses will be at par with the other students admitted in the regular courses. The students will be eligible for the university facilities such as mess/canteen, hostel accommodation as per the availability, transport, computer Centre and library etc.

6. An overhead charge of 15 % as institutional expenses will be accounted while deciding the fee structure for the students.

7. The course will be started with a minimum strength of 10 students

8. The number of students in any course will be decided in such a way that the revenue generated from the fees is sufficient to meet the recurring cost for running that program.

9. The fee structure shall be subject to revision in the beginning of every academic year/session.

10. The Teachers/Instructors for the course will be engaged on salary/honorarium basis.

11. Students under the Self Financing schemes will abide by the CUPB rules and regulations.

CRITERION-II

TEACHING LEARNING AND EVALUATION

CRITERION II – TEACHING LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

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

To ensure publicity and transparency in the admission process, the following strategies are adopted:

(i) Advertisements are given in 94 leading regional and national newspapers through Directorate of Advertising and Visual Publicity (DAVP), Ministry of Information and Broadcasting. Also, these are posted on university website and social media. The faculty visits the local colleges and interacts with students there.

(ii) Admissions are through Central Universities Common Entrance Test (CUCET), which further promotes wide publicity and transparency in the process.

(iii) Rank of applicants in CUCET is uploaded on the website and admissions to all postgraduate programmes are done solely on the basis of this rank.

(iv) All admission related information beginning from list of applicants, cut off marks, schedule of counselling and list of admitted candidates are uploaded on the website of Central University of Punjab.

(v) The counselling process is video-graphed and as the counselling proceeds, seats filled/vacant are continuously displayed on the screens at prominent places in CUPB.

(vi) It is the testimony of a robust admission process that for the academic year 2015-16, CUPB admitted 513 students to various programmes spread over nine schools without any complaint.

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

Admission to all masters degree programmes in CUPB is done exclusively on the basis of score in Central Universities Common Entrance Test, which is conducted by one of the central universities. Admission to Ph.D. programmes is through entrance test conducted by CUPB, following UGC guidelines.

Process of Admission

The Controller of Examinations is the officer-in-charge of Admission Cell in the university and is responsible for notification of the dates of admission, conduct of common entrance tests and centralized counselling for admission into all programmes offered by the university. The details of the process are as below:

(a) *For Masters degree programmes:*

- Every year the university brings out an admission notification for various programmes in leading national and regional dailies through DAVP. The information is also uploaded on the university website.

- After the result of CUCET is declared, candidates are asked to apply for admission to CUPB. The application is online.

- Counselling schedule is announced. All information is made available on the university website and candidates are also informed via email/SMS.

- Admissions are based solely on the score obtained in CUCET.

- Final results are displayed on the website for ensuring complete transparency.

(b) *For Ph.D. degree programmes:*

For admissions to Ph.D. programmes, a candidate should have qualified one of the national level examinations: UGC/CSIR NET, GPAT, ICMR/ICAR NET or should be working in a CUPB's

externally funded research project. The procedure is as described below:

- The admission is done on the basis of an entrance test conducted by CUPB. The entrance test carries 75 points, academic record 10 points and interview 15 points.

- However, NET-JRF candidates are exempt from the entrance test as per UGC guidelines and given 75/75 points, above board. Score of these candidates in the academic career and interview are added.

- NET-LS candidates are given 60/75 points + 1/5th of score in entrance test of 75 points. Score of these candidates in the academic record and interview are added.

- The above procedure ensures that all NET-JRF and NET-LS candidates are high in the merit list.

- CUPB has instituted 21 university fellowships, which have mostly gone to NET-LS candidates whose score remains high in the cumulative score of 100 because of the above policy.

- Fellows and associates working in externally funded projects at CUPB are encouraged to compete for Ph.D. admission, but not given any special weightage.

Thus, the Ph.D. students admitted to CUPB are NET-JRF or NET/LS getting CUPB fellowship, or are fellows/associates of the CUPB's externally funded projects. Those without any financial assistance are not admitted.

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

Not applicable as CUPB does not have affiliated colleges.

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

The admission process is reviewed by the "Admissions Committee" very frequently to ensure that it is fair, transparent and also helps in admitting the best possible students. Innovative ideas are incorporated to refine the admission process and to make the mechanism student-friendly.

The analysis of the admission process and overall student profile is provided in the annual report and is also put up to Executive Council.

With the aim to improve the quality of admitted students each year, the university reviews student profile critically. Such an analysis helps in:

(i) Knowing the trends of admissions in the programmes.
(ii) Identifying the areas from where the students are applying to CUPB.
(iii) Marking areas where awareness about university is still to be spread through various strategies
(iv) Analysing the level of merit of students admitted.

Analysis of admission data helped in redesigning of some programmes and discontinuation of some others. The analysis of regional trends helped in identifying parts of the country and parts of Punjab from where CUPB has less number of students admitted.

Admission Committee

All admission related decisions are taken by a committee after thorough discussions and consideration. During admission period (April to September), the committee meets very frequently and at short notice, as required. For the year 2015-16, the following members constituted the committee:

1. Prof. P. Ramarao, Professor, Centre for Pharmaceutical Sciences and Natural Products.
2. Prof. R. G. Saini, Invited Professor, Centre for Biochemistry and Microbial Sciences.
3. Prof. A. K. Jain, Professor, Centre for Computer Science and Technology.
4. Prof. A. K. Dhawan, Professor, Centre for Plant Sciences.
5. Prof. S. K. Bawa, Professor, Centre for Education.
6. Dr. Anjana Munshi, Associate Professor, Centre for Human Genetics and Molecular Medicine.
7. Dr. Jagdeep Singh, Controller of Examinations.
8. Dr. Pankaj Khare, Registrar.

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

SC/ST

The university has established a "SC/ST and minorities cell" and also adopted UGC guidelines for SC/ST candidates (*Annexure 2.1*). In all

academic programmes offered by the university, 15% seats are reserved for students belonging to scheduled castes and 7.5% for students belonging to scheduled tribes. Further, the minimum eligibility requirement of marks is relaxed by 5% for students belonging to these categories.

The SC/ST Cell guides students to get scholarships from the various schemes of Government. Apart from the financial assistance offered by the university, CUPB has put in place mechanisms to ensure easy educational loan from CUPB resources and the banks.

OBC

As per Govt. of India rules, 27% of the seats in the academic programmes are reserved for students belonging to other backward classes. Further, the minimum eligibility requirement of marks is reduced by 5% for students belonging to these categories.

Women

Women students are treated in equal priority with male students. However, the university policies proactively encourage women candidates to compete and seek admission. CUPB is a gender equal, women safe campus.

Persons with varied disabilities

Seats are reserved for physically challenged students as per the Government norms.

Economically weaker sections

CUPB has a policy for financial assistance to students. Accordingly grants and financial assistance are provided to the meritorious students coming from economically weaker sections (***Annexure 2.2***).

The university encourages the students to take up part time jobs at the university under the "Earn While You Learn" scheme and has also made arrangements with the local banks for educational loans. Interest free loan, up to Rs. 40,000 is provided by CUPB from Student Aid Fund.

Outstanding achievers in sports and other extracurricular activities

University encourages sports and other extracurricular activities among its students and for this purpose sports meet is held annually. To attract outstanding achievers in sports, CUPB plans to introduce B.P.Ed programme from academic year 2016-17.

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

Table 2.1 shows the year-wise analysis conducted by university for demand ratio of various courses for the period 2011-2016.

The analysis shows that the demand for the computer science and basic science programmes, even without fellowship, is very high as compared to the humanities programmes. In some of the programmes, number of applicants were 20-30 times more than the number of seats. The Ph.D. programmes of the university were in high demand and there were as many as 442 applications for 19 seats in different centres, during the current academic year. The total number of candidates who opted for CUPB in CUCET or applied directly during the academic session 2015-16 was 6747. Of these 513 candidates were offered admission, making the average of demand ration 1.13.

Table-2.1: Year wise analysis of demand ratio for various courses for the period 2011-2016

Programme	2011-2012 No. of applications received (Ratio of No. of Applications : No. of seats)	2012-2013 No. of applications received (Ratio of No. of Applications : No. of seats)	2013-2014 No. of applications received (Ratio of No. of Applications : No. of seats)	2014-2015 No. of applications received (Ratio of No. of Applications : No. of seats)	2015-2016 No. of applications received (Ratio of No. of Applications : No. of seats)
M.Phil.-Ph.D. Biosciences	103 (1:7)	219 (1:15)	362 (1:18)	104 (1:5)	-
M.Phil.-Ph.D. Environmental Science and Technology	37 (1:2)	129 (1:9)	220 (1:11)	26 (1:1)	-
M.Pharm.-Ph.D. Pharmaceutical Sciences (Medicinal Chemistry)	80 (1:8)	32 (1:3)	70 (1:4)	56 (1:3)	89 (1:5)
M.Phil.-Ph.D. South and Central Asian Studies	31 (1:2)	54 (1:4)	113 (1:5)	75 (1:3)	105 (1:7)
M.Phil.-Ph.D. Comparative Literature	35(1:2)	55 (1:4)	87 (1:3)	96 (1:4)	124 (1:6)
M.Phil.-Ph.D. Development Economics	29 (1:2)	43 (1:3)	136 (1:5)	71 (1:3)	170 (1:11)
LLM. Environmental Law	29 (1:3)	-	47 (1:5)	19 (1:2)	71 (1:5)
M.Sc. Biosciences	26 (1:3)	63 (1:3)	126 (1:5)	64 (1:3)	-
M.Sc. Life Sciences (Animal Sciences)	-	-	-	-	412 (1:27)
M.Sc. Life Sciences (Plant Sciences)	-	-	-	-	319 (1:21)
M.Sc. Life Sciences	-	-	-	-	435 (1:29)

(Biochemistry)					
M.Sc. Life Sciences (Microbial Sciences)	-	-	-	-	384 (1:26)
M.Sc. Environmental Science and Technology	-	-	-	19 (1:2)	316 (1:21)
M.Sc. Earth and Geological Sciences	-	-	-	22 (1:2)	78 (1:5.2)
M.Sc. Chemical Sciences	-	-	-	34 (1:3)	506 (1:33)
M.Tech. Computer Science and Technology	-	-	-	103 (1:6)	267 (1:11)
M.Sc. Molecular Genetics	-	-	-	11 (1:1)	-
M.Sc. Molecular Medicine	-	-	-	36 (1:4)	333 (1:22)
MSc. Life Sciences (Human Genetics)	-	-	-	4 (1:0.4)	449 (1:29)
M.Phil. Physics	-	-	-	3 (1:03)	-
M.Tech. Computer Science and Technology (Cyber Security)	-	-	-	10 (1:04)	257 (1:17)
M.Pharm. Pharmaceutical Sciences (Pharmacognosy and Photochemistry)	-	-	-	3 (1:0.12)	62 (1:3)
M.Sc.in Physics (Nanophysics)	-	-	-	9 (1:0.36)	658 (1:43)

M.Sc. Mathematics	-	-	-	3 (1:0.12)	462 (1:30)
M.Sc. Statistics	-	-	-	6 (1:0.25)	158 (1:11)
M.Sc. Life Sciences (Bioinformatics)	-	-	-	63 (1:2)	150 (1:10)
M.A. Comparative Literature	-	-	-	-	112 (1:7)
M.A. (Hons.) Punjabi and Comparative Literature	-	-	-	-	11(1:0.7)
M.A. Development Economics	-	-	-	-	167 (1:11)
M.A. Education	-	-	-	-	49 (1:3)
M.A. History	-	-	-	-	53 (1:4)
M.A. Sociology	-	-	-	-	55 (1:4)
M.A. Political Science	-	-	-	-	97 (1:6)
M.A. Geography	-	-	-	-	90 (1:6)
M.Ed.	-	-	-	-	94 (1:2)

'-' indicates non-existence of programme in the respective academic year.

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

M.Phil.-Ph.D. Integrated Programmes have been restructured and divided into two separate phases of M.Phil. and Ph.D. Indeed, due to a limited number of faculty supervising Ph.D. scholars, it was difficult to accommodate all M.Phil students in Ph.D. The university has now started direct admission to Ph. D. from the current academic session.

Some programmes have been redefined for the year 2015-16. For example M.Sc. Biosciences programme has now been redefined and admissions have been carried out in seven different specializations: Plant Sciences, Animal Sciences, Human Genetics, Molecular Medicine, Microbial Sciences, Bioinformatics and Biochemistry.

M.Sc. Molecular Genetics programme offered by Centre for Biosciences has been discontinued from the 2015-16 academic session because of the low demand.

LL.M-Ph.D. integrated programme was also discontinued due to the low demand. The one year LL.M. Programme has been converted to two year programme as per the UGC guidelines.

In year 2014, M.A. International Studies programme was discontinued due to poor demand; instead focus was to attract students in M.Phil.-Ph.D. integrated programme in South and Central Asian Studies.

2.2 Catering to Diverse Needs of Students

The students admitted in CUPB represent 25 major states of India with most of them coming from Punjab, Uttar Pradesh, Chandigarh, Himachal Pradesh and Jammu and Kashmir as given in *Table 2.2*.

Students' needs and abilities are different due to divergence in economic, cultural and linguistic background, abilities and interests. CUPB believes that every student should have equal opportunities to be educated regardless of their backgrounds and socio-economic status. Therefore, teachers take diversity into consideration and efforts are made to satisfy the needs of the students from diverse backgrounds including less privileged communities.

Table-2.2: The diversity of the students at CUPB admitted from 2009-2015

S. No.	State	No. of students	S. No.	State	No. of students
1.	Andhra Pradesh	**04**	14.	Maharashtra	**05**
2.	Assam	**07**	15.	Manipur	**01**
3.	Bihar	**33**	16.	Nagaland	**01**
4.	Chandigarh	**50**	17.	New Delhi	**31**
5.	Chhattisgarh	**02**	18.	Odisha	**19**
6.	Gujarat	**01**	19.	Puducherry	**05**
7.	Haryana	**66**	20.	Punjab	**374**
8.	Himachal Pradesh	**59**	21.	Rajasthan	**80**
9.	Jammu and Kashmir	**95**	22.	Tamil Nadu	**02**
10.	Jharkhand	**10**	23.	Uttar Pradesh	**94**
11.	Kerala	**15**	24.	Uttarakhand	**08**
12.	Karnataka	**01**	25.	West Bengal	**15**
13.	Madhya Pradesh	**21**			

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

An orientation programme is held at the university level and then each centre holds a separate orientation programme for its newly admitted students.

- At the university level one day programme is led by the Vice Chancellor. The Deans, Registrar, COE, Coordinators of Centre, faculty members, the toppers of various programmes and the office bearers of the student council are introduced to the new entrants through slides containing their CV.

- The freshers are made aware of the university life, values and ethics to be followed, attendance, punctuality and the academic system of the university. Also, mentor-mentee system is explained and mentors announced for each student. Policies on sexual harassment, grievance redressal and ragging are explained. The students are introduced to members of different committees whom they can approach in emergencies.

- Thereafter, the induction programmes are held in respective centres led by the CoCs. Students are briefed about the details of the programme they have enrolled in, the code of conduct, the rules and regulations of the university, pattern of examinations and the facilities available. They are explained the opportunities at CUPB, academic success strategies, scope of their programme and possible career opportunities.

- The students are also taken on a tour of the university, laboratories, library, computer centre, museum, health centre, etc. before the commencement of the teaching programme.

- Senior students are involved at every step of the orientation. The faculty of each centre provides guidance and counselling during the initial days, take feedback of freshers and act on this.

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

The university has a "Students Counselling Cell" (*Annexure 2.3*) and "SC/ST/OBC and minorities Cell". These two cells identify and address the needs of different groups of students admitted in the university.

- The orientation programme conducted in each session before the commencement of teaching, helps in understanding and assessing the knowledge base and skills of the students.

- In the initial interactions with the students, the faculty members take special care to understand the needs of the students and impart support to the students from less privileged groups. For example, students who are weak in English are identified, divided into batches and special remedial English classes are arranged for them.

- For language inhibitions, initial help through the mentor from the same state is very useful.

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

The university realizes its objective of catering to the diverse needs of students from less privileged communities, rural backgrounds as also the high performers. Apart from the English remedial classes, the following efforts are made:

- *Remedial courses in Communication and Soft Skills Development*

  The Centre for Comparative Literature offers short and long term need based courses in English. These courses help the students to acquire the required proficiency in communication skills. These classes commence as soon as the semester starts and are scheduled in the evening after class hours.

- *Competitive Examination Cell*

  The objective of the cell (***Annexure 2.4***) is to prepare the students to face different competitive examinations and help them acquire the requisite knowledge to excel in these competitions. The cell conducts coaching classes for exams like UGC/CSIR-NET, ICMR, DBT, GATE, GPAT, Civil services examination, etc. Classes are held in the evening, so that the regular teaching schedule of the university is not disturbed. This cell contributes particularly to the needs of the weaker sections i.e. socially and educationally backward communities of the students. CUPB assesses the academic growth through the results of different competitive examinations in which our students participate. The details of

students who have qualified various national competitive examinations is in *Section 3.4.4*.

- *Punjabi Language classes*

    This course is offered to the interested students during evening hours on specific days which are generally decided as per the time-table during the semester. The Central University of Punjab has diverse student community coming from all parts of the country. Punjabi language is taught to help these students get accustomed to the social culture.

- The university has started short term value added courses of direct relevance to current social needs. These courses are:

    - Certificate course in Human Rights and Duties
    - Short course in Vermicomposting
    - Short course in Apiculture
    - Short course in Mushroom Cultivation
    - Short course in Sericulture
    - Communication and Soft Skills Development
    - Introductory Punjabi Language Course

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

The mentor appointed for each student is expected to maintain the record of the academic growth of the respective students. Mentors recommend remedial courses to ensure the academic growth of students.

In the faculty meetings, teachers share their experiences about students and remedial measures, if needed for students or on any other issue, are addressed. CUPB identifies the need of the students and provides assistance based on the category of students having one or more of the following special needs:

- Improvement in English.
- Special coaching in different programmes.
- Remedial classes and tutorials for slow learners.
- Financial requirements for economically disadvantaged students.

The economically disadvantaged students are encouraged to apply for national level scholarships such as Rajiv Gandhi National Fellowship (RGNF) for Scheduled Caste and Scheduled Tribes, funded by Ministry of Social Justice and Empowerment and Ministry of Tribal Affairs. Students are also encouraged to apply for fellowship under Maulana Azad National Fellowship (MANF) for Minority Students Scheme.

The university does not let any student suffer for the reasons of economic hardships and offers financial aid programs through scholarships and interest free loans. Moreover, CUPB helps them through Earn While You Learn Scheme wherein the students get paid for working at various places in the university campus after their classes and during weekends. CUPB also helps the students in facilitating loan process with banks to meet their financial needs.

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

- The Choice Based Credit System takes care of the advanced learners who can opt for higher levels of courses.

- Students can also opt for inter-disciplinary courses and specialized elective courses of their choice and interest.

- Learning needs of the students are assessed by getting constant feedback from the learners and also individual needs of the students are assessed by the research guides.

- Bright students are encouraged to participate in additional seminars and symposia conducted by other institutions and are motivated to publish technical papers in reputed journals.

- Special coaching for competitive examinations like UGC-NET /SET / GATE / ICAR fellowships are given for advanced learners.

  To encourage advanced learners, library and reading rooms remain open for 24 hours on all working days. The students are provided with uninterrupted power supply and fully air conditioned class rooms.

2.3   Teaching-Learning Process

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

(i) Academic Calendar

Academic calendar of the university is prepared by a committee under the chairmanship of Dean Academic Affairs where in all the university activities are planned and scheduled. This calendar is uploaded on the university website.

An academic year consists of two semesters. The odd semester runs in the months of August to December and the even semester runs during the months of January to May. One semester normally has 18 weeks and each week has 24-28 hours of instructions spread over 5 days of the week.

- Academic Calendar of every centre is prepared by the Academic and Administrative Committee of the respective centre. The calendar of the centres also includes activities such as organization of seminars/workshops/invited lectures etc.

- For each course, the schedule of lectures, lesson plans and detailed syllabus is defined precisely.

- The schedule of seminars to be conducted and other programmes to be organized are well planned to fit in time frame.

(ii) Teaching plan

- The allotment of courses and allocation of teachers for each programme are well defined by each centre before commencement of semester.

- Allotment of dissertation/thesis by supervisors is completed in the beginning of each academic year.

- Each programme includes courses identified by their unique course code. The courses are distributed as lectures, practical/laboratory work, tutorials, term papers, seminars,

surprise quiz, report writing and viva-voice and credits are assigned accordingly.

(iii) Evaluation blue print

- Continuous internal assessment: This includes surprise test of 25% weightage, two pre-announced tests of 25% weightage each and an end semester examination of 25% weightage.

- External assessment: All dissertations/research project reports of CUPB are assessed by external subject matter experts.

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

Yes, Students' Manual is uploaded on the university website, which provides academic calander and other relevant information, details of various programmes, courses, syllabi, course outlines with relevant reference books and suggested readings are also uploaded on website prior to the commencement of the academic session.

Before the session starts, the teachers get ready with new books (textbooks and reference books) and update themselves with the current and latest lecture materials. A number of teachers prepare lecture handouts also.

Course schedules are prepared by every faculty member for the courses they are teaching. This system is very effective in covering the syllabus within the time frame prescribed for a semester. The academic calendar and time table are given to students prior to the commencement of the academic session and feedback from the students ensures effectiveness of the process.

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

CUPB and its faculty take teaching as the highest priority. Till date the university has not faced any problem in completing the curriculum within the stipulated time frame. The time table is strictly followed. In some unavoidable circumstances if the classes are disturbed then the faculty compensates for the loss by taking additional classes.

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

The learning is made student centric by making students participate in the process through interactive discussions in the class and engaging them in activities in which they are the main participatory subjects. The teaching techniques like quiz, seminars, home assignments, term papers, etc. augment the student-centric learning process.

List of participatory learning activities adopted in general are:

- Students are asked to prepare MCQs, assignments and term papers on specific topics using reference books and journals.
- The students are asked to evaluate the surprise tests to make learning more students' centric.
- Seminars with use of multimedia, project reports, surveys, field studies.
- Surprise tests/quiz.
- Journal clubs to enhance students' knowledge and update them with recent research.
- Term papers to promote team learning.
- E-learning, blogs, email groups help students' participation.
- Academic documentary, shows/films.

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

University's central policy on expert selection is the scholarship as attested by the membership/fellowship of national academies. Experts are chosen from the list of these peer-recognized academies as much as possible.

The university permits and encourages faculty to invite experts and people of eminence from different fields to deliver lectures. The university has already appointed eight visiting professors of eminence who share their expertise with faculty and students.

Besides, every centre has the provision of inviting experts as and when required. In the last four years there have been 108 lectures by experts from different fields.

The centres also organize seminars, workshops etc. from time to time which offer a platform to invite experts /people of eminence to deliver lectures and share their experiences. Eminent scientists, consultants and representatives

from industry are also invited to deliver scholarly lectures by the concerned faculties/centres (***Table 2.3***).

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

The university has a computer centre, where each computer has internet connection, to which students have free access. The library has subject specific databases, interactive learning software and e-learning resources for the benefit of the students and the faculty. Students are also exposed to open source reference materials and online educative resources. They are encouraged to consult their teachers on learning whenever required. Besides, the university has plans to start programmes through blended learning mode, once the MOOC programme progresses further.

Table 2.3: List of experts invited for lectures at CUPB

Sr.No.	Name of Experts	Date of Lecture
1.	Kulvinder Singh Saini	June 24, 2010
2.	Dr. P. S. Ahuja	June 25, 2010
3.	Dr. A. K. Saxena	May 3, 2011
4.	Mr. P. C. Hota, IAS (Retd.)	May 28, 2011
5.	Dr. Daljit Singh	July 17, 2011
6.	Dr. M. S. Bakshi	August 5, 2011
7.	Prof. A. K. Dhawan	April 27, 2011
8.	Prof. Naresh Kochhar	November 18, 2011
9.	Prof. Mool Chand Sharma	November 24, 2011
10.	Prof. Dr. Harish Puri	December 9, 2011
11.	Prof. Dr. A. K. Saluja	December 9, 2011
12.	Dr. Devinder Singh Sandhu	December 13, 2011
13.	Prof. Dr. Jagbir Singh	February 10, 2012
14.	Dr. U. S. Tandon	March 5, 2012
15.	Prof. Anwar Alam	April 17, 2012
16.	Dr. A. Banerjee	April 20, 2012
17.	Dr. Gurwattan Singh Miranpuri	April 25, 2012
18.	Prof. S. S. Gill	May 08, 2012
19.	Dr. A. Bhardwaj	Sept 24, 2012
20.	Prof. C. P. Kaushik	Sept 26, 2012
21.	Dr. Babu Ram	November 27, 2012
22.	Prof. A. K. Singal	December 21, 2012
23.	Dr. S. Sharma	Jan 10, 2013
24.	Dr. R. K. Tuli	March 28, 2013
25.	Dr. Deeksha Bali	April 12, 2013
26.	Prof. Moin Uddin	May 13, 2013
27.	Prof. S. K. Salwan	May 13, 2013
28.	Prof. A. P. Pathak	May 17, 2013
29.	Dr. S. S. Bir	May 22, 2013
30.	Prof. D. S. Brar	May 22, 2013
31.	Prof. Pushpinder Jai Rup	May 22, 2013
32.	Prof. P. K. Joshi	May 22, 2013
33.	Dr. B. M. Gandhi	May 29, 2013
34.	Prof. Bismillah A.	June 28, 2013
35.	Prof. A. Tikoo	December 05, 2013
36.	Prof. P. T. Chande	September 16, 2013
37.	Prof. Pandey Sashibhushan Sheetanshu	September 16, 2013
38.	Padma Bhushan Sardar Anjum	September 16, 2013
39.	Prof. M. N. Rai	September 16, 2013
40.	Prof. Prithipal Singh Kapur	November 1, 2013

41.	Prof. M. S. Kang	November 1, 2013
42.	Prof. Ranjit Singh Ghuman	November 1, 2013
43.	Dr. Satnam Singh Ladhar	November 1, 2013
44.	Sh. Ajmer Singh Aulakh	April 23, 2013
45.	Sh. Tony Batish	April 23, 2013
46.	Prof. Harbhajan Singh Bhatia	May 7, 2013
47.	Prof. Sukhdev Singh	May 7, 2013
48.	Dr. Swarajbir	September 27, 2013
49.	Dr. Navsharan Kaur	September 27, 2013
50.	Chancellor Prof. S. S. Johl	October 25, 2013
51.	Padma Bhushan Sh. Gurdial Singh	October 25, 2013
52.	Sh. N. S. Ratan	October 25, 2013
53.	Prof. Sukhdev Singh Sirsa	October 25, 2013
54.	Prof. Harbhajan Singh Bhatia	October 25, 2013
55.	Dr. Harshinder Kaur	October 25, 2013
56.	Dr. Jagmail Singh Bhathuan	November 25, 2013
57.	Prof. J. S. Grewal	November 25, 2013
58.	Major Adarsh Pal Singh	November 25, 2013
59.	Prof. Chaman Lal	January 10, 2014
60.	Prof. J. S. Hundal	January 17, 2014
61.	Prof. R. K. Tuli	January 17, 2014
62.	Prof. A. K. Malhotra	February 4, 2014
63.	Dr. J. S. Sekhon	February 4, 2014
64.	Dr. Neeta Kang	February 4, 2014
65.	Dr. Rajesh Vashishta	February 4, 2014
66.	Dr. Manjit Singh Bal	February 4, 2014
67.	Shri Avinash Chander	February 28, 2014
68.	Prof. S. K. Salwan	February 28, 2014
69.	Prof. Asit K. Chakraborti	April 4, 2014
70.	Dr. Inder Pal Singh	March 28, 2014
71.	Dr. Prabhjot Parmar	May 27, 2014
72.	Prof. Ram Sharan Joshi	September 15, 2014
73.	Prof. Rohini Aggarwal	September 29, 2014
74.	Sh. Bal Anand	September 4, 2014
75.	Prof. M. Shamsher Ali	October 21, 2014
76.	Prof. S. C. Sharma	November 13, 2014
77.	Prof. R. K. Tuli	November 15, 2014
78.	Prof. Gurmail Singh	November 24, 2014
79.	Dr. Veer Singh	November 26, 2014
80.	Dr. Anand Bachhawat	December 5, 2014
81.	Prof. Rakesh Tyagi	December 5, 2014
82.	Dr. M. K. Mahajan	December 5, 2014
83.	Dr. Suman Dhar	December 5, 2014
84.	Dr. Javed N. Agrewala	December 5, 2014

85.	Dr K. K. Bhutani	January 22, 2015
86.	Dr. S. S. Marwaha	January 22, 2015
87.	Dr. Amarjit Kaur Kotfata	February 11, 2015
88.	Major General (Retd.) R. K. Kaushal	February 11, 2015
89.	Prof. V. K. Garg	February 11, 2015
90.	Prof. S. C. Sharma	February 19, 2015
91.	Prof. Narpinder Singh	February 23, 2015
92.	Prof. Ashok Dhawan	February 26, 2015
93.	Dr. Raj Bahadur	February 27, 2015
94.	Prof. Sardara Singh Johl	February 28, 2015
95.	Prof Rajesh Gill	March 5, 2015
96.	Prof. S. K. Sharma	March 19, 2015
97.	Dr. D. P. Bhatt	March 27, 2015
98.	Dr. Pralok Gupta	April 10, 2015
99.	Prof. V. K. Jain	April 22, 2015
100.	Prof. S. S. Dhillon	April 22, 2015
101.	Prof. Arbind Jha	April 26, 2015
102.	Dr. Gayatri Singhal	April 27, 2015
103.	Dr. Mark Mcdowall	April 30, 2015
104.	Prof. Daisy R. Batish	May 22, 2015
105.	Prof. Jagbir Singh	May 22, 2015
106.	Prof. Gurmail Singh	May 22, 2015
107.	Dr. Jayanti Dutta	June 10, 2015
108.	Prof Rabindra N Chibbar	June 12, 2015

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

- The university has a modern computer centre with latest configuration workstations (Dell®) each featuring all recent processors. The computer centre has 511 computers, 10 high end work stations, blade server with capacity for 16 blades each having with 16 GB RAM (12 are functional), two lease lines of 40 Mbps and 1 Gbps 22 laptops and 22 different kinds of software.

- Each faculty member has a desktop and in addition each centre is provided with a laptop/computer.

- The university library is fully automated with OPAC Library Management Software which functions from cataloguing to security protocols.

- The e-journals are made available to the students through universities IP determined access. The university library has 9105 e-journals (**http://cup.ac.in/library.php**)

- Utilization of latest technologies and databases such as ISI, Web of Science, Scopus SciFinder, Manuparta and facilities like language lab, podcasts, MOOC, flipclass and other e-learning resources are made available for effective teaching.

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

Open Source

Massive Open Online Courses (MOOC) programme as per guidelines from MHRD is being started. The university has identified expertise in different areas of various disciplines who will be preparing the modules for the programme. Thirty faculty members from different disciplines of the university have been identified as experts for developing the MOOC programme in their respective areas. A number of MOOCs are already available for access from students across the world.

University has Inspired Teachers Network and Expert Teachers Network who intend to work together to improve the teaching quality.

2.3.9 What steps have the university taken to convert traditional classrooms into 24x7 learning places?

- Library is open for 24 hours all working days. Reading rooms are also open throughout the night. On Saturdays, Sundays and Gazetted holidays it opens from 9 am to 5.30 pm.

- The assignments and practical work included in the curriculum ensure that the students adhere to the habit of learning in 24 x 7 modes. Home assignments and practical work includes writing of term papers, preparing seminar reports, power point presentations.

- Broadband Internet with Wi-Fi facility is available in the hostels and reading rooms 24x7.

- Well-equipped computer centre remains open from 9:00 am to 6:30 pm.

- Students, teachers and mentors are connected to each other with social media so that the queries, discussion and learning continue even beyond the regular class schedules.

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

- Yes. In accordance with the provisions of Choice Based Credit System "Programme Advisors" are decided for each programme run by a centre. They coordinate and advise students on all academic matters and take care of overall monitoring of students academic progress. (*Table 2.4*)

- For every 8 to 10 students one mentor is assigned to provide academic, personal and psycho social guidance. The mentor remains the same throughout the programme of the student from orientation to graduation.

- Apart from the programme advisors and mentors, students have research guides, hostel wardens and chief warden who are accessible round the clock.

Table 2.4: Programme Advisors of various academic programmes in different centres of CUPB

Centre for Chemical Sciences

Name of the Programme	Name of Programme Advisors
M.Sc.	Dr. J. Nagendra Babu, Assistant Professor
Ph.D.	Dr. Rakesh Kumar, Assistant Professor

Centre for Pharmaceutical Sciences and Natural Products

Name of the Programme	Name of Programme Advisors
M.Pharm. (Medicinal Chemistry)	Dr. Raj Kumar, Assistant Professor
M.Pharm. (Pharamcognosy and Photochemistry)	Dr. Pradeep Kumar, Assistant Professor
Ph.D. (Pharmaceutical Sciences)	Dr. Vinod Kumar, Assistant Professor
M.Sc. (Medicinal Chemistry)	Dr. Vikas Jaitak, Assistant Professor

Centre for Animal Sciences

Name of the Programme	Name of Programme Advisors
Ph.D.	Dr. Jyoti Prakash, Assistant Professor
M.Sc.	Dr. Krishna Chaitanya, Assistant Professor

Centre for Plant Sciences

Name of the Programme	Name of Programme Advisors
M.Sc.	Dr. Felix Bast, Assistant Professor
Ph.D.	Dr. Pankaj Bhardwaj, Assistant Professor

Centre for Biochemistry and Microbial Sciences

Name of the Programme	Name of Programme Advisors
M.Sc.	Dr. Shashank Kumar, Assistant Professor
Ph.D.	Dr. Aklank Jain, Assistant Professor

Centre for Computational Sciences

Name of the Programme	Name of Programme Advisors
M. Sc.	Dr. Mahesh Kulharia, Assistant Professor
Ph.D.	Dr. Purshotam Sharma, DST INSPIRE Faculty

Centre for Physical Sciences

Name of the Programme	Name of Programme Advisors
M.Sc.	Dr. Kamlesh Yadav, Assistant Professor
Ph. D.	Dr. Jai Prakash, Assistant Professor

Centre for Mathematics and Statistics

Name of the Programme	Name of Programme Advisors

Ph.D.	Dr. Sachin Kumar, Assistant Professor
M.Sc. Mathematics	Dr. Akhlad Iqbal, Assistant Professor
M.Sc. Statistics	Dr. Harmanpreet Singh Kapoor, Assistant Professor

Centre for Environmental Science and Technology

Name of the Programme	Name of Programme Advisors
M.Sc.	Prof. R. C. Sharma, Professor
M.Phil.	Prof. R. C. Sharma, Professor
Ph.D.	Prof. R. C. Sharma, Professor

Centre for Geography and Geology

Name of the Programme	Name of Programme Advisors
M.A./M.Sc. Geography	Dr. L. T. Sasang Guite, Assistant Professor
M.Sc. Geology	Dr. Jitendra Kumar Pattanaik, Assistant Professor
Ph.D. Geography	Dr. Kiran K. Singh, Assistant Professor

Centre for Human Genetics and Molecular Medicine

Name of the Programme	Name of the Programme Advisors
Ph.D. in Human Genetics	Dr. Anjana Munshi, Associate Professor
Ph.D. in Molecular Medicine	Dr. Harish Chander, Assistant Professor
M.Sc. in Human Genetics	Dr. Preeti Khetarpal, Assistant Professor
M.Sc. in Molecular Medicine	Dr. Monisha Dhiman, Assistant Professor

Centre for Comparative Literature

Name of the Programme	Name of Programme Advisors
M.A. English (Comparative Literature and Translation studies)	Dr. Amandeep Singh, Assistant Professor
M.Phil-PhD Integrated and M.Phil (Comparative Literature)	Dr. Rajinder Kumar, Assistant Professor

Centre for Classical and Modern Languages

Name of the Programme	Name of Programme Advisors
M.A. Punjabi	Dr. Ramanpreet Kaur, Assistant Professor
Ph.D. Punjabi	Dr. Ramanpreet Kaur, Assistant Professor

Centre for Computer Science and Technology

Name of the Programme	Name of Programme Advisors
M.Tech. Computer Science and Technology	Er. Meenakshi Mittal, Assistant Professor
M.Tech. Computer Science and Technology (Cyber Security)	Er. Surinder S. Khurana, Assistant Professor

Centre for South and Central Asian Studies

Name of the Programme	Name of Programme Advisors
Ph.D.	Dr Bawa Singh, Assistant Professor
M.Phil.	Dr. Bawa Singh, Assistant Professor
M.A. (Pol. Sc.)	Dr. Nishtha Kaushiki, Assistant Professor

Centre for Economic Studies

Name of the Programme	Name of Programme Advisors
Ph.D.	Dr. Pabitra Kumar Mishra, Associate Professor
M.Phil.	Dr. Sandeep Kaur Bhatia, Assistant Professor
M.A.	Dr. Naresh Kumar Singla, Assistant Professor

Centre for Law

Name of the Programme	Name of Programme Advisors
LL.M.	Dr. Puneet Pathak, Assistant Professor
Ph.D.	Dr. Puneet Pathak, Assistant Professor

Centre for Education

Name of the Programme	Name of Programme Advisors
Ph.D.	Dr. Satvinderpal Kaur, Associate Professor
M.Ed.	Dr. Shamshir Singh Dhillon, Assistant Professor
M.A. (Education)	Dr. Shireesh Pal Singh, Assistant Professor

Centre for Sociology

Name of the Programme	Name of Programme Advisors
M.A. Sociology	Dr. Vinod Arya, Assistant Professor

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

Constant innovations in teaching are a matter of pride for CUPB faculty and many innovative teaching approaches/methods are practiced in the university.

Teleconferencing and video-lecturing are used in various centres. One fine example of this is in Centre for Environmental Science and Technology. The faculty of the centre coordinated the 13th, 14th and 15th Outreach Programme on "*Applications of Remote Sensing and GIS for Natural Resources*" between August 2014-November 2015. The programme is broadcasted live using A-VIEW software from the Indian Institute of Remote Sensing (IIRS), Dehradun. This programme was sponsored by National Natural Resources Management System (NNRMS) and was organised by Indian Institute of Remote Sensing, Indian Space Research Organisation and Department of Space, Government of lndia. In the first two sessions a total of 55 participants registered for the course, out of which 39 successfully completed the course.

Several other methods are used in CUPB:

(i)   Digital technologies like LCD projectors are used to provide a real time animation and present the concept in a most attractive and lively way.

(ii) Video based teaching engages the students in the class.

(iii) Brainstorming on various social, scientific issues and problems by way of panel discussions.

(iv) Tutoring by senior students in mentor groups.

(v)   Journal clubs.

(vi) Seminars.

(vii) Poster presentation on research topics.

(viii) Innovators Club exhibitions.

(ix) Podcasts, blogs, documentaries, films etc. are prescribed by the faculty. It has been observed that all of these innovative practices improve the overall learning abilities of students.

(x) Participation in other national levels competitions like mock parliament and debate competitions organised by Federation of Indian Chambers of Commerce and Industry.

(xi) International commemorative days are celebrated which imparts holistic awareness and development.

These practices have helped the students to bring out their hidden talents, better understanding of the subject, augment inclination towards subject and enhance active learning process. The activity oriented teaching methodology adopted by a teacher is considered as an important criterion to assess the teaching quality. CUPB gives the "Best Teacher Award" each year, based on students feedback and the "Best Student Award" based on overall performance of the student.

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

CUPB realises its responsibilities of promoting scientific temper and creativity and promotes this through multiple approaches.

- University permits and sponsors several of the research students to participate in seminars, workshops, trainings, conferences etc., in their field so as to stimulate creativity among them in university and outside. Also, such events are organized in the university campus, so that students are exposed to the views of national and global experts, which would trigger creativity in their young minds.

- Faculties regularly contribute articles in newspapers on policies and scientific temper.

- University freely allows and encourages students to take up research projects which would again culminate into creative outputs.

- To exhibit the talent and inculcate scientific temper, the students are given opportunity to develop scientific models/exhibits to the public through science day programmes, innovators day, science exhibition, etc.

- For the overall personality development various competitions such as debates, declamation, elocution, quiz, painting and photography are organized.

- Class projects, freedom to interact with faculty and experts and encouraging team spirit through group projects are other ways CUPB implements to achieve these targets.

- Apart from the academic activities, for overall holistic development, students have visited various places such as Pushpa Gujral Science City, Kapurthala and Biodiversity train, Bathinda, etc. The Visual Arts Club of the university screens social movies and documentaries for general awareness.

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

Yes the project work/dissertation is an essential component of the programmes offered by the university. 100% programmes have made it mandatory. A summary of students' projects is provided in *Table 2.5* and details are in *Annexure 2.5*.

Table 2.5: Students' projects completed

Academic Year	M.Phil.	M.Pharm.	LL.M.	M.Tech.	M.Sc.	Total
2011-12	26	NIL	NIL	NIL	NIL	26
2012-13	34	8	4	NIL	11	57
2013-14	50	8	9	17	13	97
2014-15	33	0	3	0	2	38
Total	153	16	16	17	26	228

NIL – the programme did not exist during the year.

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

Yes, the university takes pride in its exceptionally qualified and committed faculty which easily meets the requirements of curriculum. As a general practice of appointment at CUPB, an Assistant Professor is appointed only if he/she has both Ph.D. and NET and is from a reputed national/international laboratory. Generally, some experience of foreign universities is also expected. These unwritten guidelines are always followed except in engineering disciplines where some faculty members are M.Tech. from reputed institutes like IITs.

Whenever, there is a short fall, new recruitments are made and visiting faculties are invited for specialised topics to enhance the knowledge of the students.

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

- CUPB organized a workshop for its faculty on "Capacity Building of Higher Education Teachers on e-Content Development using Moodle" from September 15-16, 2015. Nearly 30 faculty members of the university attended this two day programme and the software, Moodle was installed on university server.

- Facilities provided to prepare computer aided teaching materials are provided like computer lab, language lab, audio visual aids, micro phones, LCD projectors, high resolution cameras, high-end planetary V-cradle scanners and LCD televisions.

- All the faculty members are provided with a personal computer, a departmental laptop with internet connection and the facility to take print-outs through the networked printer in the computer lab.

- All the classrooms have LCD projectors with screens to enable teaching through power point presentations, in addition to black/white boards. Faculties are provided with remote slide changer with laser pointers.

- The university has the intranet facility (http://172.16.0.7) where besides other academic, administrative information; lectures could also be loaded, so that students have an access to them whenever required.

- The university has provided its faculty with access to English copy-editing software "Grammarly" and bibliography software "Endnote".

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

Feedbacks are received from students at the end of each semester for all the subjects. The feedback is analysed. The names of the students are kept confidential but the concerned faculty is counselled by the authority for improvement. These feedbacks are helpful in rectifying the short- comings of

the faculty by subjecting themselves to in-service training, and to go for refresher/summer/winter programmes organized outside the university. One unique feature of CUPB is that a number of faculty members have carried out web-based anonymous student feedback for self improvement.

2.4 Teacher Quality

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

Dean Academic Affairs, Deans of Schools and CoCs ensure that plans are in place to meet changing needs of the curriculum. Steps are taken to induct new faculty and where ever possible enhance the skill levels of the existing faculty.

- The faculty is motivated to attend orientation and refresher courses as per UGC guidelines. About 50% of the faculty has already attended the orientation programmes and refresher courses offered by various Academic Staff Colleges.

- The faculty is permitted to attend national and international seminars to update on recent developments in research and curriculum.

- The faculty is advised to attend training on lab oriented programmes.

- The CUPB administration ensures and provides support to the faculty to update themselves and meet the changing requirement of the curriculum.

- Workshops are organised on use of application of high end equipment in collaboration with manufacturers.

2.4.2 Furnish the details of the faculty:

CUPB faculty has 8 Professors, 9 Associate Professors, 65 Assistant Professors, 1 DST INSPIRE faculty, 1 Ramalingswami Re-entry Fellow from 2nd March 2014. The faculty members have a large number of publications, patents and research projects. CUPB faculty has a number of national and international awards as detailed in *Section 2.4.7*. The faculty has wide international exposure and experience. Amongst the present faculty, 38 members have made a total of 105 visits abroad for training/research/conferences etc. Twenty faculty members have been abroad for more than one year and nine have spent between 5 to 17 years at prestigious foreign universities.

Details of the faculty are given in ***Table-2.6.***

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

Central University of Punjab has faculty from different states of the country. ***Table 2.7*** presents the details of faculty diversity (based on location of the university awarding Ph.D. degree). The number of faculty with degrees from CUPB, other universities of Punjab, universities out of state and universities out of India is 0, 38%, 59% and 3% respectively.

Table-2.6: Details of the faculty at CUPB

Sr. No.	Professors	
1.	Prof. R. K. Kohli, PhD	Centre for Environmental Science and Technology
2.	Prof. P. Ramarao, PhD	Centre for Pharmaceutical Sciences and Natural Products
3.	Prof. R. G. Saini, PhD	Centre for Biochemistry and Microbial Sciences
4.	Prof. A. K. Jain, PhD	Centre for Computer Science and Technology
5.	Prof. R. C. Sharma, PhD	Centre for Environmental Science and Technology
6.	Prof. A. K. Dhawan, PhD	Centre for Plant Sciences
7.	Prof. S. K. Bawa, PhD	Centre for Education
8.	Prof. P. K. Sharma, PhD	Centre for Biochemistry and Microbial Sciences
Associate Professors		
1.	Dr. Anjana Munshi, PhD	Centre for Human Genetics and Molecular Medicine
2.	Dr. Tarun Arora, PhD	Centre for Environmental Law
3.	Dr. Hans Raj Arora, PhD	Centre for Environmental Law
4.	Dr. Satvinder Kaur, PhD	Centre for Education
5.	Dr. Alpna Saini, PhD	Centre for Classical and Modern Languages
6.	Dr. Pabitra Mishra, PhD	Centre for Economic Studies
7.	Dr. Vinay K. Rao, PhD	Centre for South and Central Asian Studies
8.	Dr. Ramakrishna Wusirika, PhD	Centre for Plant Sciences
9.	Dr Amandeep Kaur, PhD	Centre for Computer Science and Technology
Assistant Professors		
1.	Dr. Raj Kumar, PhD	Centre for Pharmaceutical Sciences and Natural Products
2.	Dr. Vinod Kumar, PhD	Centre for Pharmaceutical Sciences and Natural Products
3.	Dr. Vikas Jaitak, PhD	Centre for Pharmaceutical Sciences and Natural Products
4.	Dr. Felix Bast, PhD	Centre for Plant Sciences
5.	Dr. Sanjeev Kumar, PhD	Centre for Plant Sciences
6.	Dr. Pankaj Bhardwaj, PhD	Centre for Plant Sciences
7.	Dr. Vinay Kumar, PhD	Centre for Plant Sciences
8.	Dr. Anil K. Mantha, PhD	Centre for Animal Sciences
9.	Dr. Jyoti Parkash, PhD	Centre for Animal Sciences
10.	Dr. Ajay Kumar, PhD	Centre for Animal Sciences
11.	Dr. Krishna Rapalli, PhD	Centre for Animal Sciences
12.	Dr. Aklank Jain, PhD	Centre for Biochemistry and Microbial Sciences
13.	Dr. Shashank Kumar, PhD	Centre for Biochemistry and Microbial Sciences

14.	Dr. Rakesh Kumar, PhD	Centre for Chemical Sciences
15.	Dr. Krishan Kanta Haldar, PhD	Centre for Chemical Sciences
16.	Dr. Rajendra S. Dhayal, PhD	Centre for Chemical Sciences
17.	Dr. J. Nagendra Babu, PhD	Centre for Chemical Sciences
18.	Dr. Sunil Mittal, PhD	Centre for Environmental Science and Technology
19.	Dr. Dhanya M.S., PhD	Centre for Environmental Science and Technology
20.	Dr. Yogalakshmi K.N., PhD	Centre for Environmental Science and Technology
21.	Dr. Puneeta Pandey, PhD	Centre for Environmental Science and Technology
22.	Dr. Preeti Khetarpal, PhD	Centre for Human Genetics and Molecular Medicine
23.	Dr. Sandeep Singh, PhD	Centre for Human Genetics and Molecular Medicine
24.	Dr. Monisha Dhiman PhD	Centre for Human Genetics and Molecular Medicine
25.	Dr. Harish Chander, PhD	Centre for Human Genetics and Molecular Medicine
26.	Dr. Sabyasachi Senapati, PhD	Centre for Human Genetics and Molecular Medicine
27.	Dr. Neeraj Kumar, PhD	Centre for Human Genetics and Molecular Medicine
28.	Er. Meenakshi Mittal, M.Tech.	Centre for Computer Science and Technology
29.	Er. Surinder S. Khurana, M. Tech.	Centre for Computer Science and Technology
30.	Er. Sukhreet Singh, M.Tech.	Centre for Computer Science and Technology
31.	Er. Navjot Sidhu, M.Tech.	Centre for Computer Science and Technology
32.	Dr. Kousik Giri, PhD	Centre for Computational Sciences
33.	Dr. Mahesh Kulharia, PhD	Centre for Computational Sciences
34.	Dr. Kamlesh Yadav, PhD	Centre for Physical Sciences
35.	Dr. Achchhe Lal Sharma, PhD	Centre for Physical Sciences
36.	Dr. Ashok Kumar, PhD	Centre for Physical Sciences
37.	Dr. Sachin Kumar, PhD	Centre for Mathematics and Statistics
38.	Dr. Anoop Kumar, PhD	Centre for Mathematics and Statistics
39.	Dr. Harmanpreet Kapoor, PhD	Centre for Mathematics and Statistics

40.	Dr. Deepak Kumar, PhD	Centre for Law
41.	Dr. Puneet Pathak, PhD	Centre for Law
42.	Dr. Sukhwinder Kaur, PhD	Centre for Law
43.	Dr. Surender Mehra, PhD	Centre for Law
44.	Dr. Zameerpal Kaur , PhD	Centre for Comparative Literature
45.	Dr. Rajinder Kumar, PhD	Centre for Comparative Literature
46.	Dr. Amandeep Singh, PhD	Centre for Comparative Literature
47.	Dr. Kiran K. Singh, PhD	Centre for Geography and Geology
48.	Dr. Jitendra K. Pattanaik, PhD	Centre for Geography and Geology
49.	Dr. L.T. S. Guite, PhD	Centre for Geography and Geology
50.	Dr. Bawa Singh, PhD	Centre for South and Central Asian Studies
51.	Dr. Nishtha Kaushiki, PhD	Centre for South and Central Asian Studies
52.	Dr. Sudheer K. Verma, PhD	Centre for South and Central Asian Studies
53.	Dr. Sandeep Kaur , PhD	Centre for Economic Studies
54.	Dr. Naresh K. Singla, PhD	Centre for Economic Studies
55.	Dr. S. K. Singla, PhD	Centre for Economic Studies
56.	Dr. Jainendra K. Verma, PhD	Centre for Economic Studies
57.	Dr. Jajati Keshari Parida, PhD	Centre for Economic Studies
58.	Dr. Vinod Arya, PhD	Centre for Sociology
59.	Dr. Aditya Ranjan Kapoor, PhD	Centre for Sociology
60.	Dr. Ramanpreet Kaur, PhD	Centre for Classical and Modern Languages
61.	Dr. Dinesh Babu, PhD	Centre for Classical and Modern Languages
62.	Dr. S. S Dhillon, PhD	Centre for Education
63.	Dr. Shireesh P. Singh, PhD	Centre for Education
64.	Dr. J. Padmanabhan, PhD	Centre for Education
65.	Dr. Sesadeba Pany, PhD	Centre for Education
DST INSPIRE Faculty		
1.	Dr. Purshotam Sharma, PhD	Centre for Computational Sciences
Ramalingaswami Re-entry Fellow		
1.	Dr. Somesh Baranwal, PhD	Centre for Biochemistry and Microbial Sciences
Research Associate		
1.	Dr. Neetu Purohit, PhD	Centre for Comparative Literature

Table-2.7: The details of faculty diversity

Faculty / Department	% of faculty from the same university	% of faculty from other universities within the State	% of faculty from universities outside the State	% of faculty from other countries	SC	ST	OBC	% of faculty with Post-Doc /Work Experience at Foreign University
Centre for Chemical Sciences	None	50	50	0	01	-	01	50%
Centre for Pharmaceutical Sciences and Natural Products	None	75	25	0	-	-	01	25%
Centre for Animal Sciences	None	25	75	0	01	-	01	60%
Centre for Plant Sciences	None	40	40	20			01	60%
Centre for Biochemistry and Microbial Sciences	None	25	75	0	01			50%
Centre for Physical Sciences	None	0	100		01		01	66%
Centre for Environmental Science and Technology	None	60	40	0	-	-	01	-
Centre for Human Genetics and Molecular Medicine	None	15	85	0	01	-	01	43%
Centre for Computer Science and Technology	None	100	-	0	-	-	-	-
Centre for Computational Sciences	None	0	67	33	-	-	01	66%
Centre for	None	50	50	-	01	-	01	66%

Mathematics and Statistics								
Centre for Legal Studies and Governance	None	50	50	-	01	-	01	-
Centre for Comparative Literature	None	75	25	-	-	-	01	25%
Centre for South and Central Asian Studies	None	25	75	-	01	-	01	-
Centre for Economic Studies	None	50	50	-	01	-	01	-
Centre for Classical and Modern Languages (Punjabi Language, Literature and Culture)	None	50	50	-	-	01	01	-
Centre for Sociology	None	0	100		01		01	-
Centre for Geography and Geology	None	0	100			01		-
Centre for Education	None	33	67		-	-	02	25%
Overall Average	0	38.05	59.15	2.78	0.52	0.10	0.89	28.21

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

Positions are advertised in leading dailies with specific requirements for expertise in the emerging areas of study. (***Table-2.8***).

Table-2.8: Number of faculty members in new/emerging areas of study and respective faculty

Innovative/Emerging Areas	No. of Faculty
Computational Sciences	2
Bioinformatics	1
Molecular Medicine	3
Nanotechnology	4
Cyber security	5
Human Genetics	2

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

The university has 8 visiting professors and 1 adjunct professor as in the list given in ***Table-2.9***.

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

Faculty members of CUPB are encouraged to undergo trainings, orientation programmes and refresher courses as per UGC norms. Efforts are made to promote faculty development by permitting teachers to attend national/international conference/seminars, providing professional leave for attending the orientation programmes, refresher courses, Faculty Improvement Programme and Faculty Exchange.

The newly joined faculty are given Research Seed Money (RSM) which helps them to initiate their research programmes and generate preliminary data for submitting major grant proposals.

Table-2.9: Details of the Visiting/Adjunct/Honorary Professors

S.No.	Name and Affiliation
1.	Dr. Ravindra N. Chibbar, Professor and Canada Research Chair in Molecular, Biology for Crop Quality, University of Saskatchewan, Canada.
2.	Prof. R. Gadagkar, FNA, FNASc, FTWAS, President Indian National Science Academy, JC Bose National Fellow, Centre for Ecological Sciences, I.I.Sc., Banagalore-560 012.
3.	Prof. K. N. Pathak, FNA, FNASc, FASc, Former Vice Chancellor, Professor Emeritus (Life Long) and UGC Emeritus Fellow, Department of Physics, Panjab University, Chandigarh-160 014.
4.	Dr. K. K. Bhasin, FNASc, Former Professor, Department of Chemistry, Panjab University, Chandigarh-160 014.
5.	Dr. Debashish Banerji, Advisor Bioscience, Baba Amte Centre for People's Empowerment Samaj Pragati Sahayog, Bagli, Distt-Dewas, M.P.
6.	Prof. R. S. Tripathi, FNA, FNASc, Amarawati, 10/58, Sector-10, Indira Nagar, Lucknow-220 016 (U.P.)
7.	Prof. Ashok Sahni, FNA, FNASc, FASc, FTWAS, F-28, Sector 38A, Chandigarh-160 014.
8.	Prof. Veer Singh, Former Vice Chancellor, National Law University, Hyderabad, Director Academics, Chandigarh Judicial Academy, Chandigarh.
9.	Prof. IBS Passi, FNA, FNASc, FASc, FTWAS, 381, Sector 38A, Chandigarh- 160 014 (Adjunct Professor).

Various policies have been framed which provide an impetus to the faculty to work towards individual, as well as, university's development. Two of these are:

(a) Policy for research awards and incentives for state and national level recognition in research. (***Annexure 2.6***)

(b) Policy for Research Seed Money

CUPB is planning to collaborate with King Mongkut's University of Technology Thonburi, University of Bangkok to hold an international conference at Pataya in January 2016.

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

The list of faculty members who have received awards is as given below:

National Awards:

- J C Bose National Fellow: 1
- Fellow, Indian National Science Academy: 1
- Fellow, National Academy of Agricultual Sciences:1
- Fellow, National Academy of Sciences:1
- Fellow, Indian Academy of Sciences:1
- DST-INSPIRE Faculty Award: 3
- DST Young Scientist Award: 5
- "Young Scientist Award" by Punjab Academy of Sciences at Punjab Science Congress: 1
- Fellow of Punjab Academy of Sciences, 2015 (FPAS):1
- Awardee of UGC special honorarium of Rs 15000 pm till the age of 65 for being Fellow of academies: 1
- Dr. DS Kothari Post-Doctoral fellowship: 3
- Best Educationist Award: 1
- Prof. V.P. Sharma award for contribution in education: 1
- Sudarshan Rakheja Memorial award for best women educationist: 1
- Presidents Inspired Teachers recognition: 1
- Venus International Foundation's Young Faculty Award: 1
- Ramalingaswami Re-entry fellow 1
- Ramanujan fellow 1

International Awards:

Members of CUPB hold important international professional positions:

- Chair/Coordinator, IUFRO (International Union of Forestry Research Organizations, Austria) International Working Party 8.02.04) on Ecology of Alien Invasive Species (2011-2015)

- Chair/Coordinator, IUFRO International WP 4.02.02 on Multipurpose Inventories (2011-15)

- Member IUFRO Task Force on Forests and Biological Invasions (2015-2020)

- Re-accreditation of highest order from ESA, USA.

- New Investigator International Research Grant, Alzheimer's Association

- One faculty is serving as adjunct faculty at University of Texas Medical Branch.

- British Phycological Society Bursary award, Japanese Government Monbukagakusho Fellowship, NSF-USA Fellowship

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

About 50% of the present faculty has undergone orientation programmes and refresher courses at various Academic Staff Colleges. Six faculty members attended refresher courses and another twenty five have attended orientation programmes, two attended special summer programmes and two attended special winter programmes at various places as per details in section 1.4.4.

2.4.9 What percentage of the faculty have been
- **Invited as resource persons**
- **Participated in the event**
- **Presented papers**
- **Industrial engagement**
- **International experience in teaching**

Many faculties have participated in more than one of the above events. The details are as given below:

- Invited as resource persons: 41%
- Participated in the event: 60%
- Presented papers: 70%
- Industrial engagement: 4%
- International experience in teaching: 10%

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

University encourages the faculty to attend various academic staff college trainings, workshops, conferences and other faculty development programmes (FDPs). Faculty members are also encouraged to organize similar programmes in the university.

Centre for Education has recently received two grants to conduct seminars on teaching methods. Centre for Human Genetics and Molecular Medicine has received a grant from DBT to organise a two weeks workshop.

The university has submitted an application to Indian Academy of Sciences to organize a refresher course in Environmental Biology.

2.4.11 Does the university have a mechanism to encourage
* Mobility of faculty between universities for teaching?
* Faculty exchange programmes with national and international bodies?
If yes, how have these schemes helped in enriching the quality of the faculty?

The university allows the faculty to go to other universities for exchanging their knowledge, ideas and research findings.

2.5 Evaluation Process and Reforms

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

(i)   Handbook containing information about the courses, their distribution and method of evaluation and pass criteria is put on CUPB website.

(ii)   The students are detailed about the evaluation procedure in beginning of the session during orientation programme and in the classes. The students are evaluated through continuous evaluation.

The answer sheets are shown to the students after each examination to ensure transparency.

(iii)   The evaluation criteria is described in detail in the curriculum, which is accessible via CUPB website.

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

(i)   The university has started the Choice Based Credit System as given by UGC and it has also adopted 10- point grading system as per UGC guidelines.

(ii)   Beginning from academic session 2015-16, CUPB has changed the examination pattern. This involves surprise quiz (25%), pre-announced test (50%) and end term examination (25%). Question banks have been prepared for each course. This ensures a rapid objective and transparent system.

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

Earlier the university declared the result in two weeks after the final examination. However, with the introduction of objective type end semester examinations in academic session 2015-16, it is expected that the result will be available to the students within 3-5 days of final examination. The results are put up on the departmental notice boards and displayed on the university website. To speed-up the result declaration and to increase the accuracy and efficiency of examination system, the examination cell has developed in-house software "Automated Result Processing System" for result processing and printing of tabulation sheets and marks-sheets. (*Annexure-2.7*)

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

The university ensures full transparency in the evaluation process. The papers are set by the respective teachers and answer books are also checked by them. The entire process of paper setting and evaluation is very systematic and ensures transparent evaluation. The students are shown the evaluated answer sheets.

All teachers are responsible for the confidentiality of their own paper, printing and distribution.

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

Yes, the university has an integrated examination platform for the following processes.

*Pre-examination processes***:** The university has pre-examination process. The minimum attendance for the student to sit in the examination is 75%. Obtaining 50% marks in the Continuous Internal Assessment (CIA) is compulsory before the final examinations.

Examination process: The examination is centrally conducted by the examination cell under very strict supervision and invigilation.

Post-examination process: Result is processed meticulously; the CoCs of respective centers send the result to the Controller of Examination through the Dean. Result is then declared on website. After the declaration of result, students can download their provisional marks sheet for various purposes. University has Examination Grievance Committee to which students can approach in case of any conflict.

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

Ph.D. and M.Phil. ordinances have been prepared as per UGC guidelines 2009. The university is following the Ph.D. evaluation process as prescribed by UGC.

- Ph.D. Programme comprises of course work for 20 credit hours, a thesis and public viva-voce. The Ph.D. thesis has to be a substantial work of original research carried out by the candidate.

- The progress of the work is evaluated by the supervisor and time to time progress report is submitted every month.

- Once the work proposed in the synopsis is complete, the final Ph.D. pre-submission seminar is conducted, followed by the submission of the thesis.

- The supervisor submits the panel of six external examiners for the thesis evaluation.

- The Academic Council in its 6th meeting held on 05-03-2015 has approved the rules and regulations for Ph.D. degree.

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

This is not applicable as the university has no affiliated colleges.

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

The examinee can give the representation to the Dean Academic Affairs regarding any grievance related to evaluation or result. After scrutiny, the application is forwarded to "Result committee" of the concerned subject. The result is rechecked and conveyed to the student.

If the student is not satisfied, he can file an appeal to "Examination Grievances Redressal Committee". This committee investigates the issue and recommends necessary action. After due approval, the recommendation is implemented. In some instances, where student was not satisfied with this committee also, the Vice Chancellor called external experts for reevaluation.

CUPB offers immediate and effective redressal to the problems reported by the students and work towards providing a safe and secure atmosphere for the holistic growth of the students.

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

- The Controller of Examination (CoE) office is functioning independently with a full time Controller of Examinations, one Assistant Registrar and four supporting staff. The duties and responsibilities are well defined and the work flow is smooth and streamlined.

- This office has facilities for the central evaluation, computers, database server and printing/photocopying facilities which accelerates and streamlines the evaluation and result process. The OMR scanner has been purchased for conducting the online examination.

2.6 Student Performance and Learning Outcomes

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

The university articulates its graduate's attributes to knowledgeable, disciplined and honest human beings who would be leaders of tomorrow. Building independent thinking, self-confidence, courage and sincerity has, therefore, been among the principal objectives of CUPB's activities. The university enforces these principles through class room teaching, hands on experience, extracurricular activities and motivational lectures.

University provides facilities for improving the soft skills of students to improve their leadership qualities.

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

The learning outcomes are defined for each course and programme objectives are defined for each programme. These are available in the handbook and are also uploaded on the university website.

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

The teaching process is structured through planning of instructions made for each topic mentioned in the curriculum of various courses. Number of lectures to be delivered for each unit is also defined. Lecture schedule is prepared to ensure and facilitate the teaching learning process, keeping in mind the available time frame and learning outcomes.

The assessment strategies are also mentioned in details at the beginning of each semester. The details of internal criteria of evaluation and the allocation of marks to each criterion are defined to facilitate the achievement of learning outcome.

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

During continuous evaluation and class room interaction, the teachers can easily assess the learning outcomes. The mentors keep a record of overall performance of their mentees. The students who are found to be slow in

learning are helped by the concerned teacher to overcome the barriers to learning by recommending foundation courses and other resources.

The software to be used for the online examination has a provision to analyse the level of the students based on the difficulty levels of the questions. Questions are presented in an adaptive manner; this enables the examiner to assess the performance of students in a realistic manner.

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

(i) For students learning the lectures are assisted by multimedia.

(ii) MOOCs, podcasts, flip class, documentaries, virtual museums, popular science magazines.

(iii) Digital resource sharing and online resources are made available for students learning. Lectures through video conferencing and from open access sources enhance student's learning outcome.

(iv) With the introduction of new examination system that is predominantly objective questions based, exams will be conducted online. OMR machine has been installed to make the evaluation process of OMR-based answer sheets, quicker.

ESTABLISHMENT OF SC/ ST AND MINORITIES CELL

The Central University of Punjab is committed to provide an environment that promotes diversity and respects everyone regardless of colour, religious belief or cultures. While maintaining diversity of all kinds, it also commits to ensuring protection of everyone including minorities and acting as per the provisions of constitution of India in such matters. In order to create a living and working environment where all students feel safe and respected, there is a need to establish an SC, ST and Minorities Cell with the following objectives:

- To counsel and guide SC, ST and Minority students studying at CUPB on various issues and help them to manage academic and personal demands of a university life effectively.
- To ensure provisions for an environment where all such students feel safe and secure
- To provide prompt counselling for any emotional emergencies arising on account of any events at the campus.
- To provide a mechanism to redress the grievances of SC, ST and minority students, if any
- To ensure protection and reservation as provided in the constitution of India
- To arrange for special opportunities to enhance the career growth of these students such as through Competitive Examinations Cell

The SC/ ST and Minorities Cell will provide comprehensive preventive and proactive services to all such students enrolled for various academic programmes in the university. The goal of the cell would be to enhance the psychological wellbeing of SC/ ST and Minority students at CUPB so they can take full advantage of the educational opportunities at the University.

The composition of the SC/ ST and Minorities Cell will be as follows:
- Prof. A. K. Dhawan
- Dr. Yogalaxmimi, Assistant Professor
- Dr. Dhanya Subramanium, Assistant Professor
- Ms. Shweta Arora, Deputy Registrar

The guidelines of UGC will be adapted by CUPB in word and letter. The guidelines have been attached as Annexure.

Annexure 2.2

Ref No: CUPB/Notification/15/15-EC/15   Dated: 28/07/2015

<u>**NOTIFICATION-15**</u>

In pursuance to Item No. EC:15:15:39 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council is hereby conveyed for constitution of the **Students Financial Assistance Fund and Education Loan Facility Committee** comprising of the members as detailed hereunder:

1. Dean Academic Affairs,   **Chairperson**
2. Prof. R. C. Sharma, Professor
3. Prof. R. G. Saini, Invited Professor
4. Registrar
5. Mr. Rajinder Singh Smagh, Liaison Officer   **Convener**

The committee shall recommend the cases of the deserving students for financial Assistance with the objective that no deserving student, as far as possible, is denied opportunity of studying at University merely due to her/his poverty.

The Detailed guidelines of Students Financial Assistance Fund and Education Loan Facility are enclosed for ready reference.

STUDENTS' FINANCIAL ASSISTANCE FUND AND EDUCATION LOAN FACILITY

1. **Title** – These rules shall be called "The Students' Financial Assistance Fund"

2. **Definition** – The following terms shall have the meaning as under:

   Fund means the Student Welfare Fund.
   Committee means the Committee constituted to administer the Fund.
   Vice Chancellor means the Vice Chancellor of Central University of Punjab, Bathinda.
   Student means the students admitted to pursue any course in Central University of Punjab, Bathinda.

3. **Aims and Objectives** – Students Financial Assistance Fund has been created with the objective that no deserving student, as far as possible, is denied opportunity of studying at University merely due to her/his poverty.

4. **Administration of Fund** – The Fund shall be administered, managed and monitored by a committee which shall include a nominee of student community. The tenure of the Committee shall be two year.

5. **Sources of Income** – The following shall be the income sources of the Fund:

   - The existing amount in the Student Aid Fund will be put in a corpse fund and interest used under this scheme
   - Library fines collected from students/faculty.
   - Student Aid Fund collected from suppliers/contractors.
   - Donations
   - Any others as deemed fit to be included by Vice Chancellor, CUPB

6. **Eligibility for Grant** – The deserving students with weak economic background will be eligible for grant out of fund subject to the as below conditions. However, the amount of grant or loan will depend upon parents' income and family size etc.

   a) The performance in the qualifying examination should be up to the mark.
   b) The attendance of the student at Central university of Punjab, Bathinda should be at least 75% and also academic performance at least "good standing".
   c) She/he should have completed the previous semester successfully.
   d) There should be no disciplinary action or proceedings against the student.

7. **Purpose for which grant can be granted** – The students can avail of the grant for:-

    (a) Pursuing studies: payment of tuition fee/ payment of registration fee
    (b) Medical treatment: in case of serious illness demanding hospitalization.
    (c) Attending national international meets, conferences, seminars towards payment of registration fees, 2nd class Train or Bus travel with in India or in specific cases even travel abroad (partial assistance)
    (d) Any other with the approval of competent authority**.**

8. **Quantum of Grant –The** amount of the grant shall be up to Rs.40, 000/- depending upon the nature and seriousness of situation.

9. **Eligibility for Loan** – The most deserving students shall be eligible for interest-free loan out of Fund:-

    a) She/he should not have availed of the facility of grant out of the Fund.
    b) She/he shall submit the guarantee for availing loan out of fund.
    c) The other conditions as per Rule 6 (a) to (d) shall also be applicable.

10. **Quantum of loan** – The student shall be eligible for loan up to 75% of the total fees payable to Central University of Punjab, Bathinda for the whole program.

11. **Recovery** – The student who wishes to avail of loan under the Financial Assistance Scheme shall execute an affidavit accompanied by Indemnity Bond duly notarized and registered by Notary Public that he/she shall pay back the loan amount before the award of Degree/ DMC.

12. **Procedure to process grant/loan** – The student shall submit her/his application through her/his supervisor duly recommended by the COC/DAA.

13. **Maintenance of Accounts** – Cash book, Receipt Book maintained by an official designated by the Vice Chancellor for the purpose and posting shall be done every month in respect of receipt and payment. For this purpose, a student who has availed facility should offer the services for maintenance and completion of record.

14. **Detailed Accounts** – Detailed accounts of the fund – receipts and expenditure – shall be published annually and shall be available for perusal in the University Library. Contingent expenditure for the maintenance of fund account shall be met from the Fund.

15. **Audit of Accounts** – Annual accounts shall be audited from the auditors appointed by the committee with the consent of the Vice Chancellor. However, half yearly un-audited accounts shall be put up by the Committee to the Vice Chancellor.

16. **Amendment of Constitution** – The amendment to the Constitution shall be made by committee in consultation with the Vice Chancellor.

17. **Investment of Funds** – The committee shall decide how the best returns from the funds can be realized i.e. on long term deposits or depending upon the situation.

18. **Write off the Non-Recoverable Loan** – Sincere efforts shall be made to recover the amount from the loaned. In case, it becomes impossible to recover the amount after exhausting all the remedies, the Vice Chancellor shall be competent to write off the irrecoverable amount of loan on the recommendations of the committee.

19. **Power of Interpretation** – In case of any dispute regarding interpretation of any clause of the fund, the decision of the committee in consultation with the Vice Chancellor shall be final and binding.

EDUCATION LOAN FACILITY TO STUDENTS

Central University of Punjab shall make all efforts to ensure that the financial needs of its students are met. For the present it has tied up with four nationalized banks viz Punjab National Bank, Oriental bank of Commerce, Bank of India and State Bank of India for providing Education loan facility to students. All the Banks shall be having stalls in the premises of the University for the Guidance of students and grant of education loan.

Annexure 2.3

Ref No: CUPB/Notification/15/15-EC/21   Dated:04/08/2015

NOTIFICATION-21

In pursuance to Item No. EC:15:15:36 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council is hereby conveyed for constitution of the **Student Counselling Cell** comprising of the members as detailed hereunder:

1.	Prof. S.K. Bawa, Professor	**Chairperson**
2.	Dr. Sushil Kumari Gupta, OSD Administration	
3.	Dr. Anjana Munshi , Associate Professor	
4.	Dr. Tarun Arora, Associate Professor	
5.	Ms. Shweta Arora, Deputy Registrar	**Convener**

The objective of the cell will be:
- To counsel and guide CUPB students on various issues and help them to manage academic and personal demands of a university life effectively.
- To help students of all beliefs and identities who may react to such events with feelings that include anger, hurt, confusion, fear, helplessness, loneliness, and hopelessness.
- To counsel the students requesting a withdrawal from a specific academic programme for non-academic reasons.
- To provide prompt counseling for mental health emergencies arising on account of highly charged events at the campus.

The Student Counselling Cell shall provide comprehensive preventive and clinical services to students enrolled for various academic programmes in the university. The goal of the cell would be to enhance the psychological wellbeing of CUPB students so they can take full advantage of the educational opportunities at the University. Some of the presentations that the Counselling Centre will offer include academic success skill, conflict resolution, dealing with difficult situations, stress management techniques and time management. All student contacts and information obtained in the course of counselling will be confidential.

Annexure 2.4

ESTABLISHMENT OF COMPETITIVE EXAMINATION CELL

Introduction

There is an imperative need for the students to develop a competitive spirit and excel in their studies. In addition to the university degree, the students ought to equip themselves with the basic requisite skills for the competitive examinations for better job opportunities. Central University of Punjab started Competitive Examination Cell (CEC) with aim to provide right direction to the talented youth and atmosphere of competition, learning and succeeding. The university's competitive examination cell continuously strives to guide the students in choosing their careers. Due to longer research hours and the time crunches felt by the students, the university has arranged coaching classes for the students aspiring to compete for various competitive examinations. Classes are conducted in the evening after lectures to enable as many students as possible to avail of this facility. Teachers from different Centres of the university coach the students.

Objectives
- To provide intensive subject specific coaching for UGC/CSIR-NET, ICMR, DBT, GATE, GPAT, Civil services examination, etc.;
- To build positive state of mind and self-confidence among the students;
- To encourage SC/ST/OBC and women candidates to appear in competitive examinations.

Target group

Primarily the students of Central University of Punjab, but old students of CUPB and outsiders may be admitted, if seats are available.

- May include old students of CUPB (with tuition fee).
- May include outsiders (with tuition fee)

Fee

For:

CUPB current students	= Rs 200 per month
CUPB old students	= Rs 500 per month
Others	= Rs 1000 per month

Honorarium for teaching faculty

The teaching faculty may be paid a token honorarium out of fee collected, after deducting 10% of the fee as establishment charges for CUPB

DETAILS OF M.PHIL. PROJECTS COMPLETED

I. Academic session 2009-10

M.Phil.-Ph.D. Integrated Programme in Biosciences

S.No.	Name/ Registration	Title	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Pushpendra Singh** CUP/MPh-PhD/SBAS/BIO/ 2009-10/02	To study the effects of insulin and metformin on PC-3 cell line.	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Felix Bast
2.	**Prateek Sharma** CUP/MPh-PhD/SBAS/BIO/ 2009-10/03	Evaluation of breast cancer cell lines (mcf-7 and t47d): influence of insulin and metformin on growth parameters.	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Sanjeev Thakur

M.Phil.-Ph.D. Integrated Programme in Environmental Science and Technology

S.No.	Name/ Registration	Title	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Upma Vaid** CUP/MPh-PhD/SEES/EVS/ 2009-10/01	Adsorption studies for the removal of hexavalent chromium using fly ash of 'waste to energy power plant'	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Sunil Mittal
2.	**Anamika Das** CUP/MPh-PhD/SEES/EVS/ 2009-10/02	Effect natrium fluoride on growth and physiology of *oryza sativa l.*	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Sunil Mittal

3.	**Gajendra Singh Vishwakarama** CUP/MPh-PhD/SEES/EVS/ 2009-10/03	Phototoxic potential of essential oil from leaves of *eucalyptus tereticornis* against rice (*oryza sativa*) and its weeds, *echinochloa crus- galli* and *cyperus rotundus*.	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Sunil Mittal
4.	**Manohari Kumari** CUP/MPh-PhD/SEES/EVS/ 2009-10/04	To study the effect of bt (*bacillus thruingiensis)* cotton cultivation on soil health	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Sunil Mittal

M.Phil.-Ph.D. Integrated Programme in South and Central Asian Studies

S.No.	Name/ Registration	Title	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Gurpreet Kaur** CUP/MPh-PhD/SGR/ SCA/ 2009-10/02	Foreign direct investment is South Asia: trends and prospects	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Sandeep Kaur Bhatia

M.Phil.-Ph.D. Integrated Programme in Comparative Literature

S.No.	Name/ Registration	Title	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Yeshpal** CUP/MPh-PhD/SLLC/CPL/ 2009-10/02	Astudy of UR Anantha Murthy`s novel Samskara in the context of Indian philosophy of charvaka	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Zameerpal Kaur
2.	**Kamaljeet Kaur** CUP/MPh-PhD/SLLC/CPL/ 2009-10/03	Autobiography as a social critique: a study of Madhopuri`s Changiya Rukh and Valmiki`s Joothan	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Amandeep Singh
3.	**Poonam Pahuja**	The binding vine and the	Adm. Guide: Prof.

	CUP/MPh-PhD/SLLC/CPL/ 2009-10/04	bluest eye: a comparative study from a feminist perspective.	Paramjit Singh Ramana Dissertation Coordinator: Dr. Zameerpal Kaur

II. Academic session 2010-11

M.Phil.-Ph.D. Integrated Programme in Biosciences

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Shweta Thakur** CUP/MPh-PhD/SBAS/BIO/ 2010-11/01	Histopathological staging in putative prostate cancer tissues and reviewing literature of correlation between prostate specific antigen levels and prostate cancer incidence	Dr. Sanjeev Thakur
2.	**Mohd. Jahid** CUP/MPh-PhD/SBAS/BIO/ 2010-11/02	Cytotoxic activity of *sargassum wightii* on pc-3 cancer cell-line	Dr. Felix Bast
3.	**Seema. S** CUP/MPh-PhD/SBAS/BIO/ 2010-11/03	Effect of metformin on insulin mediated proliferation of lung cancer cell lines	Dr. Felix Bast
4.	**Ravi Parkash Cholia** CUP/MPh-PhD/SBAS/BIO/ 2010-11/04	To study the dose and time dependent effect of human insulin and metformin on the growth of breast cancer cells	Dr. Sanjeev Thakur
5.	**Rajiv Kumar** CUP/MPh-PhD/SBAS/BIO/ 2010-11/05	Phylogenetic analysis of bacterial diversity of heavy metal affected soil of Bathinda region (South West Punjab)	Dr. Sanjeev Thakur
6.	**Abhimanyu Kumar** CUP/MPh-PhD/SBAS/BIO/ 2010-11/07	To study the effect of insulin on advanced androgen-independent prostate cancer (pc-3) cells	Dr. Sanjeev Thakur
7.	**Bibekananda Sarkar** CUP/MPh-	Microrna target prediction and comparative mirnomics: study in different cancers- special focus on	Dr. Felix Bast

	PhD/SBAS/BIO/ 2010-11/08	breast cancer metastasis	

M.Phil.-Ph.D. Integrated Programme in Environmental Science and Technology

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Gurpreet Kaur** CUP/MPh-PhD/SEES/EVS/ 2010-11/01	Inhibitory effect of essential oil of *ocimum sanctum* l. against pesticide induced genotoxicity	Dr. Sunil Mittal
2.	**Jaskiran Kaur** CUP/MPh-PhD/SEES/EVS/ 2010-11/02	Influence of fertilizer industry wastewater on the germination behavior of barley (*hordeum vulgare*) grains	Dr. Yogalakshmi K. N.
3.	**Nandini Gautam** CUP/MPh-PhD/SEES/EVS /2010-11/04	Exploration of antioxidant and anticancer potential of essential oil of *salvia plebeia rbr.*	Dr. Sunil Mittal
4.	**Leena** CUP/MPh-PhD/SEES/ EVS/ 2010-11/06	Studies in the Synthesis and Arsenic Adsorptive Removal Properties of Cellulose Embedded Zero-Valent Iron Nanoparticle.	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. J. N. Babu
5.	**Shilpa Nag** CUP/MPh-PhD/SEES/EVS/ 2010-11/07	Effect of arsenic on the growth and physiology of *triticum aestivum l.* seedlings	Dr. Sunil Mittal
6.	**Rabindra Kumar** CUP/MPh-PhD/SEES/EVS/ 2010-11/08	Studies in the hydrolysis of cellulose using cellulase in imidazolium based ionic liquid	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. J. N. Babu

M.Phil.-Ph.D. Integrated Programme in Comparative Literature

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Barjinder Singh**	Filming of Fiction: A	Adm. Guide: Prof.

	CUP/MPh-PhD/SLLC/ CPL/ 2010-11/01	Comparative Study of Bapsi Sidhwa`s *Ice-Candy-Man* and 1947: Earth	Paramjit Singh Ramana Dissertation Coordinator: Dr. Zameerpal Kaur
2.	**Shyamkiran Kaur** CUP/MPh-PhD/SLLC/ CPL/ 2010-11/02	Portrayal of Diaspora in English and Vernacular Fiction: A Study of The Namesake and <u>Hashiye</u>	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Amandeep Singh
3.	**Manpreet Kaur** CUP/MPh-PhD/SLLC/ CPL/ 2010-11/03	Orientalising the Postcolonial Nation-State: A Study of The *Inheritance of Loss* and *Half a Life*	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Zameerpal Kaur
4.	**Tania Bansal** CUP/MPh-PhD/SLLC/ CPL/ 2010-11/04	Critiquing Family as an Institution in Difficult Daughters and Unaccustomed Earth	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Rajinder Kumar
5.	**Manpreet Kaur** CUP/MPh-PhD/SLLC/ CPL/ 2010-11/06	Theme of Revolt in the Selected Poems of Pash and Lal Singh Dil	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Rajinder Kumar
6.	**Amandeep Kaur** CUP/MPh-PhD/SLLC/ CPL/ 2010-11/07	Socio-Cultural Concerns in Ajmer Singh Aulakh`s <u>Sat Begane</u> and Gurdial Singh`s Night of the Half Moon	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Amandeep Singh

M.Phil.-Ph.D. Integrated Programme in South and Central Asian Studies

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1.	**Maninderjit Singh** CUP/MPh-	Punjab and the Great Game	Adm. Guide: Prof. Paramjit Singh Ramana

	PhD/SGR/ SCA/2010-11/02		Dissertation Coordinator: Dr. V. J Varghese
2.	**Kovid Kumar** CUP/MPh-PhD/SGR/SCA/ 2010-11/03	Human Trafficking in South Asia: A Case Study of Bathinda District, Punjab	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. V. J Varghese
3.	**Dinesh Bassi** CUP/MPh-PhD/SGR/SCA/ 2010-11/04	Militancy and Media: A case study of Indian Punjab	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. V. J Varghese
4.	**Jaspreet Kaur** CUP/MPh-PhD/SGR/ SCA/2010-11/05	Indo-Kazakhstan Trade: Trends and Prospects in the post-Cold War era	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Sandeep Kaur Bhatia
5.	**Anu Sonia** CUP/MPh-PhD/SGR/ SCA/ 2010-11/06	India's relations with Turkmenistan	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Sandeep Kaur Bhatia
6.	**Rajbir Singh** CUP/MPh-PhD/SGR/SCA/ 2010-11/07	Violation of Human Rights of Women in South Asia: A Case Study of Punjab 1978-1992	Adm. Guide: Prof. Paramjit Singh Ramana Dissertation Coordinator: Dr. Sandeep Kaur Bhatia

III. Academic session 2011-12

M.Phil.-Ph.D. Integrated Programme in Biosciences

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1	**Balraj Singh Gill** CUP/MPh-PhD/SBAS/	Chemical profiling of *ganoderma lucidum* of Bathinda region	Dr. Sanjeev Kumar

	BIO/2011-12/02		
2	**Satej Bhushan** CUP/MPh-PhD/SBAS/ BIO/2011-12/03	DNA Barcoding and Phylogeography of Brown Seaweeds of Coasts of Indian Subcontinent	Dr. Felix Bast
3	**Aijaz Ahmad John** CUP/MPh-PhD/SBAS/ BIO/2011-12/04	Diversity of Green and Red Macroalgae Distributed in Indian west-coast Using Morphometry and DNA Barcoding.	Dr. Felix Bast
4	**Gagan Sharma** CUP/MPh-PhD/SBAS/ BIO/2011-12/05	Development and Characterization of UGMS markers for Genetic Diversity Analysis in *Rhododendron arboreum.*	Adm. Guide: Prof. R.G. Saini Dissertation Coordinator: Dr. Pankaj Bhardwaj
5	**Navgeet** CUP/MPh-PhD/SBAS/ BIO/2011-12/07	Genetic diversity and population analysis of *melia azaderach* l. by RAPD markers in Bathinda and adjoining regions	Adm. Guide: Prof. R.G. Saini Dissertation Coordinator: Dr. Pankaj Bhardwaj
6	**Kamal Ahmad** CUP/MPh-PhD/SBAS/ BIO/2011-12/09	Population analysis of *Melia azedarach* L. by RAPD markers in region of Rajasthan	Adm. Guide: Prof. R.G. Saini Dissertation Coordinator: Dr. Pankaj Bhardwaj

M.Phil.-Ph.D. Integrated Programme in Environmental Science and Technology

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1	**Disha Mishra** CUP/MPh-PhD/SEES/ EVS/2011-12/01	Evaluation of monocrotophos residues in soils of Bathinda, Punjab and its biodegradation through microbial isolates of contaminated soil	Dr. Dhanya M.S.

2	**Rishikesh Singh** CUP/MPh-PhD/SEES/ EVS/2011-12/02	Thermo-chemical decomposition of wheat crop residue in presence of fly-ash and its application for soil amelioration	Adm. Guide: Prof. A.K. Jain Dissertation Coordinator: Dr. J.N. Babu
3	**Gh. Nabi Najar** CUP/MPh-PhD/SEES/ EVS/2011-12/03	Removal of hexavalent chromium from aqueous solution using cone biomass of *'picea smithiana'* as adsorbent	Dr. Sunil Mittal
4	**Archana Kumari Sharma** CUP/MPh-PhD/SEES/ EVS/2011-12/04	Studies in the synthesis and chromium adsorption behaviour of microcrystalline cellulose immobilized zero valent iron nanoparticles (mcc- nzvi)	Adm. Guide: Prof. A.K. Jain Dissertation Coordinator: Dr. J.N. Babu
5	**Amita Bhatti** CUP/MPh-PhD/SEES/ EVS/2011-12/05	Screening and identification of quorum quenching bacteria from activated sludge of sewage treatment plant	Dr. Yogalakshmi K. N.
6	**Annu Sharma** CUP/MPh-PhD/SEES/ EVS/2011-12/10	Cotton seed cake and dairy waste water as substrates for pha producing bacteria	Dr. Dhanya M.S.
7	**Jatinder Singh** CUP/MPh-PhD/SEES/ EVS/ 2011-12 /11	Isolation of indigenous Butachlor (herbicide) degrading bacteria from the agricultural fields of Punjab	Dr. Yogalakshmi K. N.

M.Phil.-Ph.D. Integrated Programme in South and Central Asian Studies

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1	**Mandakini Halder** CUP/MPh-	Women and Land Ownership: A Case Study of Sundarbans in West Bengal	Dr. V.J. Varghese

Sr. No.	Name/ Regd. No.	Title of the dissertation	Supervisor
	PhD/SGR/ SCA/ 2011-12/01		
2	**Mohamad Arif Mir** CUP/MPh-PhD/SGR/SCA/ 2011-12/02	Nuclearisation in South Asia: The China Factor	Dr. Bawa Singh
3	Waseem Ahmad Dar CUP/MPh-PhD/SGR/SCA/ 2011-12/03	Being National or Non National : Sheikh Abdullah`s autobiography and the History of Kashmir	Dr. V.J. Varghese
4	**Swati Raikhy** CUP/MPh-PhD/SGR/SCA/ 2011-12/04	Indian ocean: a life - line for South Asia	Dr. Kiran K. Singh
5	**Mudasir Mubarik** CUP/MPh-PhD/SGR/SCA/ 2011-12/05	Indo-Russian Defence Cooperation, 1991-2011	Adm. Guide: Dr. V. J. Varghese Dissertation Coordinator: Dr. Nishtha Kaushiki
6	**Mairu** CUP/MPh-PhD/SGR/SCA/ 2011-12/06	Women`s Participation in Politics and Local Governance	Dr. Kiran K. Singh
7	**Gurvinder Singh** CUP/MPh-PhD/SGR/SCA/ 2 011-12/07	Problem of Land Acquisition: A Case Study of Gobindpura, District Mansa (Punjab)	Dr. Sandeep Kaur Bhatia
8	**Amandeep Kaur** CUP/MPh-PhD/SGR/SCA/ 2011-12/08	India`s Trade with Six EU Countries: Trends and Patterns	Dr. Sandeep Kaur Bhatia

M.Phil.-Ph.D. Integrated Programme in Comparative Literature

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1	**Chitra** CUP/MPh-PhD/SLLC/	Depiction of Dalit Exploitation and Remonstration: A	Dr. Rajinder Kumar

	CPL/2011-12/01	Comparative Study of *Salaam* and *Muktiparva*	
2	**Vandana Bathla** CUP/MPh-PhD/SLLC/ CPL/2011-12/03	Mythico-Patriarchal Construction of a Woman in Githa Hariharan`s *The Thousand Faces of Night* and Mahasweta Devi`s Stories "Draupadi" and "Breast-giver"	Dr. Alpna Saini
3	**Disha** CUP/MPh-PhD/SLLC/ CPL/2011-12/04	Historico-Mythical Analysis of Girish Karnad`s Tughlaq and Swarajbir`s Krishna	Dr. Alpna Saini
4	**Rajpal Kaur** CUP/MPh-PhD/SLLC/ CPL/2011-12/05	Search for Female Self: A Comparative Study of Jasmine and That Long Silence	Dr. Amandeep Singh
5	**Sheenam** CUP/MPh-PhD/SLLC/ CPL/2011-12/06	critiquing anthropocentrism in Amitav Ghosh`s *the Hungry Tide* and J.M. Coetzee`s D*isgrace*	Dr. Amandeep Singh
6	**Pardeep Kaur** CUP/MPh-PhD/SLLC/ CPL/2011-12/07	Revisiting History and the Question of Identity: A Comparative Study of *The Shadow Lines* and *Tamas*	Dr. Rajinder Kumar
7	**Khushvinder Kaur Romana** CUP/MPh-PhD/SLLC/ CPL/2011-12/09	Struggle for identity: comparative study of cry, T*he Peacock* and *Home*	Dr. Zameerpal Kaur
8	**Kiranpal Kaur** CUP/MPh-PhD/SLLC/ CPL/2011-12/10	Socio-Political Protest: A Comparative Study of Selected Plays (*Har ik Nu Jion da Haq Chahidaye* and *Savere di Lo*) of Gursharan Singh and Selected Poems of Sant Ram Udasi	Dr. Zameerpal Kaur

M.Phil.-Ph.D. Integrated Programme in Development Economics

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1	**Neha Jindal** CUP/MPh-PhD/SSS/ CSS/2011-12/01	Growing Urbanization and Economic Development in India: The Role of Middle Class	Dr. Naresh Singla
2	**Bilal Ahmad Naikoo** CUP/MPh-PhD/SSS/CSS/20 11-12/02	Monitoring of Mahatma Gandhi National Rural Employment guarantee scheme in Kulgam district of Jammu and Kashmir.	Dr. A.S. Kahlon
3	**Munish Kumar** CUP/MPh-PhD/SSS/CSS/20 11-12/04	Inter-state Disparities and Income Convergence in India: A Study of Pre and Post Reform	Dr. Naresh Singla
4	**Amandeep Kaur** CUP/MPh-PhD/SSS/CSS/20 11-12/06	Socio-economic impact of Bt cotton in Bathinda district of Punjab	Dr. A. S. Kahlon

IV. Academic session 2012-13

M.Pharm.-Ph.D. Integrated Programme in Pharmaceutical Sciences (Medicinal Chemistry)

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1	**Arvind Negi** CUP/MPhm-PhD/SBAS/ CPS/2011-12/01	Imidazole Based Compounds: Synthesis and *In Vitro* Anticancer Screening	Dr. Raj Kumar
2	**Jimi Marin Alex** CUP/MPhm-PhD/SBAS/ CPS/2011-12/02	Anticancer potential of new *n*-acetyl pyrazoline derivatives of 1, 3-diaryl/heteroaryl propenes: synthesis and evaluation	Dr. Raj Kumar

3	**Ramit Singla** CUP/MPhm-PhD/SBAS/ CPS/2011-12/03	Phytochemcal investigation and Biological Evaluation of Secondary Metabolites from *Asparagus racemosus L* Through *In-vitro* and *In-silico* Approach	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Vikas Jaitak
4	**Monika Chauhan** CUP/MPhm-PhD/SBAS/ CPS/2011-12/04	Synthesis and Evaluation of Novel Heterocyclics as Anticancer Agents	Dr. Raj Kumar
5	**Deependra Kumar** CUP/MPhm-PhD/SBAS/ CPS/2011-12/06	Synthesis and Biochemical Screening of Novel Non-Purine Based Xanthine Oxidase Inhibitors	Dr. Raj Kumar
6	**Vinay Kumar Gupta** CUP/MPhm-PhD/SBAS/ CPS/ 2011-12/07	*In-Vitro* Assay Guided Fractionation of Crude Root Extracts of *Potentilla atrosanguinea* Lodd. and *In-Silico* Study of Polyphenolic Compounds with MRP-1 and GSTP1-1 receptors in Cancer Chemotherapy	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Vikas Jaitak
7	**Prakriti Monga** CUP/MPhm-PhD/SBAS/ CPS/2011-12/08	Phytochemical investigation, *In vitro* Anti-mutagenic activity of *Potentilla fulgens* Lodd. and In-silico Study of Flavonoids with CDK-2, CDK-6 receptors	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Vikas Jaitak
8	**Yashika Bhalla** CUP/MPhm-PhD/SBAS/ CPS/2011-12/09	Integrated *in-vitro* antioxidant and *in-silico* anti-apoptotic study of essential oil components of Aconitum heterophyllum Wall	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Vikas Jaitak

LL.M. - Ph.D. Integrated Programme in Environmental Law

Sr. No.	Name/ Regd. No.	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
2.	**Ramandeep Singh Sidhu** CUP/LLM-PhD/SLSG/ CEL/2011-12/02	Impact of Laws, Awareness and Local Participation in Prevention and Control of Crop Residue Burning: A Case Study of Bathinda District	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Deepak Kumar Chauhan
3.	**Jithin V. J.** CUP/LLM-PhD/SLSG/ CEL/2011-12/03	Groundwater Conservation: Response of Legal and Policy Framework in India and Agenda of Reforms	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Deepak Kumar Chauhan
4.	**Abhishek Kumar** CUP/LLM-PhD/SLSG/ CEL/2011-12/04	A human rights approach to environment protection in India	Adm. Guide: Prof. P. Ramarao Dissertation Coordinator: Dr. Puneet Pathak

M.Sc. in Biosciences

S.No	Name Registration Number	Title of the dissertation	Administrative Guide/ Dissertation Coordinator/ Supervisor
1	**Ashish Kumar Pandey** CUP/MSc/SBAS/BIO/2011-12/01	Genotoxicity Detection in Ground Water of Bathinda District of Punjab	Dr. Felix Bast
2	**Simranjeet Kaur** CUP/MSc/SBAS/BIO/2011-12/02	Preconditioning of Chickpea Seedlings (*Cicer arietinum* L.) With Non- Lethal Water Stress to Improve Chilling Tolerance.	Dr. Sanjeev Thakur
4	**Sukhbir Kaur** CUP/MSc/SBAS/BIO/2011-12/04	Cellular Inflammatory Responses Activated by Pollen Extracts in A549 Human Lung Carcinoma Cells	Dr. Monisha Dhiman

5	**Shashi Shekhar Anand** CUP/MSc/SBAS/BIO/2011-12/05	Genetic diversity and population structure analysis of *rhododendron arboreum l.* by rapd markers in western Himalyan region	Dr. Pankaj Bhardwaj
6	**Nirmaljot Kaur** CUP/MSc/SBAS/BIO/2011-12/06	An *In Vitro* Study of Pollen Extract- Induced Oxidative Stress in A549 Human Lung Carcinoma Cells	Dr. Monisha Dhiman
7	**Manbir Kaur** CUP/MSc/SBAS/BIO/2011-12/07	An *In Vitro* Study on Oxidative Stress Induced Superoxide Dismutase (SOD) Activity in Human Glioblastoma (U-87 MG) Cells	Dr. Anil K. Mantha

POLICY FOR RESEARCH AWARDS AND INCENTIVES FOR STATE AND NATIONAL LEVEL RECOGNITION IN RESEARCH

The Central University of Punjab is amongst the fastest growing newly established universities of the country. It has attained a distinguished position amongst all the central universities and IITs established in 2008-2009. The University ranks number one in Citation index and h-index as per Scopus. The development and expansion of the university since its inception has been steadfast. Our vision is to be one of the country's finest universities. The University provides a creative atmosphere in which higher studies and research thrive amongst the students and the faculty.

The University has decided to introduce Research Awards for innovative faculty members who produce outstanding research achievements. The purpose of these awards is to promote research at CUPB, create a research atmosphere and give recognition to outstanding performance of individual researchers. Research Award will be conferred in different disciplines in which research is being carried out at CUPB. The award will be given to faculty for their research productivity and impact during the last academic year.

Eligibility

All faculty members of CUPB are eligible to receive the award. The Criteria will be:

1. Ability to secure funding to support research, i.e. Research Grants from various Govt. funding agencies to the tune of:
    a. Grant over 1 crore (10 points)
    b. Grant from 50 lacs to 1 crore (8 points)
    c. Grant from 30 to 50 lacs (6 points)
    d. Grants less than 30 lacs (4 points)

2. Number of publications in peer reviewed journals including impact factor
    a. Impact factor more than 10 (10 points)
    b. Impact between 5-10 (8 points)
    c. Impact between 3-5 (6 points)
    d. Impact less than 3 (Only for social sciences, humanities and education) (4 points)

3. Patents
   National or International Patent, which has been granted, may be considered as equivalent to publication with impact factor 10. (10 points)

4. Grants from National Agencies obtained for the development and infrastructure building of CUPB will also be considered.

The Award

- Faculty members securing grant of Rs. 1 crore or above (all investigators of the project) will be given a certificate of commendation by the Vice Chancellor and a cash award of Rs. 20,000 to be shared equally by investigators.
- For each paper above impact factor 10 each author will be given a certificate of commendation by the Vice Chancellor and the authors will be given cash award of Rs. 20,000 to be shared equally by all authors.
- If the cumulative impact factor of papers published by a Faculty member exceeds 15 in a calendar year, he/she will be given a commendation certificate and cash award of Rs. 20,000/-
- If a faculty member gets 5 commendation certificates, he/she will be included in the Roll of Honour of the University and honoured at the time of next convocation.
- In addition to above, based on the scoring system as give above for each Criterion, "CUPB Outstanding Research Award" will be declared in different disciplines.

Further, those faculty members who get National and International recognition will be given incentives as below:

1. A cash award of Rs. 5,000 for an award at state level.
2. A cash award of Rs. 10,000 for an award at National Level
3. A cash award of Rs. 20,000 for an award at International level.

Note: The recognition must be from a Government Agency. The recognition will include awards by national bodies for example S.S Bhatnagar Award; fellowships of National Academies and awards by recognized Professional National Level Societies.

By the end of each academic year the office of the Dean Academic Affairs will notify the faculty members and inform them of the requirements for submission of application in order to be considered for the award. The applicants will have to give a description of his/her research or creative accomplishment during the previous academic year, including the evidence of external peer recognition of the work and financial assistance from various Govt. agencies. The award will be given once each academic year.

Annexure 2.7

AUTOMATED RESULT PROCESSING SYSTEM

To speed up the work of result declaration and to increase the accuracy and efficiency of examination system, the examination cell has developed **in-house** software for result processing and printing of tabulation sheets and marks-sheets. This system has been successfully implemented from academic session 2014-15.

Major features of the system

1. Once the awards are fed in the system, **coloured** tabulation sheets and DMCs get ready immediately with 100% accuracy
2. The software also incorporates the security features like Q-R, BAR code and specialized seal of examination cell.
3. For increased security, both tabulation sheets and DMCs bear coloured photo- graphs of the students.
4. The system has been successful in saving the cost, man-power and valuable time of the students.
5. As the system has been developed in-house by examination cell, therefore the updating and maintenance is always fast and easy.

(A) Examination Web Portal

To facilitate students, staff and employers, the examination cell hosted its separate web portal in 2015 which can be accessed from anywhere through internet.

Main features of the web-portal

1. Beginning with the session 2014-15, all the examination related rules, regulations and data has been uploaded on this web portal.
2. A student can view all DMCs and internal assessment etc. (From anywhere through internet) by just entering student ID and date of birth.
3. As data is online, marks-sheets can be verified online for its originality.
4. The web-portal is linked with main website and is available in "**Student Corner"** section of main website , however it can also be accessed from address *http://14.139.242.5:83*
5. The data on this web portal is very secure at it is in-house developed by the examination cell and is hosted on the own server of examination cell.

(B) High Quality secure degree certificates

The university has prepared high quality degree certificates for all the eligible students with the following features: Non tear-able, termite proof, water proof, rodent proof, temperature proof paper with 100 years life; Micro text security feature; Ultraviolet light text security feature; Correlation patch security feature; Barcode security feature; QR code security feature; Background variable data vertical and Horizontal; Water mark; Clear ink logo and text; Clear ink with VD.

CRITERION-III

RESEARCH, CONSULTANCY AND EXTENSION

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

3.1   Promotion of Research

The Central University of Punjab makes dedicated efforts towards achieving excellence in research.   Indeed, research in front line areas of sciences, humanities, languages and law is a core activity of CUPB and notable achievements have been made during the period 2009 to 2015.

In tune with university's vision of nurturing high quality research, every faculty member is encouraged to engage in research extensively. CUPB provides strong support to the faculty at every stage of planning and execution of research projects: writing proposals, obtaining grants, carrying out the work plan, reporting and disseminating the results. Administrative structures and procedures that reflect this philosophy are in place and changes to these are made to enhance their effectiveness, as and when necessary.

The CUPB's policies clearly emphasize the rewards of high quality research in the recruitments and subsequent promotions, as also, annual awards for publications of high impact and research grants obtained from external agencies. The emphasis on these criteria, along with a culture of respect and encouragement for research achievements by the faculty has made it core strength of CUPB.

CUPB is on a focused path. It has a committed and globally competitive faculty with diverse backgrounds and at a very young stage, has earned first rank among the 13 newly established central universities on the basis of Relative *h-index*, Research Paper Citations and Impact Points (*Figure 3.1)*.

Relative *h*-index of New Central Universities (www.scopus.com)
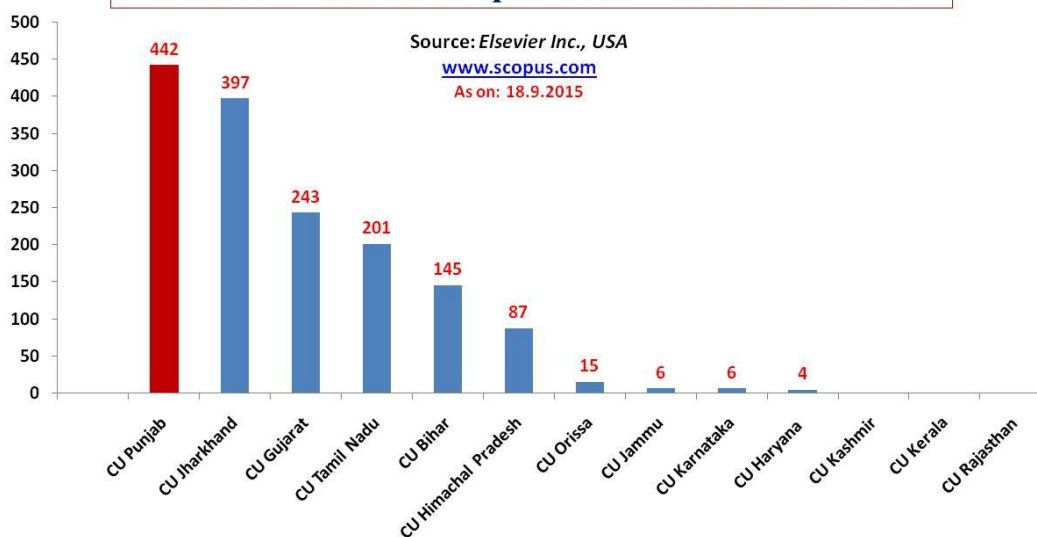
Figure 3.1: *h*-index and citations of newly established central universities

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

CUPB has a well-structured system to promote and monitor high quality research.

(i) A university level Research Advisory Committee with external experts sets the guidelines of CUPB's research policies.

(ii) An internal Research Committee looks after the implementation of these policies and lays general guidelines.

(iii) In addition, each research project has a committee to advice on its implementation.

(iv) Also, there are advisory committees for each student.

For quick resolution of problematic issues, the Vice Chancellor himself interacts with research teams in each centre regularly.

The overall objective of these committees is to address research activities in the following ways:

- To monitor and evaluate the progress of research being carried out by faculty and students of different centres.

- To address the issues of facilities and removing the bottlenecks, if any.

- To monitor the progress of externally funded projects and facilitate their smooth and successful implementation.

- To ensure compliance of regulatory requirements of externally funded projects and in house research projects.

- Pre-assessment of research projects to be submitted to different funding agencies.

- Advice on acceptance of research grants provided by private agencies.

Composition of these committees is as below:

Research Advisory Committee:

- Prof. A. K. Dhawan, Professor, Centre for Plant Sciences, CUPB-Chairperson.

- Prof. Dr. N. Sathyamurthy, Director, Indian Institute of Sciences Education and Research, Mohali.

- Prof. Veer Singh, Ex. Director, Chandigarh Judicial Academy, Chandigarh.

- Prof. Dr. R. K. Tuli, Former Director, NABI, Mohali (Biological Sciences).

- Prof. V. K. Kapoor, Former Chairman UIPS, Panjab University Chandigarh (Pharmaceutical Sciences)/ Director Research, GHG Khalsa College, Raikot.

- Prof. Rajesh Gill, Panjab University, Chandigarh (Social Sciences).

- Prof. Sohanbir Singh, Guru Nanak Dev University, Amritsar (Literature).

- Prof. Nandita Shukla Singh, Panjab University, Chandigarh (Education).

- Prof. K N. Pathak, former Vice Chancellor, Panjab University Chandigarh (Physical Sciences).

- Prof. Kesar Singh Kesar, Panjab University, Chandigarh.

- Ms. Shweta Arora, Deputy Registrar, CUPB (Secretary).

Internal Research Committees

1. Prof. R. G. Saini, Invited Professor, Centre for Biochemistry and Microbial Sciences.

2. Prof. A. K. Jain, Professor Centre for Computer Science and Technology.

3. Prof. P. Ramarao, Professor, Centre for Pharmaceutical Sciences and Natural Products.

4. Prof. A. K. Dhawan, Professor, Centre for Plant Sciences.

5. Dr. Anjana Munshi, Associate Professor, Centre for Human Genetics and Molecular Medicine.

6.   Dr. Zameerpal Kaur, Assistant Professor, Centre for Comparative Literature.

7.   Dr. Anil Kumar Mantha, Assistant Professor, Centre for Animal Sciences.

Research Committees for the externally funded projects

1.   Principal investigator of the project.

2.   One senior faculty member of the centre.

3.   Dean Academic Affairs.

Research Committee for the student

1.   Coordinator of Centre.

2.   Supervisor of the student.

3.   One Professor of the centre.

4.   External expert (in case of final evaluation).

Recommendations of Committees and their impacts

Deliberations of research committees have made a significant impact on the university's research. A policy document on guidelines for research projects has been approved by Academic Council and Executive Council of CUPB. Other impacts of efforts of these committees are listed as below:

- Introduction of policy to grant research seed money.
- Improved coordination and cooperation between centres and schools.
- Guidelines for externally funded projects.
- Autonomy to PIs with regard to their projects.
- Proposal for Centre of Excellence.
- Research proposals for external funding.
- Retention of the facilities after completion of the R and D project.
- Timely transmission of UCs.

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

CUPB does not have affiliated colleges. However, the university has a clear policy to encourage interaction among research workers and offers infrastructural facilities including equipment use and access to library to any researcher from colleges of other universities of the region. Following colleges/institutions are availing research facilities from the university:

- GNDU, Amritsar: DNA sequencing facility.
- Moga College of Pharmacy: Cell culture facility.
- Baba Farid Group of Institutions: Project revisions.
- Chemistry/Pharmacy, PU Chandigarh: Facilities of concerned centre

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

CUPB has, in place many proactive mechanisms to facilitate research. A policy document on "Research guidelines for externally funded projects" duly approved by Academic Council and Executive Council gives a lot of autonomy to PIs. (***Annexure 3.1***)

Advancing funds for sanctioned projects

- As soon as the funds are received, the projects are put into operation.
- In the event of delays in receipt of grants for ongoing projects, limited overdrafts are allowed for urgent expenses.
- In case of late receipt of grants, salaries of research fellows are paid as advance which is adjusted on receipt of funds.
- PIs get advance up to Rs 15,000 for project purchase.

Providing seed money

As per the decision of Executive Council, research seed money of up to Rs 3.0 lacs (sciences) or 1.5 lacs (humanities) is provided to newly joined faculty to begin their research. For availing research seed money, the faculty members submit a research project. This helps newly appointed faculty to begin their research activities and in the meantime, they prepare proposals for research grants from external sponsoring agencies.

The research seed money can be used for lab facilities, small equipment and other technical support. University also encourages faculty to participate in national/international conferences and provides money for registering as a member of professional societies.

University funded research project

The faculty members, in consultation with their CoC, prepare proposals for purchase of equipment and their other research needs. These are purchased as per CUPB's policies.

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

- Simple and efficient purchase procedures have been a priority of CUPB

- A purchase committee negotiates purchase of instruments/equipment with the manufacturers/dealers so as to reduce the cost of the instrument to the maximum extent possible.

- For conducting research, funds are released under contingency, travel, non-consumables and consumables etc.

Autonomy to the principal investigators/coordinators for utilizing overhead charges

An important objective of CUPB is to make principal investigators fully independent as also, accountable for their projects. Thus complete autonomy is provided to the principal investigators to carry out their research projects.

- CUPB has a well-defined policy for the proper implementation of the externally funded projects.

- Neither centres nor the administration impose any restriction for procuring specific brand/source for equipment, chemicals, glass wares, analysis, etc. as long as General Financial Rules for the Govt. of India are followed.

- Principal investigators can avail duty leave to do his/her research related work and to present research work in conferences /seminars/workshops.

- The overhead charges of projects are pooled together to augment the research facilities which are common for all centres such as internet facility, library, electricity, central instrumentation laboratory, infrastructure, etc.

- The contingency fund can be utilized by PI for membership of professional societies, publication cost, purchase of books through

library, renovation of laboratories and purchase of minor equipment required for execution of the project.

- In addition, the travel funds of the research projects may also be used by the PI for partial travel support for attending national and international conferences/workshops/seminars as per the guidelines of funding agencies.

- Executive Council of CUPB has approved that 50% of the overhead charges can be used for lab development of PI.

Timely release of grants

The grants are released quickly with least possible procedures.

Timely auditing

- Account branch helps in maintenance of project accounts, and all financial transactions are organized to ensure proper records and preparation of utilization certificate at the end of the every financial year.

- A separate account is opened for each grant.

- The university also has an internal audit officer for auditing of revenue income and maintenance of the expenditure of grant funds.

Submission of utilization certificate to the funding agencies

The audited utilization certificates for submission to the funding agencies are obtained from account office at end of the every financial year and timely submission is ensured by the grants section of the university.

3.1.4 How is interdisciplinary research promoted?

The university promotes interdisciplinary research by encouraging the faculty to formulate proposals from among its different centres/faculties. Further, it encourages the students to take up PG/M.Phil. /Ph.D. research in interdisciplinary research topics. Several faculty members coordinate with faculty from other centres for student research work *Table 3.1*. Recently, the Centre for Environmental Science and Technology developed a major research proposal for UGC funding on "Health issues in Malwa region of Punjab" in collaboration with Centre for Human Genetics and Molecular Medicine and Centre for Chemical Sciences. A very unique example of interdisciplinary collaboration is a recent proposal on "Designing a model to

mitigate impact of climate change on urban communities using a developing university township in periurban Bathinda, Punjab, India, as focal point". The project submitted to IDRC, Canada involves the centres of Environmental Science and Technology, Centre for Plant Sciences, Centre for Biochemistry and Microbial Sciences, Centre for Education and Centre for Economic Studies.

Table 3.1 Research Collaboration between/among different centres /schools of the university and with national/international institutes /industries

S.No.	Faculty	Different Centres/ National/ International	Aspect of Collaboration
1.	Prof. R. K. Kohli (Vice Chancellor), Professor, Centre for EVST	Panjab University, Chandigarh	MoEF project
2.	Prof. R. K. Kohli (Vice Chancellor), Professor, Centre for EVST	Dr. Rakesh Monocha, USDA	Research project
3.	Dr. Felix Bast Centre for Plant Sciences	Dr. Vikas Jaitak Centre for Pharmaceutical Sciences and Natural Products	MoES project
4.	Dr. Felix Bast Centre for Plant Sciences	Dr. Zameerpal Kaur, Centre for Comparative Literature	ICSSR-Research project
5.	Dr. Bawa Singh Centre for South and Central Asian Studies	Dr. Sandeep Kaur, Centre for Economic Studies	ICSSR, Research project
6.	Dr. Anil Mantha Centre for Animal Sciences	Prof. Perez-Polo JR, University of Texas Medical Branch, Galveston, TX, USA	Research collaboration
7.	Dr. Felix Bast Centre for Plant Sciences	CDRI, Lucknow	MoES Project
8.	Dr. Raj Kumar, Centre for Pharmaceutical Sciences and Natural Products	Dr. U. C. Banerjee NIPER, Mohali	Research collaboration
9.	Dr. Vikas Jaitak Centre for Pharmaceutical Sciences and Natural Products	Dr. V. K. Kaul IHBT, Palampur	Research collaboration
		Dr. Saroj Arora GNDU, Amritsar	Research collaboration
		Dr. Iris Stappen University of Vienna, Austria	Research collaboration
		Dr. Nurhayat Tabanca University of Mississippi, University, USA	Research collaboration

		Dr. Leopold Jirovetz University of Vienna, Austria	Research collaboration
10.	Dr. Sandeep Singh Centre for Human Genetics and Molecular Medicine	Prof. Madhu Khullar, PGI, Chandigarh and Dr. Raj Kumar, CUPB	Research collaboration

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

The university has organized various workshops / training programmes/ sensitization programmes/special lectures over the years to motivate and inculcate research aptitude amongst its staff and students. These programmes include research methodology workshops, training programs for instrumentation and software skill, and sensitization programmes for current global trends in research. Many of these programmes involved more than one centre and some were at the university level. The list of various events and distinguished scholars who participated is at *Annexure 3.2*.

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

The university has a well laid policy for invited and visiting professors (*Annexure 3.3)*. Visiting Professors to CUPB are listed in *Section 2.4.5*.

A Visiting Professor is appointed for two years and can make up to five visits each year. The total duration of five visits is limited to 60 days and CUPB pays travel expenses and honorarium.

Whenever a visiting professor visits CUPB, he/she delivers a few lectures. A separate office with computer, internet, telephone etc. is marked for the visitors and interested faculty members set up appointments of 1 to 2 hours slot for discussions. In addition, the Visiting Professors teach a part of some course. The knowledge and acumen of these academicians of international repute helps the faculty and the students in broadening their knowledge vistas. Their suggestions help CUPB researchers develop a deeper understanding of newer technologies and discoveries.

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

CUPB is committed to encourage research activities in its campus. In a short span of time, CUPB has become number one university among newly formed central universities. The university uses 24 to 41% of its budget on research. The percentage of total budget and expenditure reports are mentioned in *Table 3.2*.

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

There are no affiliated colleges.

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

Yes, CUPB encourages PDFs/Research Associateship funded by national agencies to join here. Presently, CUPB has three fellows/associates:

- Dr. Purshotam Sharma, DST, INSPIRE Fellow
- Dr. Somesh Baranwal, Ramalingaswami Fellowship
- Dr. Neetu Purohit, Research Associate (CUPB)

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

Being a new university, no one has availed sabbatical leave for pursuing higher research till now. But the university has adopted UGC policy in this regard.

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

The university has organized workshops as per *Annexure 3.2*.

Table 3.2: Expenditure details - UGC Fund

Sr. No	Item	2009-10	2010-11	2011-12	2012-13	2013-14	Total (Rs. In Lacs)
1	2	3	4	5	6	7	8(3 to 7)
1.	**Recurring Expenditure:**						
I.	Fellowship (UGC Budget)	0.00	8.83	14.49	43.68	72.74	**139.74**
II.	Chemicals , Lab items, Newspaper and Periodicals, Lease Line Rent, Membership Fee	24.27	48.00	60.67	27.29	147.99	**308.22**
	TOTAL-I	**24.27**	**56.83**	**75.16**	**70.97**	**220.73**	**447.96**
2.	**Non-Recurring Expenditure:**						
I.	Books and Journals	96.23	89.04	72.71	88.63	136.13	**482.74**
II.	Laboratory Equipment, Computers and Other equipment	276.40	374.34	275.45	438.80	995.17	**2360.61**
	TOTAL-II	**372.63**	**463.38**	**348.16**	**527.43**	**1131.30**	**2842.90**
	Grand Total (I+II)	**396.90**	**520.21**	**423.32**	**598.40**	**1352.03**	**3290.86**
	Total expenditure as per Utilization Certificate submitted to UGC, New Delhi	971.82	1878.19	1686.36	2474.53	3849.53	10861.90
	% of the total expenditure for research	**40.84%**	**27.70%**	**25.10%**	**24.18%**	**35.12%**	**30.30%**

University Projects Expenditure Details – Item wise

Sr. No	Item	2009-10	2010-11	2011-12	2012-13	2013-14	Total (Rs. In Lacs)
1	2	3	4	5	6	7	8
Recurring Expenditure:-							
I.	Student Fellowship						
	(a) RGNF	0.00	0.00	7.55	9.45	0	17.00
	(b)CSIR	0.00	0.00	1.06	0.61	0	1.67
	(C)ICMR	0.00	0.00	0.00	2.15	5.86	8.01
	(d)UGC - JRF	0.00	0.00	0.00	0.00	2.04	2.04
	(e) Other fellowship of different projects allotted to faculty	0.00	0.00	0.00	0.00	4.83	4.83
II.	Consumable (Chemicals and other sundry items)	0.00	0.00	0.00	18.55	48.13	66.68
TOTAL - I		**0.00**	**0.00**	**8.61**	**30.76**	**60.86**	**100.23**
2.	**Non-Recurring Expenditure:-**						
I.	Equipment and other fixed assets	0	0	0	2.53	26.76	29.31
TOTAL - II		**0**	**0**	**0**	**2.53**	**26.77**	**29.31**
Grand Total (I+II)		**0.00**	**0.00**	**8.61**	**33.29**	**87.63**	**129.54**

3.2   Resource Mobilization for Research

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

Many of the students in CUPB are getting fellowship from UGC, CSIR, ICAR, DBT, Maulana Azad National Fellowship and Rajiv Gandhi Fellowship. Some Ph.D. students are employed in externally funded projects. Apart from these, university allocates funds for doing research in the form of "University Research Fellowships". All research needs of students are met from CUPB budget.

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

The university encourages its faculty to file patents to retain IPR emanating from research programmes. The teachers are given due weightage for the patents filed and are recognized through awards and points for career advancement. The filing of one patent by Dr. Raj Kumar, on "Novel fused heterocycles and method of use and manufacture thereof" is in process.

Punjab State Council for Science and Technology, Chandigarh has established the IPR cell at CUPB. Dr. Jai Prakash from Centre for Physical and Mathematical Sciences has been working as nodal officer to take care of IPR issues of the university. Details of IPR cell are in *Annexure 3.4*.

3.2.3 Provide the details of ongoing research projects of faculty:

CUPB is operating 24 internally funded and 60 externally funded research projects with a total grant of Rs. 13.76 crores. In addition, 7 projects worth Rs. 0.85 crores have been completed recently. Details are provided in *Table 3.3*.

As many as 34 faculty members have joined CUPB in the last four months, so the number of research projects is likely to increase significantly when more grant proposals are submitted.

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

None at present, but CUPB has a consultancy policy in place. University-Industry Forum and University-Industry Council aim at seeking collaboration from industries for sponsored projects.

Table 3.3: List of ongoing projects at CUPB

I. University Awarded Projects

S.No.	Principle Investigator	Name of the Project	Year	Total Grant of Project
1.	Dr. Felix Bast	Sequence-based DNA barcoding, Phylogeography and Conservation Genetics of selected Medicinal Plants from Indian Subcontinent	2014-16	3 lacs
2.	Dr. Anil K. Mantha	Identification of APE1-associated proteome during oxidative stress conditions in Glioblastoma cell lines.	2014-16	3 lacs
3.	Dr. Sanjeev Kumar	Identification and characterization of stress proteins and related Heat Shock Factors; assessment of up/down-regulated stress genes in preconditioned chickpea (*Cicer arietinum* L.*)*	2014-16	3 lacs
4.	Dr. Pankaj Bhardwaj	Differential gene expression in response to ultra-low temperature in *Rhododendron arboreum* by whole genome transcriptome.	2014-16	3 lacs
5.	Dr. Raj Kumar	Design, synthesis and in vitro screening of mono/bis- Arnino quinolines as EGFR inhibitors (RSM Grant).	2014-16	3 lacs
6.	Dr. Vinod Kumar	Design, synthesis and evaluation of combrestatins inspired small molecules as putative tubulin polymerization inhibitors	2014-16	3 lacs
7.	Dr. Vikas Jaitak	Studies on Phyto estrogens as anticancer agents from *Asparagus racemosus* (Shatavari) used in Breast cancer chemotherapy	2014-16	3 lacs
8.	Dr. A. L. Sharma	Preparation, characterization and evaluation of free standing polymeric films for energy storage/conversion device application	2014-16	3 lacs
9.	Dr. Kamlesh Yadav	Thin Film Deposition of Magnetic Oxides using Spray Pyrolysis Technique and their	2014-16	3 lacs

		Characterization		
10.	Dr. Mahesh Kulharia	Development of novel scoring function for prediction of PPI affinity	2014-16	2.91 lacs
11.	Dr Sandeep Singh	Investigation of anticancer potential of *Citrullus colocynthis* extract	2014-16	3 lacs
12.	Dr. Monisha Dhiman	Molecular Mechanisms of Pollen-Mediated Stress in Human Epithelial Lung cell line.	2014-16	3 lacs
13.	Dr. Harish Chandra	Proteasomal mediated regulation of pro-metastasis protein Toca-1 in Breast Cancer	2014-16	3 lacs
14.	Er. Surinder Singh Khurana	Overcoming the WPA2-PSK's "Hole 196 Vulnerability" using RSA-Public Key based Cryptography Scheme	2014-16	1.875 lacs
15.	Dr. Puneeta Pandey	Assessment of Urban heat island formation and its relationship with aerosols in Bathinda district, Punjab	2014-16	3 lacs
16.	Dr. Dhanya M. S.	Investigations on the potential of agro-wastes for the production of ecofriendly products	2014-16	3 lacs
17.	Dr. Yogalakshmi K. N.	Microbial electrolysis cell for integrated landfill leachate treatment and biohydrogen production	2014-16	3 lacs
18.	Dr. Anjana Munshi	The prevalence of Thalassemia and mutation spectrum associated with the disease in Malwa region of Punjab	2014-16	3 lacs
19.	Dr. Preeti Khetarpal	Cytogenetic investigations in couples of primary infertility from Malwa region of Punjab, North-West India	2014-16	3 lacs
20.	Dr. Bawa Singh	Mapping of Maritime Security Concerns for South Asia: Contextualizing Indian Concerns and Strategy.	2014-16	1.5 Lacs
21.	Dr. Nishtha Kaushiki	The Great Rebalancing and Emerging Triangular Dynamics of India, China, and Japan: An Analysis.	2014-16	1.5 Lacs
22.	Dr. Amandeep	Ecological Concerns in	2014-16	1.5 Lacs

	Singh	Contemporary Punjabi Fiction: Native and Diasporic Writing		
23.	Dr. Ramanpreet Kaur	A Comparative Study of Formal And Semantic Structure of Japuji Sahib and Jaap Sahib in Indo-Aryan Perspective	2014-16	1.5 Lacs
24.	Dr. Naresh Singla	Post-Harvest Losses in Fruits and Vegetables in Punjab- The Role of Agro Processing Industries and Retail Chains	2014-16	1.5 Lacs

II. Externally funded projects

S.No.	Principle Investigator	Name of the Project	Funding Agency	Year	Total Grant Sanctioned
1.	Dr. Felix Bast	Genotoxicity detection in drinking water from Malwa region, Punjab	UGC-BSR	2012-14	6 lacs
2.	Dr. Felix Bast	Chemical and phylogenetic diversity of seaweeds in Indian sub-continent	DST	2012-15	35 lacs
3.	Dr. Felix Bast (PI), Dr. Vikas Jaitak (Co-PI)	Phylogenetic selection of target taxa for anti-proliferative and anti-metastatic marine natural products from sea weeds of Indian coast.	Ministry of Earth Sciences	2014-17	40 lacs
4.	Dr. Sanjeev Kumar	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 (*Cicerarietinum* L.)	UGC-BSR	2012-14	6 lacs
5.	Dr. Anil K. Mantha	APEI/Ref-I's dual functions countering beta amyloid induced genotoxicity	Alzheimer's Association, USA	2011-14	54 lacs
6.	Dr. Anil K. Mantha (PI),	Mitochondrial oxidative stress DNA-repair in	DST	2014-17	46.6 lacs

	Dr. Monisha Dhiman (Co-PI)	Alzheimer's disease: AP-endonuclease (APE1/Ref1) as a potential therapeutic target			
7.	Dr. Anil K. Mantha	Apurinic/apyrimidinic endonuclease (APEI) as an anti-cancer therapeutic agent for Glioblastoma therapy	UGC-BSR	2013-15	6 lacs
8.	Dr. Pankaj Bhardwaj	Analyses of genetic variations and structure of Rhododendron, a rare and endangered tree species in Western Himalayas	DST	2013-16	16 lacs
9.	Dr. Pankaj Bhardwaj	Development and characterization of SSR markers providing genome wide coverage and high resolution in *Rhododendron arboretum*	UGC-BSR	2013-15	6 lacs
10.	Dr. Raj Kumar	Design, Synthesis and Biological Screening of Novel multi-target Inhibitors of Tyrosine Kinase(s) and Topoisomerase.	DST	2012-15	27 lacs
11.	Dr. Raj Kumar	Design, Synthesis and Biological Screening of Novel Heterocycles as Inhibitors of Dual Tyrosine Kinase(s) and Histone Deacetylase as Potential Anticancer agents.	UGC	2014-16	12. 59 lacs
12.	Dr. Vinod Kumar	Synthesis of Bioactive Heterocyclic Scaffolds Using Novel Green Technologies.	UGC	2013-15	6 lacs
13.	Dr. Vikas Jaitak	Synthesis of Rebaudioside-A: Natural Substitute for sugar from *Stevia Rebaudiana* (Bertoni).	DST	2013-16	25.50 lacs
14.	Dr. Vikas Jaitak	Chemical investigation, Ant diabetic and anticancer study of *Stevia rebaudiana* (Bertoni) through Invitro and insilico approach.	UGC	2014-16	6 lacs

15.	Dr. A. L. Sharma	Ionic Conduction and Stability Improvement in Polymer Clay Nanocomposites for Device Applications	UGC Startup Grant	2013-15	6 lacs
16.	Dr. Kamlesh Yadav	Synthesis and Study of Structural, Magnetic, Dielectric and Transport Properties of Doped Nanodimensional $BiMnO_3$ Perovskite Manganites	UGC Startup Grant	2013-15	6 lacs
17.	Dr. Jai Prakash	Dielectric and electro-optical studies of metal oxide nanoparticles doped ferroelectric liquid crystal and their applications	UGC Startup Grant	2013-15	6 lacs
18.	Dr. Jai Prakash	Exploration of electro-optical properties of nano-materials doped ferroelectric liquid crystals and their applications	DST	2012-17	35 lacs
19.	Dr. Mahesh Kulharia	To develop a support vector machine tool for identification of unique protein-protein interaction sites with lowest cross reactivity potential	UGC	2012-15	6.73 lacs
20.	Dr Sandeep Singh	Genotoxicity of the pesticides used in Bathinda region	UGC Startup Grant	2013-15	6 lacs
21.	Dr. Monisha Dhiman	Cardio-toxicity of the chemotherapeutic drugs	DST	2013-16	22 lacs
22.	Dr. D. D. Singh	Isolation, 3-D structural characterization and functional analysis of lectins from microbial sources.	DBT	2014-17	21.798 lacs
23.	Dr Sandeep Singh	Functional evaluation of presence of miRNAs inside the mitochondria of breast cancer cell lines.	DST	2014-17	42 lacs
24.	Prof. R. K. Kohli	Alien Invasive Species, J.C. Bose Fellowship	DST	2012-17	68 lacs
25.	Dr. Sunil Mittal	Bioherbicidal potential of immobilized (encapsulated/entrapped)	DST Fast Track	2012-15	29.69 lacs

		formulations of essential oil from leaves of plant Callistemon viminalis			
26.	Dr. Sunil Mittal	Effect of arsenic toxicity and its accumulation potential in Oryza sativa L. varieties grown in Malwa region of Punjab	UGC Start-up Grant	2012-14	6 lacs
27.	Dr. Yogalakshmi K. N.	Fluorimetric estimation of uranium and its source apportionment in groundwater of Bathinda district in Punjab'	UGC Start-up Grant	2012-14	6 lacs
28.	Dr. Dhanya M. S.	Assessment of Chlorpyriphos in Non- Bt Cotton Soil of Talwandi Sabo, Bathinda and the effect of Amendments and Organic matter on Chlorpyriphos degradation.	UGC Start-up Grant	2012-14	6.0 lacs
29.	Dr. Puneeta Pandey	Assessment of Organochlorine pesticide residues in groundwater and soil of Bathinda district, Punjab	UGC Start-up Grant	2015-17	6.0 lacs
30.	Dr. Nagendra Babu	Synthesis and Evaluation of Callixarene capped Quantum dots for sensing of organic analytes	DST Fast Track	2012-15	24.6 lacs
31.	Dr. Anjana Munshi	Amelioration of the severity of β thalassemia by modifier genes.	DBT	2013-16	36.80 lacs
32.	Dr. Preeti Khetarpal	Genetic investigations among Indian children with Silver Russell Syndrome (SRS)	UGC Startup Grant	2014-16	6.0 lacs
33.	Dr. Kousik Giri	Theoretical Study of the Molecular Mechanism(s) of Arsenic Toxicity	DST	2015-18	25.0 lacs
34.	Dr. Kousik Giri	Arsenate and Arsenite Reaction Kinetics with Ferric Hydroxides Using Quantum Chemical Calculations	UGC Startup Grant	2015-17	6.0 lacs

35.	Dr. Sandeep Kaur	Socio-economic externalities of Guru Nanak Dev thermal power plant in Bathinda.	ICSSR	2013-15	4.85 lacs
36.	Dr. Kiran K. Singh	Assessment of Urban Environment Quality of Bathinda: A Socio-Geographical Perspective.	ICSSR	2013-15	4.0 lacs
37.	Dr. Bawa Singh and Dr. Sandeep Kaur	Role of SAARC: Geostrategic and Geo-economic Perspective	ICSSR	2014-16	7.0 lacs
38.	Prof. S. K. Bawa and Dr. Shireesh Pal Singh	Research Methodology course for Ph.D. students	ICSSR	2015-16	5.50 lacs
39.	Dr. Jubilee Padmanabhan and Dr. Shireesh Pal Singh	National Seminar on Education for sustainable development	ICSSR	2015-16	2.0 lacs
40.	Dr. Rakesh Kumar (PI)	Direct C-H bond functionalization of heteroarenes via dehydrative and dehydrogenative coupling strategies.	DST	2014-17	22 lacs
41.	Dr. Rajendra Singh Dhayal (PI)	Synthesis and characterization of polyhydrido Cu and Ag nanoclusters and their application	DST	2015-18	35 Lacs
42.	Dr. R. Krishna Chaitanya	Elucidation of the role of digestive proteases during *Plasmodium* transmission in Indian malarial vector, *Anopheles stephensi*	DST-SERB	2014-17	20 lacs (to be transferred to CUPB)
43.	Dr. Felix Bast and Dr. Zameerpal Kaur	Tracing Evolutionary Heritage of Indian Languages Using Computational Phylogenetics.	ICSSR	2015-17	7 lacs
44.	Dr. Pankaj Bhardwaj (PI) and Dr. Sanjeev Kumar (Co-PI)	Transcriptomic investigation of active gene networks in hyper-accumulator plant species in response to heavy metal toxicity	CSIR	2015-18	20 lacs

45.	Dr. Anjana Munshi	Insilico Screening of all functional genes in the human genome for the detection of deleterious SNPs for association studies.	ICMR	2015-17	33 Lacs
46.	Dr. Harish Holla (PI) and Dr. Sandeep Singh (Co-PI)	A Comprehensive Study towards Identification, Characterization, Scaffold based synthesis and Anticancer Screening of Novel, Promising Furanopyranones and Pyrans from the Medicinal Plant Orthosiphon diffuses.	DST	2013-16	37 Lacs
47.	Dr. Aklank Jain	miRNA profiling for cancers (under transfer to Central University of Punjab)	DST	2012-17	83 lacs
48.	Dr. Aklank Jain	Identification of Potential circulatory miRNA as novel biomarkers for lung cancer (under transfer to Central University of Punjab)	ICMR	2015-18	32.7 lacs
49.	Dr. Aklank Jain	Elucidating the role of miRNAs in Head and Neck Cancer	DBT	2015-18	24.96 lacs
50.	Dr. Somesh Baranwal	Role of integrin binding protein kindlin in colon cancer progression	Ministry of Science and Technology	2015-20	82 lacs
51.	Dr. Purshotam Sharma	Carcinogenic DNA lesions due to ochratoxin A and aristolochic acid: structure, mutagenicity and repair	DST-Inspire	2015-20	35 lacs
52.	Dr. Mahesh Kulharia	Targeting *Mycobacterium marinum*mel2 locus With drug like compounds: its implications for *in vitro* host cell interaction	DBT	2012-15	42.15 lacs
53.	Dr. Yogalakshmi K N	Spatial distribution of Uranium and associated water quality parameters in groundwater/ drinking	BRNS	2014-16	24.49 lacs

		water resources of five districts of Punjab (Fazilka, Muktsar, Mohali, Sangrur and Patiala)			
54.	Dr. Sunil Mittal (PI) and Dr. J. Nagendra Babu (Co-PI)	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	BRNS	2014-16	24.49 lacs
55.	Dr Jitendra K. Pattanaik	Mobilization and redistribution of elements during different stages of chemical weathering of Rajmahal Basalt in Pakur district of Jharkhand"	DST	2015-18	47.76
56.	Dr. Zameerpal Kaur	Ecocriticism and Modern Punjabi Poetry	UGC-Major Research Project	2013-15	7.92 lacs
57.	Dr. Rajinder Kumar	Grammatical Structure of Bagri Dialect	UGC-Major Research Project	2013-15	8.91 lacs
58.	Dr. Alpna Saini	Taboo issues in Contemporary Indian Cinema and Theatre and their treatment with special Focus on the Theories of Subjectivity	UGC-Minor Research Project	2013-14	1.25 lacs
59.	Dr. Vinay Kumar Rao	The Sculptural Art of Eastern India and its Influence on Sculptural Art of Arakan	UGC	2015-18	10.18 lacs
60.	Dr. Satvinderpal Kaur	Constraints in Educational Empowerment of rural Women: A survey of Malwa Region in Punjab	UGC	2014-16	22.45 lacs

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

University has initiated a process to apply for Centre for Excellence to UGC for Centre for Pharmaceutical Sciences and Natural Products, Human Genetics and Molecular Medicine and Environmental Science and Technology.

3.2.6 **List details of**

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

    Sixty projects funded by different national/international agencies like DST, UGC, DBT, ICSSR and Alzheimer association, USA, etc. worth Rs. 13.76 crores are in progress. Seven projects have been completed (***Table 3.4***).

    b. *Inter-institutional collaborative projects and grants received.*

        (i)   All India collaboration

        CUPB has a project in collaboration with CDRI, Lucknow (***Table 3.5***)

        (ii)   International

        CUPB has a project in collaboration with Alzheimer Association, USA (***Table 3.5***)

Table 3.4: Projects completed at CUPB

S. No.	Principle Investigator	Name of the Project	Funding Agency	Year	Total Grant
1.	Dr. Felix Bast	Genotoxicity detection in drinking water from Malwa region, Punjab	UGC Startup Grant	2012-14	6 lacs
2.	Dr. Sanjeev Kumar	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 (*Cicerarietinum* L.)	UGC Startup Grant	2012-14	6 lacs
3.	Dr. Anil K. Mantha	APEI/Ref-I's dual functions countering beta amyloid induced genotoxicity	Alzheimer's Association, USA	2011-14	54 lacs
4.	Dr. Sunil Mittal	Effect of arsenic toxicity and its accumulation potential in *Oryza sativa* L. varieties grown in Malwa region of Punjab	UGC Start-up Grant	2012-14	6 lacs
5.	Dr. Yogalakshmi K. N.	Fluorimetric estimation of uranium and its source apportionment in groundwater of Bathinda district in Punjab'	UGC Start-up Grant	2012-14	6 lacs
6.	Dr. Dhanya M. S.	Assessment of Chlorpyriphos in Non-Bt Cotton Soil of Talwandi Sabo, Bathinda and the effect of amendments and organic matter on chlorpyriphos degradation.	UGC Start-up Grant	2012-14	6 lacs

7.	Dr. Alpna Saini	Taboo issues in Contemporary Indian Cinema and Theatre and their treatment with special Focus on the Theories of Subjectivity	UGC-Minor Research Project	2013-14	1.25 lacs

Table 3.5: Externally funded projects in National and International Collaboration

S.No.	Principle Investigator/Co-PI	Name of the Project	Funding Agency	Year	Total Grant
1.	Dr. Felix Bast Centre for Plant Sciences, Central University of Punjab, Bathinda Dr. Vikas Jaitak Centre for Pharmaceutical Sciences and Natural Products, Central University of Punjab, Bathinda CDRI, Lucknow	Phylogenetic selection of target taxa for anti-proliferative and anti-metastatic marine natural products from sea weeds of Indian coast.	Ministry of Earth Sciences	2014-17	40.0 lacs
2.	Dr. Anil K. Mantha, Centre for Animal Sciences	APEI/Ref-I's dual functions countering beta amyloid induced genotoxicity	Alzheimer's Association, USA	2011-14	54 lacs

3.3 Research Facilities

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

Constant efforts have been made at CUPB to augment the research infrastructure and support facilities like laboratories, uninterrupted power supply, IT facilities, common instrumentation facility and experimental areas for field research. Because of a much focused approach to create research infrastructure, CUPB is known to be among the best equipped universities of the region. The major equipment available in university are:

Analytical
- Ultra Pressure Liquid Chromatography (UPLC)
- Gas Chromatography-Mass Spectroscopy (GC-MS)
- Ultraviolet-Visible (UV-VIS) Spectrophotometer
- Atomic Absorption Spectrometer (AAS)
- Simultaneous TG-DTA/DSC
- FT-IR Spectrometer
- Voltameter Anodic stripping
- Gas Chromatography with FID/TCD
- Trace Metal Analyser

Microscopy
- Karyotyping Work Station
- Fluorescence Microscope
- Scanning Electron Microscope with Energy Dispersive Spectroscopy (SEM –EDS)
- Confocal Laser Scanning Microscope with Fluorescence Correlation spectroscopy
- Phase Contrast Microscope

Molecular Biology
- DNA Sequencer
- -80^0 Freezer
- 2D Gel Electrophoresis
- High Speed Refrigerated Centrifuges
- Thermocyclers
- Real Time PCR
- Gel Documentation System
- Freeze Dryer
- Gradient PCR
- Ice Flaking Machines

- Incubator Shakers
- Seed Germinator
- -20^0C Deep Freezers
- Nanodrop
- Microplate Reader - Multimode
- Millipore-Ultrapure Water Supply System
- Laminar Flow hoods

Others
- Microbial Fermenter
- Seawater Circulation System
- Flash Chromatography
- Solid Phase Peptide Synthesizer
- Fast Speed Solvent Extraction (BUCHI)
- Flow Cytometer
- Rota Evaporators
- Air Samplers
- Bomb Calorimeter
- Shaker Incubators
- BOD Incubators
- Rotary Evaporator (Ilmvac)
- Accelerated Solvent Extractor
- Biosafly Cabinet
- CO_2 Incubators
- Fermenter

Facilities

- Plant Growth Chamber
- Animal Cell Culture facility
- Plant Tissue Culture facility
- Green House
- Walk in Cold Rooms
- Water purification System
- Vacuum Concentrator

Strategies to meet the needs of researchers:

Requirements for research infrastructure are determined by specific user-meetings and interaction with Coordinators of Centres. Periodic updating and up gradation of the inventory of scientific equipment is made. Training is provided to students for efficient handling of laboratory equipment in different centres. CUPB already has infrastructure for high end research in front line areas of life sciences, health sciences, environmental and

pharmaceutical sciences. Besides equipment listed above, the following support facilities are available:

- The university has a Central Instrumentation lab which provides service to students and research scholars and also to outsiders.

- The university has cheminformatics laboratory, computational physics laboratory and networking laboratory to meet demands of the researchers.

- A computer centre with high configured systems and high end work stations is equipped as per the requirement of the researchers.

  Around 22 software have been procured for research and teaching purpose. The details of the number of systems and software are provided in *Table 3.6*. The university has excellent internet facility with 40 Mbps and 1Gbps lease lines. The university is in the process of installing another one Gbps lease line through BSNL under NMEICT.

- Scientific software and application based software installed at dedicated network Computational Laboratory.

- Entire campus, residential areas, hostels have Wi-Fi.

- E-resources, e-journals, e-publications, e-books can be accessed with desktops and laptops through intranet and internet.

- Uninterrupted power supply to all departments.

- The university library has a variety of books to cater to the needs of researchers.

Table 3.6: IT Resources of CUPB

S.No.	Resources	Total
1	Computers	511
2	High end Work stations	10
3	Blade Server with capacity for 16 blades. Each blade with 16 GB RAM, 12 blades are functional	1
4	Two lease lines	40 Mbps and 1 Gbps
5	Laptops	55
6	Software	22
7	SAN Storage	30 TB (1)

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

Yes. This facility is available in the main library. The University Library is on a rapid and consistent path of expansion and development since its inception in 2009, catering to the learning and research requirements of teachers and students of the university. Details are in *Table 3.7.*

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

The university has established a Central Instrumentation Laboratory (CIL) which has been playing a vital role in meeting the needs of faculty and students, particularly those in science schools. The new faculty members, who have to spend several months initially in developing their research laboratories, find CIL very useful. This facility is made available to all the research scholars, as well. Separate budget has been provided to develop and maintain the Central Instrumentation Laboratory. List of instruments in CIL is given in *Annexure 3.5*.

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

Separate hostels for boys and girls are available on the university campus. Wi-Fi internet facility is available in these hostels, guest house and campus residences. The university computer centre has 180 computers with internet for open access. Internet facility is also provided to students on their personal laptops. Visiting Professors are provided furnished accommodation in University Guest House and a centrally located office with computer and internet has been marked for them.

Table 3.7: Information resources at CUPB's University Library

Library sections

General Book Section	Donated Book Section	Audio-Video Section
Text Book Section	Braille Section	Newspaper Corner
Reference Book Section	Thesis and Dissertations Section	Maps and Atlas Section
Regional Language Section		

Library collections

The library collection consists of books, reference books, text books, print journals, newspapers, M.Phil. Dissertations, e-journals, databases, and cd rom/dvds.

Sr. No.	Resources	Total
01	Books	25,070
02	Journals and Print Format	40
03	E-Journals ,	9105
04	Thesis and Dissertation	107
05	News Papers	21
06	CD-ROM/DVD	370

Library services

Reprographic services: University Library provides reprographic services to the users for photocopying library materials
Reference Service: It provides the users with directional assistance in locating books and resources.
Inter-library Loan (ILL): Assistance to access materials and resources from the networking libraries through DELNET.
Current Awareness Service (CAS): Updating the users with the latest information in the academic front and new arrivals to the library.
Selective Dissemination of Information (SDI): Provides information and updates to the interested users on specific theme/area/topic as required.
Binding: Provides binding service to the users for official purposes.

E-journals

Publisher	URL	No of Title
American Chemical Society	http://pubs.acs.org/	37
American Physical Society	http://publish.aps.org/browse.html	10
Annual Reviews	http://www.annualreviews.org/	33
Cambridge University Press	http://journals.cambridge.org/	224
Economic and Political Weekly	http://www.epw.in/	1
Institute of Physics	http://iopscience.iop.org/journals	46
JSTOR	http://www.jstor.org/	2585
Oxford University Press	http://www.oxfordjournals.org/	206
Project Muse	http://muse.jhu.edu/browse/	493
Royal Society of Chemistry	http://www.rsc.org/	29
Science Direct (10 Subject Collection)	http://www.sciencedirect.com/	1389
Springer Link	http://link.springer.com/	1763
Taylor and Francis	http://www.tandfonline.com/	1173
Wiley-Blackwell	http://onlinelibrary.wiley.com/	908
Science Online	http://www.sciencemag.org/	01
Sage	http://online.sagepub.com/	11

E-resources

Publisher	Description
Economic Outlook http://economicoutlook.cmie.com	Carries data on macro-economic forecasts and insights on growth, inflation, fiscal balance, balance of payments, corporate earnings and a host of sectoral indicators on India.
Prowess http://prowess.cme.com	Provides database of the financial performance and business of over 27,000 companies in India.

States of India http://statesofindia.cmie.com	Provides statistics, official documents of state governments in India on diverse fields and sectors.
Indiastat.com www.indiastat.com	Provides ready to use data on socio-economic life of India and its states online.
DELNET Online http://delnet.nic.in/	Promotes resource sharing among the libraries through the development of a network of libraries. Enables accessing data from the libraries in the network.
Possum Web http://www.possum.net.au/	Database on birth defects.
ISID (The Institute for Studies in Industrial Development)http://isid.org.in/	Access to databases on various aspects of the Indian economy, particularly industry and the corporate sector and On-line Indexes of Indian Social Science Journals (OLI).
JCCC (J-Gate Custom Content for Consortium) http://jccc-indest.informindia.co.in /	JCCC provides a one point access to journals subscribed under UGC INFONET Digital library consortium as well as university libraries designated as Inter Library Loan (ILL) Centres.
Hein Online http://home.heinonline.org	Provides access to more than 1,800 law and law-related periodicals.
Manuparta http://www.manupatra.com	Provides databases on Legal, Taxation, Corporate and Business Policy.
SciFinder Evaluationhttp://www.cas.org/SCIFINDER/SCHOLAR/index.html	Scientific database that focuses on chemistry.
Westlaw India http://www.westlawindia.com	Provide access to a large collection of case laws and legal materials from India, and outside particularly from the UK, EU, United States and other Commonwealth Jurisdictions.
SCOPUS http://www.scopus.com/	Scopus, the largest abstract and citation database of peer-reviewed literature.
Web of Science https://webofknowledge.com	Web of Science is an online subscription-based scientific citation indexing service maintained by Thomson Reuters that provides a comprehensive citation search.

Library IT infrastructure

S.No.	Particulars	Total Numbers
01	Computers	07
02	Servers	01
03	Print/Photocopier/Scanner	01
04	Book Eye 4 Scanner	01

Library automation

The University Library is fully automated with Library Management Software which functions from cataloguing to security protocols. The acquisition, cataloguing, circulation, serials controlling, catalogue access and security protocols come under the purview of automation. The Online Public Access Catalogue (OPAC) system in the University Library is enabled with LMS which allows cataloguing of diverse resources such as books, journals, articles, slides, maps, audio/video, films, cassettes, texts, drawings, clippings, serial publications, software and so on. OPAC enables searching through clusters like Author, Keyword, Subject, Class, Title, Publisher, Place of publication, Main entry, and Material type, Place of conference, Subject name, ISBN / ISSN, Series titles, Serials title and Year of publication. It also supports circulation, acquisition, front desk operations, serials control and data entry in vernacular languages. The system generates SMS/e-mail three days before the date of book return.

The Radio Frequency Identification (RFID)

RFID system installed in the University Library is with the latest technology and configuration in this regard. It ensures efficient service delivery and security with minimum human input. It is defined by the following features:

Durable RFID tags with 1,024-2,048 bits memory to enable cataloguing and circulation.
Tattle Tapes security strips providing covert security to the library resources.
Pad Staff Workstation (PSW) which can be operated as a circulation desk or tag programming station.
Digital Library Assistant (DLA) to simplify shelf management tasks and making physical verification of resources easy.
Electromagnetic Detection System (EDS) offering state-of-the art protection to help secure valuable library materials marked with Tattle tapes security strips.
Self-Check system facilitating self-issuing, self-return and self-renewal by the users themselves.

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

Yes, university has Central Instrumentation Laboratory (CIL) in the campus to address special challenges for research programs. Along with CIL, computer centre has common facility of work station for drug design and development and Computational Sciences. Centre for Computational Sciences has started its own laboratory in computing.

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

CUPB faculty are involved in front line areas such as Life Sciences, Pharmaceutical Sciences and Natural Products, Environmental Sciences, and Human Genetics and Molecular Medicine and have acquired national and international reputation in these spheres as evidenced by publications, h-index and award of prestigious projects. Centre for Education, Centre for Pharmaceutical Sciences and Natural Products and Centre for Computer Science and Technology have got approval from their respective regulatory bodies (*NCTE* and *AICTE*).

These research centres help the scientist/students from other labs/institutes in following ways:

- Sharing updated knowledge through various programmes
- Creating platform to do collaborative research.
- Utilizing the laboratory facilities available through samples sent or collected from across the partners.
- Validating their research findings by virtue of replicating and confirmatory tests.
- Exchange of faculty/students for research

3.4 Research Publications and Awards

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

Every four months university publishes a "News Letter" to highlight the academics and research updates in different centres of university. University has published eight issues of News Letter till date. List of other publications of the university is presented in *Table 3.8*.

Table 3.8 University publications from CUPB

1.	Newsletters
	a) January 2013-April 2013 b) May 2013-July 2013 c) August 2013-October 2013 d) November 2013-January 2014 e) February 2014-August 2014 f) September 2014-Nov 2014 g) December 2014-February 2015 h) March 2015-June 2015
2.	Odyssey Towards Excellence (2010-11)
3.	Central University of Punjab Museum (July 2013)
4.	Library Strength to Strength
5.	Annotated Bibliography (2009-2013)-Library Collection
6.	Research Initiatives – Report on the externally funded research projects initiated by the university faculty and students (2009-2013)
7.	University Library Manual (2014)
8.	Plant Biodiversity of Central University of Punjab, Main Campus (February 2014)
9.	Rising Star in Higher Education (2009-2014)
10.	Annual Reports
	a) 2008-09; 2009-10 b) 2010-2011 c) 2011-12 d) 2012-13 e) 2013-14 f) 2014-2015
11.	Annual Financial Reports
	a) 2008-09; 2009-10 b) 2010-2011 c) 2011-12 d) 2012-13 e) 2013-14 f) 2014-2015

3.4.2 Give details of publications by the faculty

Faculty of the CUPB is continuously publishing research articles in journals of national/international repute. The faculty of CUPB has to its credit 823 national and 1374 international papers in addition to 100 books and 291 book chapters. The impact factors range from 0.04 to 30.43 and the total citations are 25695. Detail of publications is included in ***Table 3.9.***

3.4.3 Give details of faculty serving on the editorial boards of national and international journals

CUPB faculties are working in different editorial boards of national and international journals (***Table 3.10***). As many as 14 faculty members of CUPB are on the editorial boards of 44 journals and are reviewers in 42 journals.

3.4.4 Provide details of Research awards received by the students

A total of 194 students of CUPB have qualified national level competitive examinations, some have cleared more than one examination making the total to 212. Details are mentioned in ***Table 3.11 and Figure 3.2***.

Students who have qualified National Level Competitive Examination
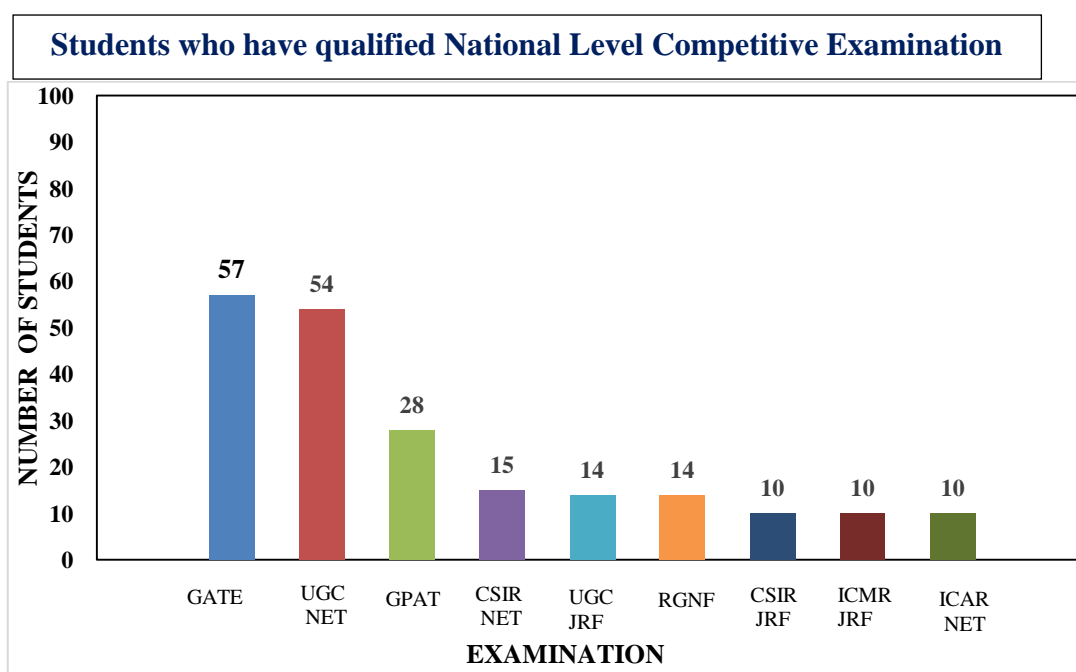
Fig 3.2: Number of students at CUPB who have qualified national level competitive examinations

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

A list of successful scholars guided by faculty during the last four years is attached in *Table 3.12*.

Yes, the university has decided to participate in Shodhganga by depositing the Ph.D. thesis with INFLIBNET for electronic dissemination through open access.

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

CUPB has well defined policy to check malpractices and plagiarism in research (*Annexure 3.6*). Grammarly software is being used by the university. Depending upon the nature of malpractice, punishment varies from fine, stopping increments or removal from CUPB.

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

Yes. University promotes interdisciplinary research. Inter disciplinary / interdepartmental research projects have been under taken by the departments (*Table 3.13*).

One major interdisciplinary collaborative project on "climate change" has been submitted to IDRC, Canada. In addition, CUPB faculty has research collaborations with national and international organizations as described in *Section 3.1.4 (Table 3.1)*.

Table 3.9: Details of Publications by Faculty

S.No	Name of the Centre	Name of faculty	Papers in Reviewed Journals		Monographs	Chapters in Books	Books Edited	Books with ISBN with details of publishers	Number listed in international database	Citation Index	Impact factor(range/index)	h-index
			National	International								
`1	Physical Sciences	Dr. A.L. Sharma	12							34	1.3 to 3.8	03
		Dr. Kamlesh Yadav							12	24	0.449-2.999	3
		Dr. Jai Prakash		38				01 (ISBN: 978-3-659-32404-8) Lambert Academic Publishing, Germany		643	0.380-7.728	13
		Dr. Ashok Kumar		20		01				330	1.3-4.5	10
2	Computational Sciences	Dr. Kousik Giri		10						157	1.5-3.15	7
		Dr. Purshotum Sharma		31						299	1.5-9.5	10
		Dr. Mahesh Kulharia		11					11	96	2.02-12.114	4
3	Comparative Literature	Dr. Zameerpal Kaur	7	2		1		3				
		Dr. Rajinder	30	5		3	2	1				
		Dr. Amandeep	2									
		Dr. Neetu				2	1	1				
4	Animal Sciences	Dr. Anil K. Mantha		29		2			29	507	0.33-17.47	13
		Dr. Jyoti Prakash		18					18	336	0.13-13.77	10
		Dr. R. Krishna Chaitanya		10					10	67	0.59-6.33	4
		Dr. Ajay Kumar		10					10	84	1.78-4.38	5
5	Classical and Modern Languages (Punjabi Language, Literature and Culture)	Dr. Alpna Saini	8	9	3	4	10	2				
		Dr. Ramanpreet	17			11	1	2				
		Dr. Dinesh Babu		5		1						
6	Chemical Sciences	Dr. Rakesh Kumar	1	20					21	320	0.38-30.43	10
		Dr. KK		14					14	433	2.15-8.31	10

No	Department	Name	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10
		Haldar										
		Dr. Rajendra S. Dhayal	1	17					18	180	0.628-12.113	8
		Dr. J. Nagendra		16					16	262	0.68-6.4	11
7	Pharmaceutical Sciences and Natural Product	Prof. P. Ramarao	118							4647	0-5.04	36
		Dr. Vinod Kumar		20						412	1.5-5.5	13
		Dr. Pradeep		46		13				311	0.3-3.5	11
		Dr. Vikas Jaitak		32		1				302	0.5-3.8	10
		Dr. Raj Kumar		50				1 (978-81-921432-9-3)		1159	1.4-6.36	21
8	Geography and Geology	Dr. Kiran Singh	3	5	1			978-36393-05753				
		Dr. JK Pathania	1	7		9		ISBN-978-81-90442-3-1 ISBN-978-81-90442-3-1 ISSN-0973-256x ISSN-0973-256x ISBN-81-8372-034-x ISBN-81-8372-020-x			16.374	3
		Dr. Sasang Guite	1	2		1		ISSN-0970-7913 ISSN-2277-6168 ISSN-2244-1522 ISBN-978-81-212-1208-3 ISBN-978-93-80036-75-5				
9	Environmental Science and Technology	Prof (Dr.) R.K Kohli		281		78	12			4862		32
		Prof (Dr.) R.C. Sharma	87	10		9				8	0.355-1.119	2
		Dr. Sunil Mittal		17		2				296	32.04	10
		Dr. Yogalakshmi		9						62	0.626-4.49	2
		Dr. Dhanya M.S	4	3		5		1; 9789380428789		20		2
		Dr. Puneeta Pandey		10						26		3
10	Law	Dr. T. Arora	17			2		1; 978-9385212202-4				

		Dr. HR Arora	1	7		2		4				
		Dr. Puneet Pathak	10	1		4						
		Dr. Surender Mehra	5									
		Dr. Deepak Kumar	6	2		4						
		Dr. Sukhwinder Kaur	3			2						
11	South and central Asian studies	Dr. Bawa Singh	8			8						
		Dr. Nishtha Kaushiki		2		2						
		Dr. Sudheer Singh	1			2						
		Dr. Vinay Rao	11	3	1			3				
12	Human genetics and molecular medicine	Dr. Anjana Munshi	7	75	-	13	2	DNA sequencing methods and applications, ISBN 978-953-51-0564-0(Intech, Europe)	75	609	1-7	16
		Dr. Harish Chander	1	16					16	609	1-9	11
		Dr. Monisha Dhiman		21		3			24	324	3-15	11
		Dr. Preeti Khetrapal	1	2		2				4	0-2	1
		Dr. Sandeep Singh		16					16	101	1.5-22.2	6
		Dr. Sabyasachi Senapati		6						354	3.5-29.6	4
		Dr. Neeraj Kumar		4					5	13	0.87-6.43	2
13	Education	Dr. SK Bawa	67			8	1					
		Dr. Satvinder	19			2						
		Dr. Shireesh	6	9		11	9	9		23		3
		Dr. Shamshir Singh Dhillon	13	13		2					25.16	
		Dr. Jubilee	6			6	2	2				
		Dr. Pany	17	12			1	2				
14	Sociology	Dr. Vinod Arya				1						
		Dr. Aditya R Kapoor				2						

15	Mathematics and statistics	Dr. Sachin Kumar		24						172	30.2	7
		Dr. Akhlad Iqbal		6						32	5.25	4
		Dr. Anoop Kumar		7						23	1.63	4
		Dr. Harmanpreet Singh Kapoor		3								
16	Plant Sciences	Prof. Ashok Dhawan	118	22	9	19				711	0.5-6.8	11
		Dr.Ramakrishna Wusirika		51		4	1	4	51	3214	0.6-33.6	26
		Dr. Felix Bast	11	29		3		2	40	94	0-3.7	6
		Dr. Sanjeev Kumar	1	27					28	616	0-3.5	15
		Dr. Pankaj Bhardwaj		11					11	167	0.45-3.94	7
		Dr. Vinay Kumar		15		6			21	116	0-5.9	7
17	Computer science and technology	Prof AK Jain		28		7				197	1-6	8
		Er. Meenakshi		6						3	3.924	1
		Er. SS Khurana		2								
		Er. Sukhreet Singh		1					1			
		Er. Navjot Sidhu		5						5		1
		Dr. Amandeep Kaur		17							1-3.5	5
18	Economics	Dr. PK Mishra	21	28		4		2		316	0.4-1.5	11
		Dr. Naresh Singla	9			6	1					2
		Dr. JK Verma		15							Not known	
		Dr. JK Parida	5	3		2				33	0.129-1.345	4
		Dr. Sandeep Kaur	2	14		2		1		3		
19	Biochemistry and microbial sciences	Prof Saini	116	16						203	0.227-3.79	19
		Prof. P. K. Sharma	45	29		18	2		84	482	0.39-9.0 (97.8)	11
		Dr. Aklank Jain	1	18					19	490	0.5-9.12	13
		Dr. Shashank Kumar	3	25					26	401	0.04-2.88	11
		Dr. Somesh Baranwal	0	26		1			27	503	2.265-16.710	9

Table 3.10: Faculty of CUPB serving in Editorial Boards of Scientific Journals

Centre for Plant Sciences

Prof. A. K. Dhawan
- Editor, Indian Journal of Plant Physiology
- Reviewer, Physiology and Molecular Biology of Plants

Dr. Sanjeev Kumar
- Guest editor World Science Journal (Hindawi)

Dr. Pankaj Bhardwaj
- Reviewer of BMC Plant Biology
- Reviewer of Protoplasma
- Reviewer of Molecular Biology Reports

Centre for Biochemistry and Microbial Sciences

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

Centre for Animal Sciences

Dr. A. K. Mantha
Member editorial board:.
- Jacobs Journal of Bioinformatics and Proteomics, USA
- Austin Journal of Proteomics, Bioinformatics and Genomics, USA.
- Journal of Cell Science and Molecular Biology
- Journal of Biotechnology and Biomaterials

Centre for Pharmaceutical Sciences and Natural Products

Dr. Raj Kumar
- Lead Guest Editor of Special Issue on "*Signal Transduction Inhibitors as Promising Anticancer Agents*" Bio Med Research International
Reviewer:
- MedChemCom (RSC)
- Bioorganic and Medicinal Chemistry (BMC, Elsevier)
- Bioorganic and Medicinal Chemistry Letters (BMC, Elsevier)
- Food and Chemical Toxicology (FCT, Elsevier)
- European Journal of Medicinal Chemistry (EJMC, Elsevier)
- International Journal of Biological Macromolecules (Elsevier)
- Medicinal Chemistry Research (Springer)
- Mini Reviews in Medicinal Chemistry (Benthem)

- ➤ Journal of Enzyme Inhibition and Medicinal Chemistry (Informa healthcare)
- ➤ Letters in Drug Design and Discovery (Bentham science)
- ➤ Biomarkers in Cancer (Libertas Academica)
- ➤ Drug Target Insights (Libertas Academica)
- ➤ Organic Chemistry Insights (Libertas Academica)
- ➤ Associate Editor to Pharamaceutica Analytica Acta (www.omicsonline.org)

Dr. Vinod Kumar
Reviewer:
- ➤ Tetrahedron Letter
- ➤ Journal of Indian Chemical Society
- ➤ Indian Journal of Chemistry

Dr. Vikas Jaitak
Reviewer:
- ➤ Medicinal Chemistry Research (Springer)
- ➤ Journal of Agricultural and Food Chemistry (ACS)
- ➤ African Journal of Pharmacy and Pharmacology
- ➤ Natural Product Research (Taylor and Francis)
- ➤ Annals of Microbiology (Springer)
- ➤ Acta Physiologiae Plantarum (Springer)
- ➤ Associate Editor of International Journal of Medicinal Chemistry Letters (Bioinfo Publications)
- ➤ Associate Editor of International Journal of Chemical Research (Bioinfo Publications)
- ➤ Associate Editor of International Journal of Analytical Chemistry Research (Bioinfo Publications)
- ➤ Guest Editor of Evidence-Based Complementary and Alternative Medicine, Special Issue "Essential Oils: New Perspectives in Human Health and Wellness" (Hindwai)

Centre for Education

Dr. Shireesh Pal Singh
- ➤ Chief Editor-Learning Community
- ➤ Chief Editor-Educational Quest
- ➤ Chief Editor-SANDARBH
- ➤ Chief Executive Editor-TechnoLEARN
Member Editorial Board: -
- ➤ International Journal of Social Sciences and Education
- ➤ Online Journal of Education-SAMWAD
- ➤ International Journal of Educational Planning and Administration
- ➤ Global Journal of Educational Administration and Policy Studies
- ➤ International Journal of Vocational and Technical Education
- ➤ International Journal of Psychology and Counselling

➢ International Journal of Education and Information Studies
➢ E-Reflection, an International multidisciplinary peer reviewed e journal
➢ SRJIS, an International Peer reviewed Journal

Chief Academic Advisor-

➢ Chhavi: National Journal of Higher Education
➢ International Journal of Advanced Research in Social Science and Humanities
➢ International Journal of Advanced Research in Education
➢ International Journal of Technological Exploration and Learning
➢ Asian Journal of Academic Research

Centre for Environmental Science and Technology

Prof. R. K. Kohli
Associate Editor:

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

Reviewer of:

➢ 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. Puneeta Pandey
Editorial member:

➢ International Journal of Biological and Medical Sciences, Catalyst Publishers
➢ 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
➢ Journal of Research in Environmental Science and Technology, Newark, USA

Centre for Law

Dr. Puneet Pathak
  ➢ Member of Editorial Board: Journal of Humanities and Culture
  ➢ Member of Editorial Board: Asian Journal of Human Development and Livelihood

Centre for Human Genetics and Molecular Medicine

Dr. Monisha Dhiman
  ➢ Editorial board member Journal of Cell Science and Molecular Biology
Reviewer:
  ➢ Revista do Instituto de Medicina Tropical de São Paulo
  ➢ American Journal of Tropical Medicine and Hygiene
  ➢ Journal of Biomedicine and Biotechnology

Dr. Sandeep Singh:
Guest Editor in special issues:
  ➢ "Signal Transduction Inhibitors as Promising Anticancer Agents,", journal 'BioMed Research International'
  ➢ "Oxidative Stress and Inflammation in Diabetic Complications", journal 'International Journal of Endocrinology'

Centre for Physical Sciences

Dr. Jai Prakash
  ➢ Reviewer of Physical Review Journals and Macromolecule Symposia

Table 3.11 List of Students from CUPB who have qualified national level competitive examinations

S. No.	Name of Student	Batch	Achievement
Centre for Plant Sciences for Animal Sciences, Centre for Biochemistry and Microbial Sciences			
1.	Shweta Thakur	2010-11	ICMR JRF 2012
2.	Prateek Sharma	2010	CSIR NET, ICAR-NET, SLET
3.	Mohd Zahid	2010-11	ICMR JRF 2011
4.	Devendra Meena	2010-11	CSIR JRF 2011
5.	Abhimanu Kumar	2010-11	CSIR JRF 2011
6.	Rajiv Kumar	2010-11	CSIR JRF 2011
7.	Sarabjeet Kour Sudan	2011-12	DBT JRF 2012
8.	Aijaz Ahmad John	2011-12	CSIR JRF 2012 CSIR NET 2012
9.	Navgeet	2011-12	CSIR UGC NET 2012 GATE 2012 and 2013
10.	Satej Bhushan	2011-12	CSIR UGC NET 2012
11.	Pushpendra Singh	2013	CSIR NET
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 (15th Rank) CSIR-JRF 2014 (61st rank)
16.	Balraj Singh Gill	2011-12	MANF 2011 GATE 2011 CSIR-NET 2011
17.	Richa Mehra	2012-13	GATE 2012 CSIR-NET 2013 ICMR-JRF 2014 (37th 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 2014
20.	Shruti Chaudhary	2012-13	CSIR-UGC-JRF 2013
21.	Raoof Ahmad Najar	2012-13	ICAR-NET 2014
22.	Pushpendu Kundu	2013-14	ICAR-NET 2014
23.	Aasim Majeed	2013-14	CSIR JRF 2014 (54 rank)
24.	Kunj Bihari Gupta	2013-14	CSIR-NET 2014 ICMR JRF- 2015
25.	Arindam Adhikary	2012-13	ICAR-NET 2014
26.	Rashpal Kumar	2013-14	RGNF 2015
27.	Sukhchain Kaur	2013-14	RGNF 2015
28.	Sumandeep Juneja	2013-14	MANF 2015
29.	Prabhat Kumar	2014-15	RGNF 2015
30.	Praveen Sharma	2014-15	CSIR-NET
31.	Bibekanand Sarkar	2010-11	CSIR-NET, 2012
32.	Sharanjot Kaur	2014-15	ICMR-JRF, 2015
Centre for Environmental Science and Technology			
33.	Upma Vaid	2009-10	UGC NET and SET 2012
34.	Gajendra Singh Viswakarma	2009-10	JRF DST UGC NET 2012
35.	Anamika Das	2009-10	UGC NET 2012
36.	Gurpreet Kaur	2010-11	UGC NET 2012
37.	Nandini Gautum	2010-11	UGC NET 2012
38.	Amita Bhatti	2011-12	CSIR-UGC NET 2012 RGNF 2012 GATE 2012
39.	Navneet Kaur	2011-12	UGC 2012
40.	Annu Sharma	2011-12	UGC-NET
41.	Disha Mishra	2011-12	UGC JRF 2011
42.	Rishikesh Singh	2011-12	UGC JRF 2012
43.	Harmandeep	2012-13	DST Inspire 2012-13
44.	Gulam Nazar		ICAR-NET 2013
45.	Amit Kumar		ICAR-NET 2013, UGC-JRF 2013
46.	Shashi Ranjan		UGC-JRF 2013
47.	Vijay Jaswal	2013-14	ICAR-NET 2014, UGC-NET 2014
48.	Radhe Shyam Yadav	2013-14	UGC-NET 2014
49.	Gini Rani	2013-14	UGC-NET, RGNF 2015
50.	Sangita Singh	2014-15	GATE
51.	Ranjit Kumar	2015-16	UGC-JRF
52.	Shilpa Sharma	2012-13	ICMR JRF-2015

	Centre for South and Central Asian Studies		
53.	Maninderjit Singh	2010-11	UGC NET 2012
54.	Kovid Kumar	2010-11	UGC-JRF 2011
55.	Gurpreet Kaur	2010-11	RGNF-UGC
56.	Anu Sonia	2011-12	RGNF-UGC
57.	Mohammad Arif	2011-12	UGC NET 2012
58.	Amandeep Kaur	2012-13	MANF 2012
59.	Mohd. Hussain Naik		UGC-NET 2013.
60.	Gaurav Kumar	2012-13	UGC-NET 2014
61.	Kuldip Singh	2013-14	UGC-NET 2014
62.	Manpreet Kaur	2012-13	MANF
63.	Amritpal Singh	2014-15	UGC-NET
64.	Meenakshi	2014-15	RGNF 2015
65.	Davinderpal Singh	2015-16	UGC-JRF 2013
66.	Rajendra Prasad	2015-16	UGC-NET
	Centre for Comparative Literature		
67.	Yeshpal	2009-10	UGC NET 2012
68.	Kamaljeet Kaur	2009-10	UGC-NET 2011
69.	Barjinder Singh	2010-11	UGC-JRF 2012
70.	Amandeep Kaur	2010-11	UGC-NET 2014
71.	Chitra	2011-12	UGC NET 2013
72.	Disha	2011-12	UGC-NET 2011
73.	Pradeep Kaur	2010-11	UGC NET 2014
74.	Vandana Bathla	2011-12	UGC NET 2012
75.	Rajpal	2011-12	UGC NET 2012
76.	Devendra Gora	2012-13	RGNF 2013
77.	Rakesh Kumar	2013-14	RGNF 2014
	Centre for Economic Studies		
78.	Mumtaz Ahmed	2012-13	RGNF 2012
79.	Munish Kumar	2011-12	UGC-NET
80.	Neha Jindal	2011	UGC-NET
81.	Ramandeep Kaur		UGC-NET 2014
82.	Vinish Prakash	2013-14	UGC-NET 2014
83.	Nadeem	2013-14	UGC-NET 2014
84.	Mohammad Fayaz	2013-14	UGC-NET 2014
85.	Noushaad A.P.	2013-14	UGC-NET 2014
86.	Bishwajeet Pakash	2013-14	UGC-NET 2014
87.	Harpreet Kaur	2013-14	UGC-NET 2014
88.	Paramjeet Kaur		RGNF 2015
89.	Manpreet Kaur		RGNF 2015
90.	Harmeet Kaur	2014-15	UGC-JRF 2014
91.	Javaid	2014-15	UGC-NET
92.	J Vinish Prakash		UGC-NET-2015
93.	Mohammad Fayez		UGC-NET-2015

94.	Noushad AP		UGC-NET-2015
95.	Bishwajit Prakash		UGC-NET-2015
Centre for Law			
96.	Ramandeep	2011-12	UGC NET 2012
97.	Abhishek	2011-12	UGC NET 2012
98.	Tripta	2015-16	UGC-NET
99.	Kamalpreet Singh Dhillon	2014	PCS (E)
100.	Nishant Kumar	2015	UGC-NET
Centre for Pharmaceutical Sciences and Natural Products			
101.	Arvind Negi	2011-12	GATE 2013
102.	Akanksha Sharma	2011	GPAT
103.	Ramit Singla	2011-12	GPAT 2011
104.	Monika Chouhan	2011-12	GPAT 2011
105.	Yashika Bhalla	2011-12	GPAT 2011
106.	Jimi Marin Alex	2011-12	GPAT 2011 MANF
107.	Prakriti Monga	2011-12	GPAT 2011
108.	Deependra Kumar	2011-12	GPAT 2011
109.	Vinay Kumar Gupta	2011-12	GPAT 2011
110.	Anil Rana	2012	GPAT
111.	Archna Kashyap	2013-14	GPAT 2013
112.	Shevani Sharma	2013-14	GPAT 2013
113.	Jagpreet Singh	2013-14	GPAT 2013
114.	Sapna Kumari	2013-14	GPAT 2013
115.	Bhupender Kumar	2013-14	GPAT 2013
116.	Vivek Parkash Gupta	2013-14	GPAT 2013
117.	Pankaj Kumar Singh	2013-14	GPAT 2013
118.	Jyoti Dandriyal	2014-15	GPAT 2014
119.	Manavendra Bhatt	2014-15	GPAT 2014
120.	Harmeet Kaur	2014-15	GPAT 2014
121.	Gaurav Sharma	2014-15	GPAT 2014
122.	Kunal Prakash	2015	GPAT
123.	Gaurav Joshi	2012-13	GPAT 2012
124.	Ashish Ranjan Dwivedi	2012-13	GPAT 2012
125.	Sheetal	2012-13	GPAT 2012
126.	Vijayinder Saini	2012-13	GPAT 2012
127.	Mayank	2012-13	GPAT 2012
128.	Gagandeep Kaur	2012-13	GPAT 2012
Centre for Computer Science and Technology			
129.	Deepika Dhiman	2012-13	GATE 2013
130.	Khushmeet Singh	2012-13	GATE 2012, 2013
131.	Amandeep Kaur	2012-13	GATE 2012
132.	Ruby Goel	2012-13	GATE 2012

133.	Kanika	2012-13	GATE 2012
134.	Shifali Hans	2012-13	GATE 2012
135.	Mandeep Singh	2012-13	GATE 2012
136.	Amandeep Kaur		GATE-2014
137.	Kanika		GATE-2014
138.	Siddharth Kumar		GATE-2014
139.	Rinku		GATE-2014,
140.	Amita Get	2013-14	GATE-2013, UGC-NET 2014
141.	Dharamveer	2013-14	GATE-2013, UGC-NET 2014
142.	Gaurav Kumar	2013-14	GATE-2013
143.	Pankaj Kumar	2013-14	GATE-2013
144.	Vicky Kumar	2013-14	GATE-2013
145.	Suchismita Mahato	2013-14	GATE-2012, 2013
146.	Saurav Kr. Gupta	2013-14	GATE-2013
147.	Komal Rani	2013-14	GATE-2013
148.	Rohit Goyal	2013-14	GATE-2013
149.	Meenu Singh	2013-14	GATE-2013
150.	Rajshree Purohit	2013-14	GATE-2013
151.	Rajiv Kumar	2013-14	GATE-2013
152.	Shrikant Saini	2013-14	GATE-2013
153.	Shailesh Kumar	2014-15	GATE 2014
154.	Marut Jindal	2014-15	GATE 2014
155.	Ankit Padhak	2014-15	GATE 2014
156.	Gursewek Singh	2014-15	GATE 2014
157.	Siddharth	2014-15	GATE 2014
158.	Sukhwinder Singh	2014-15	GATE 2015
159.	Amita	2014-15	GATE 2014
160.	Shweta Sharma	2014-15	GATE 2015
161.	Jaskaran Singh	2014-15	GATE 2015
162.	Sajja Hari Krishna	2014-15	GATE 2014
163.	Kumari Deepika	2015	GATE 2015
164.	Arvind Kumar	2015	GATE 2015
165.	Gajendra Singh Rathore	2015	GATE 2015
166.	Junaid Ali Reshi	2015	GATE 2015
167.	Anshu Malik	2015	GATE 2015
168.	Amarpreet Kaur	2015	GATE 2015
169.	Anubha	2015	GATE 2015
170.	Rekha Kumari Yadav	2015	GATE 2015
171.	Harsh Kishore Mishra	2015	GATE 2015
172.	Srishti Yadav/ CUPB	2015	GATE 2015
173.	Amanpreet Singh	2015-16	UGC-JRF 2014
174.	Virendra	2015-16	UGC-JRF 2013

175.	Amandeep Kaur	2015-16	UGC-NET
176.	Moh. Hussain Naik	2015-16	UGC-NET
177.	Gaurav Kumar	2015-16	UGC-NET
178.	Amritpal Singh	2015-16	UGC-NET
179.	Richa Arora	2015-16	UGC-JRF
180.	Kiranjit Kaur	2015-16	UGC-JRF
181.	Igona	2015-16	UGC-JRF
182.	Sushma Kumari	2015-16	UGC-JRF
183.	Anil Arya	2015-16	UGC-NET
184.	Mohd. Sadiq	2013-2014	CSIR-UGC NET
185.	Gaurav Kumar Yogesh	2013-2014	GATE
186.	Radheshyam Yadav	2015-16	UGC-NET Dec 2014
187.	Sonu Ram	2015-16	CSIR-JRF
188.	Karmjot Kaur	2015-16	DBT-JRF
189.	Kunj Bihari Gupta	2015-16	NET
190.	Parveen Sharma	2015-16	NET
191.	Prabhat Suman	2015-16	RGNF 2015
192.	Gurpreet Kaur	2015-16	
193.	Preetleen	2015-16	CSIR-JRF
194.	Sourav Kalra	2015-16	GPAT

Table 3.12 : Successful scholars guided by faculty members at CUPB in last four years

Name of Centre	M.Sc./LL.M.	M.Phil.	Ph.D.*
Centre for Plant Sciences			
Dr. Felix Bast	2	8	-
Dr. Sanjeev Kumar	5	9	-
Dr. Pankaj Bhardwaj	3	5	-
Centre for Biochemistry and Microbial Sciences			
Dr. R. G.Saini	-	5	-
Centre for Animal Sciences			
Dr. A. K.Mantha	3	3	-
Centre for Pharmaceutical Sciences and Natural Products			
Prof P. Ramarao	-	-	-
Dr. Raj Kumar	12	-	-
Dr. Vinod Kumar	10	-	-
Dr. Vikas Jaitak	12	-	-
Centre for Computer Science and Technology			
Er. Meenakshi Mittal	2	-	-
Er. Surinder Singh Khurana	4	-	-
Er. Amanpreet Kaur	4	-	-
Er. Navjot Sidhu	3	-	-
Er. Sukhreet Singh Brar	5	-	-
Centre for Environmental Science and Technology			
Dr. A. K. Jain	-	-	-
Dr. R. C. Sharma	-	-	-
Dr. Sunil Mittal	4	10	-
Dr. M. S. Dhanya	-	3	-
Dr. K. N. Yogalakshmi	-	3	-
Dr. Puneeta Pandey	-	4	-
Dr. J. Nagendra Babu	1	5	-
Centre for South and Central Asian Studies			
Dr. Kiran Kumari Singh	-	5	-
Dr. Bawa Singh		4	-
Dr. Nishtha Kaushiki	-	9	-
Dr. V. J. Varghese	-	6	
Centre for Comparative Literature			
Dr. Zameerpal Kaur	-	9	-
Dr. Rajinder Kumar	-	7	-
Dr. Alpna Saini	-	5	-
Dr. Amandeep Singh	-	8	-
Centre for Law			
Dr. Deepak Kumar	05	-	-
Dr. Puneet Pathak	04	-	-
Dr. Hans Raj Arora	04	-	-
Centre for Economic Studies			
Dr. Sandeep Kaur	-	10	-

Dr. Naresh Kumar Singla	-	6	-
Dr. A. S. Kahlon	-	4	-
Dr. Kulwinder Singh	-	2	-
Centre for Human Genetics and Molecular medicine			
Dr. Monisha Dhiman	3	1	-

* Ph.D. students will now start to submit their thesis, since first batch of M.Phil.-Ph.D. students was admitted in 2009-10.

Table 3.13: Interdisciplinary projects at CUPB

S.No.	Faculty	Different Centre	Aspect of Collaboration
1.	Dr. Felix Bast (Assistant Professor) Centre for Plant Sciences	Dr. Vikas Jaitak (Assistant Professor) Centre for Pharmaceutical Sciences and Natural Products	MoES Project
2.	Dr. Bawa Singh (Assistant Professor) Centre for South and Central Asian Studies (including Historical Studies)	Dr. Sandeep Kaur (Assistant Professor) Centre for Economic studies	Role of SAARC: Geostrategic and Geoeconomic Perspective, ICSSR, New Delhi
3.	Dr. Felix Bast (Assistant Professor) Centre for Plant Sciences	Dr. Zameerpal Kaur (Assistant Professor), Centre for Comparative Literature	Tracing evolutionary legacy of Indian languages using computational phylogenetics, ICSSR, New Delhi

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

The university has introduced Research Awards for innovative faculty members who produce outstanding research achievements. The purpose of these awards is to promote research at CUPB, create a research atmosphere and give recognition to outstanding performance of individual researchers. As per this policy (*Section 2.4.6)* all those who publish in journals of high impact, obtain research grants from national/international agencies or file patents are honoured. The details are:

- Faculty members securing grant of Rs. 1 crore or above (all investigators of the project) are given a certificate of commendation by the Vice Chancellor and a cash award of Rs. 20,000 to be shared equally by investigators.
- For papers above impact factor 10, each author is given a certificate of commendation by the Vice Chancellor. Cash award of Rs. 20,000 is given which is to be shared equally by all authors.
- If the cumulative impact factor of papers published by a faculty member exceeds 15 in a calendar year, he/she is given a commendation certificate and cash award of Rs. 20,000/-.
- If a faculty member gets 5 commendation certificates, he/she is included in the Roll of Honour of the university and honoured at the time of next convocation.
- In addition to above, based on the scoring system for each criterion, "CUPB Outstanding Research Award" is declared in different disciplines.

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

University has framed policy to give incentives to faculties for receiving state, national and international recognition for research contributions. All national/ international recognitions are applauded by the university. Other details are mentioned in *Section 2.4.6*.

Those faculty members who get national and international recognition are given incentives as below:

1. A cash award of Rs. 5,000 for an award at state level.
2. A cash award of Rs. 10,000 for an award at national Level
3. A cash award of Rs. 20,000 for an award at international level.

The recognition should include awards by national bodies for example S.S Bhatnagar Award, fellowships of national academies and awards by recognized professional national level societies.

3.5   Consultancy

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

Central University of Punjab encourages the faculty members to undertake consultancy projects as a part of their academic duties. There is a strong realization in the CUPB that consultancy projects enrich professional knowledge of faculty, augment the university resources and promote university-industry alliance. Details of the consultancy policy have been mentioned in *Annexure 3.7*.

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

Yes, CUPB values the importance of corporate resources and of industry connects in its functioning. The university has established a strong link with industries relevant to its domain areas and has therefore constituted University-Industry Forum and University-Industry Council for the purpose. These two are CUPB's advisory bodies. Policy, scope and range of activities of these bodies are mentioned in *Section 1.1.5*.

3.5.3 What is the mode of publicizing the expertise of the University for Consultancy Services? Which are the departments from whom consultancy has been sought?

University website is used for publicizing expertise for consultancy services. CUPB seeks consultancies in the areas of pharmaceutical sciences, life sciences and environment sciences.

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

The faculty deals with the consultancy projects as per their expertise and handles them at their own level.

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

CUPB has decided to provide consultancy in all areas of expertise, particularly in biosciences, pharmaceutical sciences and natural products, environmental science and technology. Prof. P. Ramarao provided consultancy to Pfizer, Mumbai and M/s Juriga, Delhi

3.6 Extension Activities and Institutional Social Responsibility (ISR)

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

The university plays its role in the social upliftment of the less developed region of Punjab and involves its faculty and students in different ways. It has organized blood donation camps, world cancer day, computer literacy programme for senior citizens, innovators days to motivate local people and farmers in generating the novel innovative ideas which will benefit the society, skill development training to youth, etc. In all these programmes, the teaching faculty along with post graduate and Ph.D. students are involved to sensitize them of their social responsibilities and to motivate them for their social commitment by virtue of visualizing the impact of the services rendered at community level.

The social outreach programs which have created an impact on students' campus experience are:

- World Earth Day, April 22, 2015
- Human Rights Day, December 10, 2014 (Theme: Human Rights of Unpaid Homemakers: Will a Price Tag Help Empowerment of Women?)
- Celebration of International Women's Day, March 4, 2015
- Labour Day, May 1, 2015
- Fascination of Plants Day, May 18, 2015
- World Biodiversity Day, May 22, 2015
- World Environment Day, June 5, 2015
- Yoga Week, June 15-21, 2015
- International Day Against Drug Abuse, June 26, 2015
- World Population Day, July 11, 2015

CUPB has become a part of Unnat Bharat Abhiyana. The university has planned and is working on the health related issues of local population

involving the testing of following parameters in its laboratories on the campus under community development programmes:

- Ground and surface water
- Soil health
- Food grown in the area
- Human health through testing of relevant parameters of the blood samples.

Following five villages have been adopted: Ghudda, Badal, Daula, Multania, Pakka Kalan

CUPB provides skill-oriented programmes relevant to regional needs in the campus with the objective to provide specialized manpower to meet the regional needs. The details of skill development courses are provided in *Section 1.3.4*.

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

In a unique initiative, CUPB has developed MoUs with five local schools and colleges (*Table 3.14*) and has virtually adopted these for their upliftment. The university interacts with nearby community and strengthens the neighborhood network by contributing to social development of the area.

- Apart from the activities listed in 3.6.1 above, the students are engaged in various community development activities like:

    - Adoption of villages.
    - Adoption of school and colleges.
    - Serving during local festivals.
    - Spot painting competition for school boys and girls.
    - Social services – like teaching of children from slums.

- A motivational programme for talented school students of Punjab in collaboration with Punjab State Council for Science and Technology was conducted at CUPB from 14th to 18th September 2015.

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

The university applied to the concerned department for allotment of the unit of N.S.S. and has got sanction of 500 seats for the students. N.C.C.,

programme is available only for undergraduate students who are supposed to stay for at least for 3 consecutive years; therefore, the CUPB could not get sanction for introducing N.C.C.

Participation in activities of Youth Red Cross has been organized in the form of Blood Donation Camps organized in February 2013 and February 2014 on the occasion of Foundation Day Ceremony.

Other Extension Activities organized by the university:

- Sensitization Programme for teachers of elementary, primary, secondary and senior higher secondary education on Water Quality Profile on February 12, 2015.

- Seminar on 'Awareness about Environment Protection' was organized on the occasion of Earth Day, on April 22, 2015 in collaboration with Punjab Pollution Control Board to sensitize various sections of community.

- Workshop on 'Biodiversity for Sustainable Development' organized in collaboration with Punjab State Council for Science and Technology, Chandigarh, National Biodiversity Authority and State Biodiversity Authority, Punjab on International Day for Biological Biodiversity day on May 22, 2015. Representatives of NGOs, social welfare clubs, and educational institutes also participated in the event with great enthusiasm.

- Extension lecture on the 'Contribution of Dr. B. R. Ambedkar in Social Justice' on April 28, 2015 with the purpose to sensitize the students as well as workers from outsourcing agency about the versatile personality of Dr. B. R. Ambedkar.

- Celebration of Labour Day – May 1, 2015 by faculty and students with labourers and workers from the outsourcing agency.

- Awareness camp on human rights organized at village Gurchari organized on May 17, 2015.

- World Environment Day, June 5, 2015

- Yoga Week, 15-21 June, 2015

- International Day Against Drug Abuse, June 26, 2015

- World Population Day, July 11, 2015

- Massive Plantation Drive at main campus, July 18, 2015

- NSS Camps organised at main campus, July 24-25, 2015

- Swachh Bharat Abhiyan 2015

- Contribution to flood relief in J and K and sufferers of Nepal Earthquake

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

CUPB has done the following work in these areas:

a) To ensure contribution of the university in social justice and empowerment of the underprivileged and other vulnerable sections of the society, the School of Legal Studies and Governance has established Legal Aid Clinic that runs legal literacy activities within and outside the campus especially in rural areas for creating awareness about the rights, providing free legal aid and consultancy to the stakeholders.

The Legal Aid Clinic aims to provide a single window facility for following:

- Client counselling
- Legal awareness in the rural, as well as, urban people
- Publication and dissemination of legal aid literature
- Workshops for NGOs
- Field surveys;
- Adult literacy classes for the residents of surrounding areas and non-teaching employees
- Street plays on socio-legal issues
- Guidance and preparation of various applications for schemes

b) School of Social Studies is involved in the following research activities to ensure justice and empower the underprivileged and the most vulnerable sections of society:

- Problem of land acquisition: a case study of Gobindpura
- Socio-economic implications of pesticide use in Bathinda district of the Punjab state

- Socio-economic externalities of Guru Nanak Dev Thermal Power Plant in Bathinda
- Child labour in prosperous state of India: A case study of the agriculture belt of Punjab
- Women's Exploitation in Contemporary South Asia: Field experiences of child marriage in Bathinda district. A field study and survey was conducted that was related to the sexual abuse of child bride. Villages for the field study included Deon, Bhokhra, Gill Patti, Bir Talab, Naruana, Jai Sing Wala, Khialiwala, Joganand, Mehta, Jassi Pou Wali, Bahoo, Gehri, etc. The urban areas of Bathinda that were covered were Bhucho Mandi, Maur Mandi and main city.
- Socio-Legal Dimensions of Domestic Violence against Women: A field experience of Malwa and Doaba Regions of Indian Punjab. In Jalandhar and Bathinda, 200 and 100 women were interviewed, respectively. Major issues within the ambit of domestic violence such as dowry, sexual harassment, gender discrimination and legal awareness have been examined.

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

The students involved in citizenship roles are monitored by the concerned teachers in charge of that activity and Dean of Students' Welfare. Further, to motivate students involvement on activities that promote these roles, recognition awards have been given for various activities like participation in republic day function, sports meet, annual function, etc. The awards are also given to the male and female volunteers to encourage them for community roles.

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

The extension activities of CUPB are a practical experience in knowledge and skill enhancement of students as a follow up of class room teaching. The students get important lessons in organizational skill, leadership quality, civic sense, and adaptability to socio-environmental conditions, practical knowledge, hands-on experience, communication skill, community involvement, commitment to nation building, etc.

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

CUPB has already developed links in the nearby areas through its outreach activities. Students from nearby schools and colleges are regularly invited to visit CUPB facilities. The Environmental Awareness Club involves local communities in its programmes. As a unique venture university organises "Computer Literacy Programme" for senior citizens. In 6 batches, 49 senior citizens have participated in the programme which consists of six modules that were administered in 6 days. Participants were provided notes of learning modules in English, Hindi and Punjabi.

Recently CUPB organised tree plantation drive at its main campus Ghuddha. NDRF team actively participated along with students, faculty and non-teaching staff.

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

None

3.7 Collaboration

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

The university has signed Memorandum of Understanding (MoU) with University of Saskatchewan Canada**,** Institute of Himalayan Bioresource Technology Palampur, Punjab Agricultural University, Ludhiana, National Agri-Food Biotechnology Institute Mohali, Baba Farid University of Health Sciences Faridkot, National Academy of Medical Sciences Delhi and Centre for Research in Rural and Industrial Development Chandigarh and other institutes as in *Table 3.14*. These MoUs help the university and linked institutes in getting academic and research benefits by the way of collaborative research works, programmes, technology transfer, updating knowledge, training, etc. These collaborations reinforce among the faculties, the ability to work in inter-disciplinary areas and coordinate with other players in contemporary research as detailed in *Section 3.7.2* below.

3.7.2 Mention specific examples of how these linkages promote

Curriculum development:

- In the proposal for B.Voc. (Food Processing Technology), Punjab Biotechnology Incubator and Centre for Innovative and Applied Bioprocessing have been identified as partners. Our MoU with these organizations was very useful in facilitating such co-operation.

- Similarly, a MoU with Baba Farid University of Health Sciences was very helpful for partnership in another B.Voc. proposal on Medical Techniques and Health Science

Internship:

- Linkages promote research and training opportunities for CUPB students and also promote the sharing of knowledge, resources and expertise between CUPB and partner organizations.

- Enhance the education and employability of students by building their knowledge, expertise and work skills through hands on training in real-life settings. The organizations in MoU with CUPB are always helpful in training internships for students

On the job training:

- Interns build up knowledge through their experience for the challenges ahead in life.

- List of the students who have been employed in different sectors and industries is given in *Section 5.1.13*.

Faculty exchange and development:

- Professor R. Chibbar from University of Saskatchewan visited CUPB and delivered lectures.

- CUPB faculty and students have the facilities of MoU partners open for use.

Research:

- In a proposal on climate change submitted to IDRC, Canada, the University of Saskatchewan is our partner organization. MoU with

this university was instrumental in building up this significant collaborative preposition.

- More possibilities of joint research, frequent exchange of students and faculty, learning through discussions and exchange lectures are some of the many possibilities in joint research with MoU partners.

Publications:
Combined efforts of CUPB faculty with scientists in partner organizations are certain to improve the quality of publications.

Consultancy and extension:
It is proposed to have joint consultancy projects in future.

Student placement:
Networks that are built through collaborations are concrete and helpful in students' internships as also job placements.

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

Central University of Punjab, Bathinda understands the power of networking with peer institutions. MoUs have been developed between CUPB and other organisations nationally and internationally as in the *Table 3.14*. This has facilitated use of facilities at both the institutions and sharing of resources, exchange programmes, curriculum development, conducting training programmes, seminars, workshops and research activities. The faculty will also be able to take advantage of these MoUs through exchange of information on teaching, learning material and other literature relevant to their programmes.

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

CUPB has a strong emphasis on university-industry interactions. The university has established a "University-Industry Forum" which includes small, medium, large and multinational industries. Five industries out of these form University-Industry council (*Section 1.1.5*). Both of these are CUPB's advisory bodies in the matters related to curriculum development, research priorities, skill development, entrepreneurship development and students placement.

Table 3.14: List of MoUs signed by CUPB

I.   For Academic Collaborations

S.No.	Name of organisation	Date
1.	CSIR-Institute of Himalayan Bioresource Technology, Palampur	8.3.2013
2.	National Agri-Food Biotechnology Institute, Mohali	28.3.2013
3.	National Academy of Medical Sciences, New Delhi	19.8.2013
4.	Punjab Agricultural University, Ludhiana	20.9.2013
5.	Baba Farid University of Health Sciences, Faridkot	17.10.2013
6.	Centre of Innovative and Applied Bioprocessing, Mohali	17.1.2014
7.	Punjab Biotechnology Incubator, Mohali	3.2.2014
8.	Department of Plant Sciences, University of Saskatchewan, Canada	12.6.2015
9.	Centre for Research in Rural and Industrial Development, Chandigarh	26.6.2015

II.   As Institutional Social Responsibility

S.No.	Name of organisations	Date
1.	R.B.D.A.V. Senior Secondary School Bathinda	22.1.2015
2.	D.A.V. College Bathinda	22.1.2015
3.	Silver Oak School, Bathinda	22.1.2015
4.	Shaheed Sandeep Singh Govt. Senior Secondary School, Bathinda	22.1.2015
5.	Govt. Rajindra College, Bathinda	31.8.2015

Annexure 3.1

GUIDELINES FOR SUBMISSION AND IMPLEMENTATION OF RESEARCH PROJECTS FUNDED BY OUTSIDE AGENCIES

1. **Applications for Research Schemes**

    i.   All proposals for research schemes for submission to the sponsoring bodies should be forwarded through the Coordinator of the Centre to the Registrar. The Coordinator of the Centre will also indicate in the proposal those requirements of the schemes which may have to be met by the university to enable provision of the necessary facilities. Foreign exchange, if needed shall also be mentioned/spelt out.

    ii.   All such proposals up to Rs. 10.00 lacs as total budget for the duration of the scheme where no financial liability on the part of university is involved shall be forwarded to the sponsoring bodies directly by the Registrar on the recommendations of Dean Academic Affairs. The prior approval of Vice Chancellor in these cases will not be necessary.

    iii. The Principal Investigator (P.I.) may associate a Co-Principal Investigator (Co-P.I.), who will be responsible for execution of the project in the absence of the Principal Investigator. Invariably, the co-investigators of the project may be named in the proposal.

    iv.   When a proposal is approved by the funding agency and sanction letter is received; approval from the Vice Chancellor will be sought for operation of the project at CUPB and its inclusion in the university budget. Subsequently, the project will be assigned a project code by the university.

    v.   The date of commencement of the project shall be treated as the date on which the CUPB assigns a code to the project. The Principal Investigator will convey this date to the funding agency as the official date of commencement of the project.

    vi.   The accounts branch shall maintain a separate account for each project and shall provide tracking facility to the P.I.

    vii. The budget of project shall be operated by PI and Co-PI (In absence of PI). The issue of cheques towards approved payments will be jointly under the signatures of PI/Co-PI (In absence of PI) and Registrar.

    viii. If the proposal is for a grant from a non-government organization, a statement on the terms and conditions of the grant including the rights of patents/royalties and commercial gains will be a part of the proposal.

ix.   If an MOU is to be signed with the Funding agency upon sanction of the project, exact terms and conditions of the MOU must be spelt out in the proposal.

x.   All records relating to each research proposal shall be maintained in the office of Dean Research/Dean Academic Affairs.

2.   Provision for Posts

(i)   The posts required under the scheme should be clearly specified in the proposal. After the proposal for the scheme is approved, it will not be necessary to obtain order of the Vice Chancellor once again for creation of posts.

In case the proposal also includes research and supporting/ secretarial staff.

(ii)   The posts provided in the proposal should preferably carry the scales of pay as required by the sponsoring authority. If there are no such requirements then the scales of pay should be identical to those of the corresponding posts in the university.

(iii)   The qualifications for the posts will be similar to those prescribed for the corresponding posts in the university.

3.   Appointments

i.   For appointments to the posts under the scheme, applications should be invited by the Principle Investigator after due publicity regarding the vacancies, including, if necessary, a press advertisement in the newspaper (s).

ii.   The applications will be processed by the Principle Investigator.

iii.   Selection will be made by a committee consisting of the Centre Coordinator, the Principle Investigator and one more member of the Centre in the field (to be appointed by the Centre Coordinator in consultation with the Principle Investigator). In the case of a senior position like Research Associate and above, the Committee will also include the Dean Academic Affairs.

iv.   Unless required by the sponsoring authority; the Committee may make recommendation for appointment without interview. However, if the committee decides to interview the candidates, it may do so. No TA/ DA etc. will be paid to the outstation candidates called for interview for employment in the scheme. The Committee shall also make recommendation for the starting pay/emoluments to the successful candidate (s).

v.   On the recommendation of the committee referred to at (iii) the services of specialists may be had without advertisement up to two

years, from University/Govt./Research Institutions or Public or Private Sector. Wherever services of such a person are acquired on deputation basis, the conditions of service may be regulated according to the standard terms of deputation as followed in the Central Government with the approval of the sponsoring body.

vi. The minutes shall be signed by all the members present. After the minutes are approved by the competent authority these shall be forwarded to the Registrar's office. The appointment letter (s) will ordinarily be issued by the Registrar office within three days of receipt of the minutes duly approved by the competent authority.

vii. Appointment of the staff in the scheme/project will be on temporary basis and shall not exceed the duration thereof. The staff will have no claim for regular appointment in the university on the termination of the scheme/project.

viii. The staff employed in the schemes will be governed by the same rules and conditions of service as applicable to the temporary employees of the university from time to time except in those schemes where the conditions of service have been laid down by the sponsoring bodies.

ix. The leave to the members of staff under the scheme will be admissible to the same extent as is admissible to the corresponding non-vacation employees of the university working in the non-vacation departments unless the sponsors specify otherwise. The scheme in-charge will be competent to sanction leave to the extent it is admissible.

x. The joining report of the selected candidate should be countersigned by the Principle Investigator and forwarded to the Registrar's office. A copy may be retained in the office of the Centre.

4. Benefit of Provident Fund

i. The benefit of provident fund, if admissible under the scheme will be allowed to the employees in accordance with the rules of the university. At the time of sending proposals by the In-charge of the scheme to the university the provision for P.F. should be considered by him and clearly indicated in the budget.

ii. In case there is no provision of Provident Fund in the scheme/project, no contribution towards General Provident Fund will be made.

iii. Each project/scheme will be treated as individual set-up /institution especially with respect to labour laws.

5.   Payment of Honorarium to the Staff

i.   Unless the scheme permits, the Principle Investigator or anyone else working on the establishment of the university shall not be entitled to any honorarium or extra payment in the event of their being detained to supervise any project/scheme to be financed by the different organisations from the funds of the schemes.

6.   Utilization of Project Funds

I.   Diversion of funds from non-recurring to recurring as well as within non-recurring and recurring heads shall be done with the approval of funding agency only. Similarly, new equipment or posts may be added only with the approval of funding agency. Also, the un-utilised grant from the previous financial year may be carried forward to the next financial year with the approval of the Vice Chancellor, unless required otherwise by the funding agency.

II.   The contingencies provided in the project may be used strictly as per the sub-heads in the sanction letter issued by funding agency. These contingencies may be used for: Travel within the country for project work, for attending conferences/meetings, registration fee of conferences, typing, photocopying, stationary, membership fee of professional bodies, postage expenses, computer peripherals and software, hiring of vehicles, hiring of casual labour for project work, purchase of minor equipment, repair of equipment related to the project, charges on advertisement of posts, travel of outside experts for work related to the project etc. Foreign travel may only be allowed if specifically provided in the project by the funding agency. The procedure as prescribed by the university for Similar Expenditures shall apply.

III.   Normally 15%, and in no case less than 10%, of the annual recurring costs of the project shall form "overhead charges" for each financial year. P.I. must make provisions for this while submitting a proposal. As a matter of principle, overhead charges are meant to offset the cost of electricity, equipment, university staff and other university facilities used in operating the project and shall therefore be added to "Overheads Scheme" to be maintained by the university. If there are no provisions made for overhead charges in the project, university may deduct 10% of the recurring contingency for the purpose.

IV.   It will be the responsibility of the P.I. to seek release of grants from funding agencies. For the purpose P.I. shall ensure timely preparation of Utilisation Certificate, Statement of Expenditure, Progress Reports and other documents that may be required by the funding agency from time to time.

V.   Any unspent grant shall be returned by the university to funding agency on completion of the project.

VI.   The "Assets" acquired out of the externally funded projects shall become the assets of the university after the completion of the project, unless required by the funding agency otherwise, but these will remain with the P.I. for his research work at CUPB.

VII.   The Principle Investigator shall be allowed to exercise administrative and financial powers equivalent to COC for the project under his charge.

VIII.   The Principle Investigator shall submit project completion report within three months of the completion of the project or in accordance with the requirements of the funding agency. A copy of the completion report must be submitted to the Dean Academic Affairs for records and verification of financial details.

IX.   In all the matters not covered above, rules of the funding agency/clarifications provided by the funding agency shall apply.

7.   Purchases

i.   Purchases of stores (consumable and non-consumable) machinery etc. will be made according to the rules of the university. The In-charge of the scheme will exercise the powers of the Centre Coordinator for purchases under the scheme provided all the expenditure on the purchases is met from the scheme funds only.

ii.   Supply orders will be signed and issued by the In-charge of the scheme after scrutiny of the tenders/quotations obtained from various suppliers. The order will normally be placed with the supplier whose quotation is the lowest, unless, for reasons to be recorded the lowest or other lower tenders/quotations are not acceptable.

iii.   The orders placed will be subject to scrutiny by finance department or/and a committee constituted by the Vice Chancellor.

iv.   The responsibility in respect of all such purchases and expenditure incurred as per the GFR applicable shall solely be that of the Principle Investigator.

8.   Payment of Bills

i.   All bills in respect of the schemes (including bills for advances) will be signed by the in-charge of the scheme and sent to the Registrar's office duly completed in all respects, for payment. It will be the

responsibility of the scheme in-charge to see that the bills are complete in all respects and are in order.

ii. Advances where necessary shall be made to the scheme in-charge who will be responsible for rendering the account of such advances.

iii. The investigator in-charge may be provided, with an impress not exceeding 10% of the contingency grant to meet the day-to-day contingent expenditure, according to the university rules.

iv. Payment of the bills will be made through the scheme in-charge by cheques drawn in favour of the parties concerned. He will keep a record of the cheques received/delivered.

v. The salary of the staff in the scheme will be drawn and disbursed by the scheme in-charge acting as the Centre Coordinator in the usual way.

vi. Where a part of expenditure on the purchase of articles for the scheme is shared by the university funds, the bills will have to be verified by the concerned Centre and approved also by the Centre Coordinator.

vii. T.A./D.A. in the scheme will be paid as per University Rules unless provided/approved otherwise in the scheme by the sponsors. For payment of charges for local conveyance, approval of the Investigator In-charge of the scheme as also The Centre Coordinator concerned will be necessary unless the scheme provides for such payments.

viii. In case the PI is to undertake travel himself/herself prior permission from the Vice Chancellor will be required that too subject to the conditions that: (a) it is not at the cost of teaching and/ or other duties of the university (b) it is not being clubbed with private work.

ix. The period spent by the Investigator in-charge or Investigators on field work relating to research work of the scheme should be treated as on professional duty, keeping in view their teaching assignments.

x. The project in-charge should be permitted to establish a field station, with the approval of sponsoring body.

9. Progress Reports

The Principle Investigator shall prepare the technical and fiscal reports for each reporting period in accordance with the requirements of the scheme. The following procedure may be followed in respect of the two reports :

a. A six monthly report – both technical and fiscal shall be submitted by the PI to the Registrar.

b. For fiscal reports, the statement of accounts and the estimates will be prepared by the scheme in-charge and sent to Registrar's office for checking with the records, maintained in Registrar's office. After due check and agreement of the figures, the fiscal reports will be

    signed by the Registrar and returned to the Principle Investigator for submission of the required number of copies to the sponsors.

c. The technical reports duly prepared and signed by the Principle Investigator will be countersigned by the appropriate university authority according to the provision of the scheme and submitted by the scheme-in-charge to the sponsors. A copy of the report shall also be sent to the Registrar's office and the concerned Centre Coordinator.

10. Maintenance of Stock Registers

a. Each scheme should have separate stock Registers for consumable and non-consumable articles and these shall be registered with office of Registrar.

b. Articles should be issued and properly entered in the stock Registers in accordance with the Guidelines laid down by the university for the departmental store.

c. Balances should be worked out up-to-date every month.

d. All entries in the stock books should be initialled by the scheme in-charge.

e. Physical verification of stock should be done by two persons to be appointed by the Dean Academic Affairs at least, once in a year and the result thereof should be reported to the Dean Academic Affairs who will send it to the Registrar's office for record and action, if any.

11. Closing of the Scheme/s

A statement of final accounts showing the receipts and expenditure year-wise and a list of articles (consumable and non-consumable) left over at the time of termination of the scheme and purchased out of the scheme funds should be sent in triplicate to the Registrar's office in the prescribed proforma duly countersigned by the Centre Coordinator and verified by the **Resident Audit Section** of the university. These articles may be transferred to the stock Registers of the Centre except where the sponsoring bodies do not allow the concerned Centre to retain the articles without paying them the book value of the articles. The equipment transferred to the Centre shall be issued to the PI. In case the concerned Centre does not want these articles, the same will be auctioned through the Executive Engineer's office with sanction of the sponsoring bodies as well as the Centre Coordinator. The sale will be credited to the university. A report regarding the transfer of assets of the scheme to the concerned Centre and their disposal shall be made to the Vice Chancellor through the Dean Academic Affairs, by the concerned Centre.

12.   Publications and IPR Issues

    I.   The P.I. may publish results obtained in the project and acknowledge the funding agency for research grant.

   II.   The Intellectual Property, royalties and commercial gains out of the research carried out in the project shall be subject to IPR policy of the university.

13.   Disposal of Unserviceable Articles

The university rules may be followed in the disposal of unserviceable articles purchased from scheme funds.

14.   Power to Interpret and Implement Rules

The Vice Chancellor shall have the power to interpret these rules and to grant relaxation as may be necessary in any case and issue such administrative instructions as may be necessary to give effect to them.

WORKSHOPS ORGANIZED AT CUPB

Bioinformatics in Human Genetics: Mutations, Microarray Analysis and Oncologies

A Joint Indo-German workshop on 'Bioinformatics in Human Genetics: Mutations, Microarray Analysis and Oncologies' was organized in association with Institute for Medical Genetics and Human Genetics, Charite-University of Medicine, Berlin, Germany and Guru Nanak Dev University, Amritsar, January 25-29, 2010.

SPSS Training Workshop

One-day SPSS Training Workshop was organized by Centre for Computer Science and Technology and Centre for Mathematical Sciences on June 6, 2014. The participants were trained in *SPSS* Statistics software package which can be used for various statistical analyses. The participants were given 20 trial CDs of the SPSS software.

Business Process Simulation

Er. Meenakshi and Er. Sukhreet Singh organized a workshop on "Business Process Simulation" on 8 September 2014.

Plagiarism Web Tools

One-day workshop Cum Training Programme on Plagiarism Web Tools held on 12th September, 2014, Organized by University Library.

Fluorescent *in situ* Hybridization (FISH),

The Centre of Human Genetics at Central University of Punjab, Bathinda in collaboration with DSS Imagetech Pvt. Ltd. organized a two day (25th and 26th September of 2014) workshop on Fluorescent *in situ* Hybridization (FISH), a modern technique used in clinics and biomedical research. The fourteen participants had hands on experience about the implementation of the technique in the research laboratory of Centre for Human Genetics.

One day National Workshop on Training the Trainers: Water Quality and Health

CUPB organised one day workshop for the government school teachers, academicians, researchers and students on February 11, 2015. Guest of Honour of

the programme: Dr. Amarjit Kaur Kotfatta, District Education Officer (Secondary Major General (Retd.) R. K. Kaushal described the significance of water while quoting from *Shri Guru Granth Sahib* where Air, Water, and earth has been given equal significance as mentor, father and mother respectively which we all should respect. Key speaker of the workshop: Prof. V. K. Garg of Guru Jambheshwar University.

A poster presentation competition was also organised during the function in which more than 40 participants took part.

Bio-diversity for Sustainable Development

Workshop on 'Bio-diversity for Sustainable Development' organized in collaboration with Punjab State Council for Science and Technology, Chandigarh, National Bio Diversity Authority and State Bio-Diversity Authority, Punjab on International Day for Biological Diversity dated May 22, 2015. Representatives of NGOs, Social Welfare Clubs and Educational Institutes also participated in the event with great enthusiasm.

Annexure 3.3

POLICY FOR VISITING PROFESSORS

The following Committee constituted by the Executive Council during its fifth meeting, vide Item No. EC:5:2011:4.2.4.5, to rationalize the emoluments and other terms of appointment for the senior faculty/officials met on 28th May 2012 at 2:30 p.m. in the office of Prof. G.K. Chadha at Akbar Bhawan, New Delhi:

1. Prof. Dr. Jai Rup Singh, Vice Chancellor, CUP, Bathinda
2. Prof. G.K. Chadha, President, South Asian University, New Delhi
3. Prof. Seyed E. Hasnain, Indian Institute of Technology, New Delhi

The Committee noted that, the Academic Council vide Item No. AC:1:2009:5, the Executive Council vide Item Nos. EC:2:2010:7 and EC:4:2011:3, and the Finance Committee vide Item No. FC:2:2011:8 have all resolved that all kinds of incentives including higher emoluments and other facilities be offered by the university to attract senior and experienced faculty. It also took note of the recommendations of the two Committees constituted by the university to frame rules for pay fixation.

Considering the resolutions of various Statutory Bodies, the recommendations of university committees, the difficulties being faced by the university in attracting senior faculty, and also the prevalent shortage of senior faculty in India as such, the observations and recommendations of the Committee are as follows:

- The Committee strongly feels that for the healthy growth of the university, it is essential to have some senior academicians in the university. The presence of such members is a must to provide right direction and leadership in the different disciplines that have been initiated by the CUP.
- In order to attract senior professors, the Committee is of the strong view that the eminent and competent senior faculty would need to be invited by the university by offering them an attractive designation and a reasonably decent consolidated pay package. The amount of pension received by the incumbents should not be deducted from the fixed emoluments being offered. Without such incentives, it will be almost impossible to persuade senior people to join the university at Bathinda on contractual basis.
- Distinguished Professors: The Committee recommends that persons who have made significant contribution in academics in a particular area and have held high academic positions like those of Vice Chancellor, Pro-Vice Chancellor, Directors of national level Institutes, Emeritus Professors of U.G.C., C.S.I.R., I.C.A.R., I.C.M.R. or any other National level body be invited by the university and designated as Distinguished Professors. They be offered a consolidated amount of Rs. 1,25,000/- per month. The university may also consider offering them some additional facilities in kind.

- Invited Professors: It is recommended that the other senior professors, with appreciable contributions in their fields, who have retired from universities/national level institutions be persuaded to join the university as "Invited Professors" and offered consolidated emoluments of Rs. 1,00,000/- per month. The university may also consider offering them some additional facilities in kind.

- Visiting Professors: The committee feels that the 'Visiting Professors' be appointed following the existing guidelines of the U.G.C.

- Associate Professors or Equivalent: The Committee feels that retired academicians may not be normally appointed as Associate Professors on contractual basis. However, if there is need for such persons in the university, then they may be suitably designated such as Museum Coordinator; Museum Curator; Incharge Computer Centre, Incharge Library, Associate Economist, etc. Such academicians/professionals be offered consolidated emoluments of Rs. 70,000/- to Rs. 75,000/- per month.

- The rationale followed for working out the emoluments is as given below: -

  a) A Senior Professor at the time of retirement at Bathinda would be receiving about Rs. 1,45,000/- per month [Band Pay (Rs. 67,000/-) + Grade Pay (Rs. 10,000/-) + DA @ 65% (Rs. 50,050/-) + HRA @ 20% (15,400/-) + TA (Rs. 2640/-) = Rs. 1,45,090/-]. The Fellows of National Academies and those retiring from Class 'A' cities would be receiving still higher emoluments at the time of their superannuation.

  b) Similarly, a senior Associate Professor at the time of retirement at Bathinda would be receiving about Rs. 1,43,000/- per month [Band Pay (Rs. 67,000/-) + Grade Pay (Rs. 9,000/-) + DA @ 65% (Rs. 49,400/-) + HRA @ 20% (15,200/-) + TA (Rs. 2640/-) = Rs. 1,43,240/-].

Therefore, in order to attract the senior academicians to come to Bathinda to join the Central University of Punjab, the emoluments being proposed are fully justifiable.

- Appointments be made against existing positions: The appointment of "Distinguished Professors" and "Invited Professors" can be made against the existing vacant positions of Professors as their emoluments do not exceed than that of a regular Professor. Similarly, the appointment of Associate Professor and equivalent positions can be made against the existing vacant positions of Associate Professors.

Annexure 3.4

Ref. No: CUPB/CC/15/EC-15/33   Dated: 06-8-2015

<u>NOTIFICATION</u>

In pursuance to Item No. EC:15:15.:40 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No:AC:7:2015:35) is hereby conveyed for establishment of **Intellectual Property Right Cell (IPR Cell).** The Ordinance Governing **Intellectual Property Right Cell** is enclosed for reference and records.

Further to the above approval of the Competent Authority is conveyed for the constitution of the Intellectual Property Cell (IPR Cell) comprising of members as detailed hereunder**:**

1. Prof. R.G. Saini, Invited Professor, **Chairperson**
2. Prof. A. K. Jain, Dean SEES
3. Dr. Sunil Mittal, Assistant Professor
4. Dr. Jai Prakash, Assistant Professor
5. Dr. Preeti Khetarpal, Assistant Professor   - **Convener**

This is issued with the approval of the Competent Authority

INTELLECTUAL PROPERTY RIGHTS POLICY

1. **Preamble**

   The **Central University of Punjab** (hereinafter referred to as University) is dedicated to teaching, research and transfer of knowledge to public for their betterment and taking appropriate measures for promoting innovations in teaching-learning process, interdisciplinary studies and research. The University is committed to provide encouraging atmosphere to researchers and to reward them for their efforts.

   Therefore, in order to establish the respective rights and obligations regarding Intellectual Property of the University, its students, faculty and employees, the University is adopting this ordinance governing Intellectual Property (hereinafter referred to as the "Policy").

2. **Commencement of the Ordinance:**

   The ordinance shall come into effect from the date of its approval by the competent authorities, but it shall cover all the intellectual property generated at the University since its inception in 2009.

3. **Definitions:**

Central University of Punjab or University	Central University of Punjab established under the Central Universities Act, 2009
Intellectual Property (IP)	Property generated out of the intellectual effort of the creator and it includes patents, copyrights, trademarks, industrial designs, service marks, logos and any other form.
Creator (s)	The faculty, staff and other persons employed by the university whether full or part-time; visiting faculty and researchers; and any other persons, including students, who create intellectual property using university resources.
Student	All candidates registered for courses leading to a degree, diploma or certificate
Externally funded project staff	Shall include all research staff appointed in the externally funded projects
University – Supported Resources	Shall include all facilities, equipment, funds and intellectual property already owned by the university
Technology transfer activities	Shall include assignments, disclosure, licensing or any other activity which results in financial gain to the university

4.   Scope of the Ordinance:

The ordinance governing Intellectual Property Policy shall apply to all faculty members, staff, externally funded project staff and students of the university as well as all others involved in generation of intellectual properties at the university. Students and other staff working on research projects at the university requiring university assistance or utilization of university resources shall be required to agree in writing to recognize and adhere to this policy.

5.   Application:

This policy as amended from time to time shall be deemed to be a part of the conditions of employment for every employee and a part of the conditions of enrolment and attendance at the university for students.

6.   Creation of Intellectual Property:

Intellectual Property can be created in the university in the following ways:
   i)   Creator may develop Intellectual Property during the course of his/her research or as a specific project.
   ii)   A student may develop intellectual property in order to earn a degree, a diploma or a certificate course in the university.
   iii)   University undertaking an assignment either from an external agency or by its own decision assign a team of its researchers to accomplish it.
   iv)   An external agency may enter into a specific agreement with the university or its researchers to develop some specific intellectual property.

7.   Ownership of Intellectual Property:

   7.1   General statement of ownership.
       Subject to the exceptions mentioned hereinafter in clause 7.2, all Intellectual Property (in both tangible and intangible forms) created by the use of university facilities or university- supported resources shall be owned by the university and the creator of intellectual property jointly. Any copyrightable work generated as a work for hire will belong to the university as per the terms of the contract. Intellectual Property Rights of which the university is the co-owner shall be managed by the Intellectual Property Cell of the university as per provisions of this policy.

7.2 **Exceptions to the general statement of ownership:**

The university will not own the right of Intellectual Property in the following situations:

i) Books, articles, monographs, lectures, speeches and other communications produced by the staff in the course of research and teaching in the university.

ii) All copyrights in term papers, research papers, thesis and dissertations written by a student to earn a degree shall belong to the student.

iii) All Intellectual Property developed by the creator without the use of university resources.

8. **Responsibilities of the university**

The university administration shall:

i) at its discretion assign management including registration of intellectual property, negotiations, assignment and licensing for commercial use of such intellectual property in which it has stake/share.

ii) educate faculty members, staff and students regarding university's intellectual property, provide support to creators to obtain legal protection in which university has its stake/share, facilitate the transfer of such Intellectual Property for commercialization, and share income derived from such Intellectual Property.

iii) provide legal support as it deems necessary and desirable for the enforcement of its intellectual property and to defend the interest of the university against third party claims on intellectual property in which university has its stake/share.

9. **Responsibilities of the creators of Intellectual Property**

The creator of the intellectual property shall

i) make disclosure in a thorough and timely manner of all inventions, discoveries and other works that can constitute Intellectual Property and in which university has stake/share as described in this ordinance.

ii) provide such assistance as may be necessary throughout the assignment process to protect and transfer of Intellectual Property.

iii) provide all records and documents that are necessary to the protection of the Intellectual Property.

iv) abide by the agreements made in respect of the sponsored research and licensing in accordance with this ordinance.

v)   have further responsibility to properly consider, disclose and manage any conflicts of interest arising in the ownership of Intellectual Property in which the university has stake/share.

10.   Administration of Intellectual Property

i)   Intellectual Property generated through university projects or sponsored projects will be governed by the terms of agreement between the university and the sponsor.

ii)   Handling of the rights of Intellectual Property generated during the course of the externally funded projects shall be governed by the terms of contract between the funding agency of the project and the university.

11.   Intellectual Property Rights Cell (IPR Cell)

i)   There shall be an Intellectual Property Rights Cell (IPR cell) for the management of the Intellectual Property in which the university has stake/share, technology transfer activities and for the implementation of the Intellectual Property Rights Policy. The IPR cell shall also look after the registration, protection, management, budget and division of intellectual property income between creators, university and external funding agency if any. The IPR Cell shall make recommendations to the competent authority that will be final authority to decide on its sharing among stake holders.

ii)   The IPR Cell shall lay down the procedure for conduct of its business and meeting of the IPR Cell shall be convened by the Chairman.

iii)   The university shall provide adequate space, funds and secretarial staff for the smooth functioning of the cell.

12.   Share of university, creator and others if any

i)   The moral rights associated with Intellectual Property shall always remain with the inventor. These rights include the right of fair attribution of creation and right to prevent usage of the Intellectual Property in such a way that it harms the reputation of the creator.

ii)   Royalty accruing or any type of payment received from the commercialization of university owned intellectual property will be shared between the university and the creator as per schedule I.

13.   Dispute Resolution

Any disputed issue related to the intellectual property or the interpretation of this ordinance, shall be decided by as follows:

i)   the matter can be resolved by calling a joint meeting with all the members of the IPR Cell, creator, funding agency if the intellectual property has been created by using its resources or any third party.

ii)   Any disputed issue that cannot be resolved with the assistance of the IPR Cell shall be referred to a tribunal of arbitration at the instance of the competent authority of the university or at the request of the creator or any third party. The tribunal shall consist of one member appointed by the Vice Chancellor, one member nominated by the grieved party and the Dean faculty of law or his/her nominee.

14.   Right to regulate policy

The University Intellectual Property Rights Cell shall have the responsibility for interpreting the IPR policy, resolving disputes concerning the interpretation and application of these policies and recommending changes to the policy. All changes to this policy shall have to be ratified by the competent authority.

15.   Amendments

The university reserves the right to amend this ordinance at any time as required. The Executive Council upon recommendation of the Intellectual Property Rights Cell may amend these ordinances.

16.   Logo and Emblem of university

The logo of the university is the exclusive property of the university. No person can utilize the logo and of the university for any commercial purpose without prior permission of the competent authority.

Schedule I

The revenue generated from the Intellectual Property and technology transfer activities shall be distributed as follows:

i)   When university is the creator, the income from commercial economic use of Intellectual property shall be shared amongst the university, research team members or creators and support staff as 60%, 35% and 5% respectively.

ii)   When the individual researcher or a team of researchers is the creator and has used substantial university resources, the revenue shall be shared amongst the individual researcher/team of researcher, the university and support staff as 60%, 35% and 5%, respectively.

iii)   When the creation is the result of funded research, the sharing of income from commercial use shall be as per the agreement with the funding agency.

iv)   When the creation is the result of sponsored research by a company, industry or commercial undertaking other than the government funding agencies, the income receivable from the commercial use shall be as provided in the licensing agreement with that company, industry or commercial undertaking.

v)   The shares as mentioned above shall be determined after deducting the direct expenses if any from the total income received by the university.

vi)   The creator share would be declared annually and disbursement shall be made to the creator or their legal heir, whether or not the creators associated with the university at the time of disbursement.

Annexure 3.5

CENTRAL INSTRUMENTATION LABORATORY (CIL)

Mission Statement

CIL aims at the optimized utilization of the major instruments with quality assurance of analytical and subsequent research outcomes.

Role of CIL in the university

Central Instrumentation Laboratory (CIL) was established in the university in 2010. An amount of Rs. 7 crores has been spent to house 9 state-of-the art instruments of common use. CIL has been playing a pivotal role in supporting the research activities of many centres, in particular Centre for Plant Sciences, Centre for Animal Sciences, Centre for Pharmaceutical Sciences and Natural Products, Centre for Computational Sciences, Centre for Environmental Science and Technology, Centre for Human Genetics and Molecular Medicine and Centre for Physical Sciences.

Facilities in the Laboratory:

The Central Instrumentation Laboratory presently hosts the following analytical instruments

- Gas Chromatography-Mass Spectrometer
- Gas Chromatography With Thermal Conductivity Detector and Flame Ionization Detector
- Atomic Absorption Spectrometer
- Ultra High Performance Liquid Chromatography
- UV-Visible Spectrophotometer
- Fourier Transform Infrared Spectrometer
- FACS (to be installed)

Apart from the above CIL also hosts an imaging section which has following instruments.

- Fluorescence Microscope
- Field Emission Scanning Electron Microscope
- Confocal Laser Scanning Microscope

Manpower

The Laboratory comes under the office of Dean Academic Affairs, CUPB. Present staff strength of the CIL is as follows

- Dr. J. Nagendra Babu, Faculty Incharge.

- Mr. Gopal Soni, Senior Technical Assistant.
- Mr. Ashish Kumar Pandey, Resident Engineer, DSS Imagetech Pvt. Ltd.
- Er. Sumit Srivastava, Resident Engineer, Carl-Zeiss Pvt. Ltd.
- Mrs. Kuldeep Kaur, Laboratory Attendant.

Research support

The university has 70 research students (including Ph.D., M.Pharm and M.Phil.) in the sciences and an active faculty in the science disciplines. The CIL is playing a vital role in meeting their equipment needs. The newly joined faculty, who have to spend a few years initially in developing their research laboratories, find CIL particularly useful. CIL has been providing a major support to all the science schools with an average number of around 9 common-use type of state-of-the-art instruments covering microscopy, spectroscopy and chromatography. Within this small span of four years of its inception, the CIL has analysed an average of 7022 samples every year with 10,880 samples completed in year 2014.

Support Facility

1. Uninterrupted Power Supply: Capacity up to 60 KVA for backup of Atomic Absorption Spectrometer, Gas and High Pressure Liquid Chromatography, Mass spectrometry, Fluorescence, FE-SEM and Confocal Microscopy.
2. Online Backup Genset
3. Dedicated Earthings <1 Volt
4. Modular Laboratory Furniture
5. Gas Equipment Assembly

Details of the Instruments available with Central Instrumentation Laboratory

S. No.	Instruments	Make and Model No.	Instrument Cost	Date of Installation	Accessories / Capabilities	Applied Area
1.	Fluorescence Microscope	Olympus, FSX-100	26,53,000/-	10/06/2010	NA	Brightfield, Phase Contrast and Fluorescence Imaging
2.	Ultra High Performance Liquid Chromatography	Thermofischer Scientific Pvt. Ltd., Dionex Ultimate-3000	11,07,536/- + 10,64,000/-	11/11/2011	C-18 and C-8 Column Diode Array Detector Fluorescence Detector	Reverse Phase Chromatography
3.	UV-Visible Spectrophotometer	Shimadzu Pvt Ltd., UV-2450	12,36,123/-	03/04/2012	PMT Detector, Flow Cell Unit, Peltier Thermostat, Multiple Cuvette Holder	Absorbance and Spectral measurement in UV and Visible region (200-900 nm)
4.	Fourier Transform Infrared Spectrometer	Bruker Inc., Tensor-27	17,02,500/-	05/09/2012	ZnSe Beamsplitter, PMT Detector, ATR Cell, Drift Cell, Hydraulic Press	Transmission, Attenuated Transmitted Reflectance (ATR) and Diffused Reflectance (DR) Infrared Spectra (4000-600 cm^{-1})
5.	Atomic Absorption Spectrometer	Shimadzu AA-7000	26,14,000/-	26/12/2012	Na, Cr, Mg, Mn, Co, Fe, Cu, As, Se, Hg Lamps GF-7000, HVG-1, Autosampler ASC-7000	Graphite Furnace Analysis Cold Vapour and Hydride Generator Analysis Flame Analysis
6.	Gas Chromatography Mass Spectrometry	Shimadzu QP2010 Ultra Plus	78,00,000/-	20/01/2014	DI Probe, CI/EI mode Teledyne TEKMAR HT3 Headspace Auto Sampler	Mass Spectroscopy, Headspace Analysis, Pesticide Residue analysis
7.	Confocal Laser Scanning	Olympus Pvt. Ltd., FV-	2,82,00,000/-	28/05/2014	Picoquant Picoharp	Laser imaging with six laser

	Microscope with FCS	1200			300 SPAD Detection Unit Live Cell Imaging setup (OKO Lab)	lines 405, 635, 488, 515, 543 and 559 nm. Differential Interference Contrast Live Cell Imaging and Fluorescence Correlation Spectroscopy
8.	Field Emission Scanning Electron Microscope	Carl Zeiss Pvt Ltd, Germany,	2,64,00,000/-	28/07/2014	Quorum-Q150R ES Sputter Coater Oxford Instruments EDX Analysis Probe Model XMax^{n}, Detectors SE, BSC, InLens, STEM	Resolution up to 0.8 nm. With Six detectors for Imaging SE, In lens, BSD, EDX and STEM
9.	Gas Chromatography	Nucon Pvt. Ltd., New Delhi NUCON-5765	5,88,000/-	02/09/2013	TCD and FID Detectors With 3 Wide Bore columns	Biogas and Producer gas analysis

A detailed samples run during various Periods:

Instrument Purchase and facility development was initiated during **January - December, 2010**

Instrument Usage:

Name of the Instrument	No of samples analysed per year					Total samples Analysed
	2011	**2012**	**2013**	**2014**	**2015**	
Fluorescence Microscope	105	182	205	132	116	**740**
Field Emission Scanning Electron Microscope (FESEM)	-	-	-	142	446	**588**
Confocal Laser Scanning Microscope (CLSM)	-	-	-	4	127	**131**
Fluorescence Correlation Spectroscopy	-	-	-	1	0	**1**
Ultrahigh Performance Liquid Chromatography (HPLC)	10	66	224	85	201	**586**
Atomic Absorption Spectrometry (AAS)	-	140	752	2020	3308	**6220**
Fourier Transform Infrared Spectrometer (FTIR)	-	45	213	398	323	**979**
UV- Vis Spectrophotometer	-	8384	6869	6271	1051	**22,575**
Gas Chromatography Mass Spectrometer (GC- MS)	-	-	-	1766	1216	**2982**
Gas Chromatograph (FID/TCD)	-	-	-	61	72	**133**
TOTAL	**115**	**8,817**	**8,263**	**10,880**	**6860**	**34,935**

GRAND TOTAL OF 10,880 samples were run during the calendar year of 2014.

The CIL is on the verge of extending the FE-SEM, Chromatography and spectrometric facility to the institution in the neighbourhood including researchers in academic institutions, food and consultancy laboratories, industries and health care systems.

CIL capacity in taking up the course

- CIL having One-Ph.D., Two M.Sc. and One B.Tech., as their staff, is capable of conducting training programs for the students of basic and applied sciences for analytical and imaging works.

Annexure-3.6

GUIDELINES TO CHECK PLAGIARISM

These guidelines are developed for faculty, students, researchers and all others associated with generation of Intellectual property at Central University of Punjab, Bathinda (CUPB), and aim at promoting originality and checking plagiarism.

- All cases of plagiarism at CUPB, no matter how minor, will be viewed seriously.
- For definition of plagiarism and related issues, the document circulated by turnitin.com (**Annexure-IX**) will be followed in CUPB.
- The students and faculty will be made aware of the information on Plagiarism as contained in this document.

Other guidelines related to plagiarism policy are as below:-

1. Plagiarism reports must be generated by available software at the time of submission of Ph.D. thesis/ research reports/ credit assignments and other documents claimed as original.
2. The exclusion at the time of performing the check should be limited to the following:
   a) Quotes
   b) Bibliography/References/Citations
   c) Phrases
   d) Small matches up to 10 words
   e) Format
   f) Ideas/works or language of the lab/team/group or the supervisor(s)
   g) Small similarity less than 1%
   h) Mathematical Formula
   i) Name of Institutions, Departments etc.

3. In case of self-plagiarism or cases where published work of a researcher from the lab/group etc. is shown by Plagiarism check, a certificate (Plagiarism Self Exclusion Certificate, Annexure) has to be issued by the Supervisor specifying and attaching the articles that have been published by the student from thesis work. Only these articles should be excluded from the check. No other article of the Supervisor or the student should be excluded from the check. This will be for reference of the library which will perform the final check.
4. The final Plagiarism check from the library is essential so that the correct report is submitted at the time of submission of thesis/ other documents.

5.   For Ph.D. thesis, the university library will issue the final certificate of Plagiarism Check called the Plagiarism Verification Certificate (Annexure), certifying and authenticating the check performed by the student/Department. This certificate has to be submitted to the Exam Branch at the time of submission of thesis along with certificate from the students, signed by Supervisor (Annexure)

Guidelines for action when Plagiarism is reported

When a case of plagiarism is reported the following procedure will apply:

- The Vice Chancellor of CUPB will form a committee of experts, from within or outside the university, who will establish whether there is a plagiarism or not, if it is then there, what is the level. This committee will submit its report to the competent authority for a final decision in this regard.
- The committee will use the best possible software provided by UGC, INFLIBNET or National Knowledge Commission or specified or made available by the university for detecting the plagiarism.
- The onus of plagiarism shall rest with the student in case of PhD thesis and on the first author in case of a research paper.
- Depending on the severity of crime a student may be awarded any of the following punishments:
  1. Fine or warning or both.
  2. Rustication for a limited period or permanent removal from CUPB.
  3. Withdrawal of degree awarded on plagiarized work.
- Depending on the severity of crime a supervisor/ teacher may be awarded any of the following punishments:
  1. Warning or stoppage of increments or both.
  2. Removal from CUPB.
  3. Any other punishment as decided by the committee

The quantum of punishment will be decided by the Vice Chancellor based on the recommendations of the committee and confirmed by the Executive Council based on the recommendations of the Academic Council.

Annexure 3.7

Ref No: CUPB/CC/15/EC-15/27   Dated:05-8-2015

<u>**NOTIFICATION No 27**</u>

In pursuance to Item No. EC:15:15:29 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No:AC:7:2015:24) is hereby conveyed to the guidelines of implementation of Consultancy Projects as enclosed with this notification.

Further to the above the Competent Authority has approved the constitution of the following committee for implementation of Consultancy Projects:

1. Prof. P. Ramarao, Dean Academic Affairs
2. Dr. Pankaj Khare, Registrar
3. Prof. A. K. Jain, Professor
4. Dr. Sunil Mittal, Assistant Professor
5. Dr. Shireesh Pal Singh, Assistant Professor

This is issued with the approval of the Competent Authority.

GUIDELINES FOR IMPLEMENTATION OF CONSULTANCY PROJECTS

1. Each Consultancy Project will have a Principal Consultant who will be responsible for
    i. Formulating the project proposal which may include (a) planning of the work to be done, (b) estimating costs according to guidelines provided in a later section, and (c) identifying other consultants, if necessary.
    ii. Execution of work.
    iii. Handling all communications with the clients after the project has been accepted.
    iv. Writing of intermediate and final reports according to the project proposal.
    v. Making recommendations to the Vice Chancellor regarding expenditure from the project funds and disbursement of funds to participants in the consultancy project.
2. Appointment of Principal Consultant: Industrial organizations usually approach the Institute for consultancy work through a faculty member or a functionary of the Institute (i.e. CoC, Dean or Director). When a faculty member is approached for the work, he will be the Principal Consultant. If he does not wish to be the Principal Consultant or if the project is referred to a functionary, Principal Consultant would be identified through appropriate discussions and appointment will be made by CUPB.
3. The project proposal prepared by the Principal Consultant will be forwarded to the client.
4. The cost of the project shall be deposited by the client, in full, before the work commences. However, based on needs of the client and circumstances, CUPB may permit commencement of work with payment to be made as per agreed upon milestones.

All payments from clients will be received and expenditure and disbursements made through normal university procedures.

5. After the initial deposit has been made by the client, CUPB will assign a job number to the project and inform the same to the client, Principal Consultant and the CoC of the concerned Department. This completes the process of initiation of a consultancy project. The above job number must be quoted in all subsequent correspondence. The Project file will be closed with the submission of the final project report and disbursement of fees to consultants and others.
6. Each Project under Consultancy Service will be given a Registration Number by the Consultancy Division.
7. Utilisation of the resources generated.

The resources earned by a teacher through consultancy should be divided between the university and the teacher in the manner give below.

The ratio for sharing of the money between the university and the teacher will be:

- a) 60:40, where CUPB facilities have been used.
- b) 50:50, if no facilities of the university have been used.

SERVICE TAX ON CONSULTANCY FEES

Service Tax is compulsory on all consultancy services. The rate of service Tax in force as per rules of state/centre/UT or any other government rules will be applicable on the consultancy fees. Service Tax is to be paid by the party which obtains the services i.e. the clients. So, it is essential that the coordinators of the consultancy projects inform the clients the amount payable by the clients as Service Tax in addition to the consultancy charge.

ADDITIONAL POINTS OF THE GUIDELINES FOR ROUTINE AND TIME BOUND CONSULTANCY PROJECTS INVOLVING THE WHOLE DEPARTMENT

1. For consultancy works a Faculty in/charge shall be selected by the concerned Departments for a tenure of 6 months.
2. The client shall first approach the CoC with a letter detailing the requirement who will indicate in writing the Fee and Service charge for the work. The client will deposit the fee.
3. The Department take over the materials and samples deposited by the client (if any) and give a tentative date of handing over the final recommendation.
4. CoC or Faculty in-charge of Consultancy will then assign the appropriate group of faculty (on rotation basis) for the job. The Technical Officer will be responsible for scheduling and conducting the laboratory tests under the direction of the faculty assigned. The Technical Officer will assign the Technical Assistants as required.
5. The Technical Officer shall sign the laboratory test reports.
6. The Faculty assigned will analyse the results, make the recommendations and prepare the final report. A Synopsis of the report will also be prepared by the faculty assigned in consultation with the Faculty in-charge of the Consultancy. He/She will sign the final report and the synopsis and submit them to the CoC.
7. The Faculty in-charge of Consultancy will inform the client about the completion of the job assigned and deliver the report.
8. The break-up of the revenue earned from the consultancy services will be as follows :
   - 25% to the university.
   - 25% to the concerned Departments (This will include the cost of consumables, labour, travel and other expenditure incurred for the work).
   - 50% to the consultant group.
9. Separate Bank accounts shall be opened to be operated by the CoC of the concerned Departments and Deputy Registrar (Finance) jointly.

10.   The distribution of the Consultancy share amongst the faculty and laboratory staff involved is as follows :
   – 10% of the Consultancy share shall be equitably distributed amongst the Technical Assistants involved in the work.
   – The balance 90% of the share shall be equitably distributed amongst the faculty involved including Technical Officer.

CRITERION-IV

INFRASTRUCTURE AND LEARNING RESOURCES

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1   Physical Facilities

The university has state of the art infrastructure facilities which include air conditioned lecture rooms with projectors, state of the art laboratories, library, computer centre, faculty rooms, play grounds, fitness centre, hostels for students, faculty transit housing, health centre etc.

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

The university houses different schools and centres. Each centre is well equipped with physical infrastructure such as class rooms, teaching and research laboratories with sophisticated instruments. The Central University of Punjab has well-established procedures to ensure the availability of physical facilities for its various functions and makes systematic efforts to upgrade its facilities and ensure their optimal use, as below:

(a)   The coordinators of various centres, incharges of administrative units and campus manager submit their requirements for the forthcoming academic year. The Academic and Administrative Committees plan ahead for all requirements regarding classrooms, laboratories, furniture and other equipment. Based on these recommendations, the university makes plan for the year; purchase section then invites quotations and makes purchases. Many other steps are involved:

- The computer centre reviews its computer status and replaces the obsolete systems and servers with new ones.

- Infrastructural facilities such as furniture and air conditioners are serviced, replaced and augmented as the need arises.

- A faculty member is made the lab in-charge for each lab to ensure that the labs are maintained and utilized properly. The university makes optimal utilisation of the available facilities.

- To facilitate the purchase of the infrastructure requirements, many committees are made with 2-3 faculty members and a senior professor as chairperson. Maintenance of equipment is done through the Annual Maintenance Contracts, while minor repair works are carried out on request.

- All efforts are made to ensure complete maintenance of the infrastructure and facilities. Various committees keep monitoring the systems: Campus Upkeeping Committee, Seminar Hall Committee, Auditorium Committee, Mess and Canteen Committee are some of these. The office of the Executive Engineer takes care of the problems associated with electrical lines, water supply lines etc.

(b) CUPB ensures optimal utilization of its facilities by engaging students and faculty to use these and by calculating occupancy rate of the various equipment. The central instrumentation lab incharge maintains the record of the usage of the sophisticated instrument in a register and the hours of usage (*Section 3.3.3*) is then reported regularly to the competent authority. The CIL facility is also open for students of other universities. The classrooms are fully engaged and have 100% occupancy rate.

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

Yes, CUPB has a very systematic approach for creation and enhancement of infrastructure. Indeed, for major decisions and planning, there are committees with outside experts: Building Advisory Committee, Library Committee and Sports Committee. The suggestions of these committees are assessed, analysed and taken through the approval procedure of university's governing bodies.

Some recent initiatives include:

- Since the planning of new campus was at final stage, the Building Advisory Committee already had seven meetings this year to ensure proper planning and prompt decisions.

- In order to ensure 24 hr electricity supply to the campus, the university has installed four diesel generating sets with a total capacity of 655 KVA: one of 315 KVA, two of 125 KVA and the fourth of 90 KVA capacities. The university has got installed two 5KW Solar-Wind Energy Hybrid Systems. In addition, the university has replaced standby UPS units with on-line ones for better performance of the computers.

- The university has been enhancing its audio visual resources. A basic multi-conferencing facility has been established in the first phase of a futuristic ICT-enabled teaching-learning.

- The Central Instrumentation Laboratory is continuously updated with new instruments.

- The Library Committee keeps planning for upgradation of knowledge resources: books and national and international journals, internet facility and subscription to electronic databases are all updated to ensure effective support for teaching-learning. The library organizes book exhibitions so that faculty and students can suggest books.

- The university aims at making the campus a zero waste campus. Good waste management practices are followed in the campus. Two sewage treatment plants of 50000 L/d are installed in the campus to treat the waste water generated within the university through Fluidized Aerobic Bioreactor. The treated water is used for landscaping of the university.

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

The university gives top most priority to the creation and maintenance of physical facilities proportionate with its requirements.

- The university has a Central Instrumentation Laboratory with state of the art sophisticated instruments (Scanning Electron Microscope with EDS, ELISA plate reader, FTIR, HPLC, GC-MS, Atomic Adsorption Spectrophotometer, Confocal Microscope, Thermogravimeter, Gas chromatograph) to benefit and serve the research needs of the faculty.

- In addition to the instruments, the university has procured many types of software to facilitate the faculty and students research. GeneMapper®, SeqScape®, BioTrekker™, SigmaPlot® with Systat, PAWS, Chem. Bio, Origin 8.1, SPSS, MATLAB, Arc GIS are some of these.

- The centres are provided with sufficient well-equipped laboratories for teaching and research.

- Each faculty member is provided with air conditioned office space with 24h power supply and power back up. A desktop/laptop with internet connection, printer and storage cabinets have also been provided. A central printing and scanning facility is available.

- Photocopying and binding facilities are provided through central library for submission of project proposals, reports etc.

- The university through its library has subscribed to many online journals to update faculty and students with recent research. Plagiarism software has also been purchased.

- Transport facilities for research purpose such as sample collection and data collection are provided.

Thus CUPB has put in place all the required facilities and systems for a conducive research environment.

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

Yes, the university provides all facilities, as far as possible, in all the schools and centres. Each member of teaching faculty has adequate and comfortable office room/cabin facility with computers, printers and storage units. Separate rest rooms for women students and staff are available in both science and humanities block.

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

The infrastructure of the university is on ground floor; hence ramps/lifts are not required. However, the specially designed toilet facilities are provided for use by disabled. A wheelchair is available for use. Physically challenged students are given special preference in seating during classes and examinations, if required.

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

The city campus of CUPB has residential area, as also, the academic buildings of the university, thereby ensuring that students are not far away from any academic facilities. The hostels are within accessible distance from the academic block, library, health centre and laboratories. The fitness centre too is on the same campus primarily for resident students. Central geyser

facility, RO water units and water coolers are provided in each hostel block. A collection of books are also provided in hostel reading rooms. The reading rooms are fully air conditioned with 24 hr power supply. Hostel rooms are semi-furnished and each student is provided with a cot, a mattress, a table, a chair and a cupboard.

- *Capacity of the hostel and occupancy:* The university has nine hostels, five for boys and four for girls, with a total of 384 rooms. Single, double and triple occupancies are available in the hostel. Ph.D. students are generally provided with single seater rooms. Details of the rooms and occupancies are provided in the *Table 4.1* and *Table 4.2*.

- *The recreational facilities* provided in hostels for the students include:

  – Air conditioned reading room with desktop and internet connection

  – T.V. Room

  – Indoor games, table tennis and badminton facilities

  – Gymnasium facility

  – Fitness centre

- *Broadband connectivity / Wi-Fi facility in hostels*: BSNL broadband connectivity with high speed Wi-Fi facility is available in all hostels.

Table 4.1: Occupancy of boys hostel

Sr. No.	Name of the Hostel	No. of rooms	Present Occupancy
1.	Hostel 1	35	35 (single occupancy)
2.	Hostel 2	17	34 (double occupancy)
3.	Hostel 3	41	41 (single occupancy)
4.	Hostel 4	17	51 (triple occupancy)
5.	Hostel 5	69	69 (single occupancy)

Table 4.2: Occupancy of girls hostel

Sr. No.	Name of the Hostel	No. of rooms	Present Occupancy
1.	Hostel 1	60	55 (single occupancy)
2.	Hostel 2	19	38 (double occupancy)
3.	Hostel 3	18	36 (double occupancy)
4.	Hostel 4	108	96 (single occupancy)

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

Yes. The university has a Health Centre with a medical consultant, two full time nurses and medical attendant. It provides OPD, indoor, emergency, referral and other services to its employees and students. First Aid is provided in case of minor ailments. In emergency, services of a nearby hospital including civil hospital are utilized.

Reputed doctors have been included in the university medical panel to ensure excellent health care for the students and faculty (***Annexure 4.1***). ECG and biochemical analysers are available in the Health Centre.

The university owns a Winger High Roof ambulance to commute students and faculty in case of emergency. It has a single stretcher, bench seats for paramedics, special doctor's seat, single oxygen cylinder cage, 4 bottle holding hooks, first aid box, overhead revolving beacon, wide 180° opening rear door, anti-skid flooring, factory-fitted dual AC, 2 cabin lights, 2 co-driver seating and 5 attendant seats.

CUPB is in the process of formulating a medical policy through group insurance for faculty, staff and students.

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

Sports facilities like physical fitness centre/gymnasium, athletic tracks (200 m), indoor badminton courts, basketball and volley ball courts, boxing gloves and punching bags, cricket pitch and many indoor games (chess, carom, table tennis) are available on campus to promote students interests in sports. In addition, yoga, aerobic and self-defence boxing classes are also conducted every day. Every year on the occasion of the foundation day in the month of February, the university conducts annual sports and athletic meet to encourage sports activities.

Similarly, various student groups including the students' union carry out cultural activities on campus with the full support of the university administration. On the occasion of the foundation day celebrations, a series of cultural events are organized. Salvadora (cultural event), musical evening, skits conveying social and environmental message, poetry, song, dance competitions, traditional dress competitions are some of the events organized to encourage cultural events among the students. Women's day, Hindi pakhwara, International mother tongue day are few of the events to be mentioned. (***Table 4.3***)

Table 4.3: Cultural and sports activities conducted by CUPB

S.No	Name of the Function	Date
1.	Hindi Diwas and Hindi Pakhwara	September 14, 2011
2.	First Foundation Day (2010)	March 27, 2010
3.	Foundation Day (2011)	May 14, 2011
4.	First External Inspection by Rajbhasha Unit	September 23-24, 2011
5.	Foundation Day (2012)	February 28, 2012
6.	Extension Lecture on Hindi	April 9, 2012
7.	Hindi Diwas	September 14, 2012
8.	Hindi Pakhwara	September 14-28, 2012
9.	Hindi Calligraphy Competition	September 17, 2012
10.	Second External Inspection by High Level "Official Language Implementation Committee" of UGC	September 17, 2012
11.	Poetry Recitation Competition	September 21, 2012
12.	Essay, Poem and Story Writing Competition	September 24, 2012
13.	Elocution Competition	September 25, 2012
14.	Debate Competition	September 27, 2012
15.	Hindi Pakhwara Samapan Samaroh	September 28, 2012
16.	First Hindi Karyashala	February 5, 2013
17.	First Annual Sports Meet	February 14, 2013
18.	Poetry recitation and music competitions	February 20, 2013
19.	Dance and Indian Traditional Dress Competitions	February 21, 2013
20.	1st Blood Donation Camp	February 22, 2013
21.	Sufi Evening	February 22, 2013
22.	Foundation Day (2013)	February 26, 2013
23.	Computer Literacy Programme for Senior Citizens	June 20, 2013
24.	Hindi Karyashala on the Use of Computer in Official Language Implementation,	June 26, 2013
25.	Hindi Diwas and Hindi Pakhwara Udghaatan Samaroh	September 16, 2013
26.	Nibandh, Kavita and Kahaani Lekhan Pratiyogita	September 17, 2013
27.	Kavita Uchchaaran Pratiyogita	September 18, 2013
28.	Hindi Laghu Kahaani/Nibandh Lekhan Pratiyogita	September 18, 2013
29.	Sulekh Pratiyogita	September 19, 2013
30.	One Day's Hindi Karyashala on Hindi	September 19, 2013
31.	Hindi Bhashan Pratiyogita	September 23, 2013
32.	Hindi Vaachan Pratiyogita	September 24, 2013
33.	Hindi Anuvaad Pratiyogita	September 25, 2013
34.	Hindi Vaktritva Pratiyogita	September 26, 2013
35.	Hindi Pakhwara Samapan Samaroh	September 30, 2013
36.	Vishva Hindi Diwas	January 10, 2014
37.	Second Annual Sports Meet	February 19, 2014
38.	Membership of Nagar Rajbhasha Karyanvayan	February 24, 2014

	Samiti,	
39.	2nd blood donation camp	February 26, 2014
40.	Hindi Karyashala on Implementation of Official Language	March 28, 2014
41.	One Day's Hindi Karyashala on Implementation of official language	June 30, 2014
42.	Hindi Diwas and Hindi Pakhwara Udaghatan Samaroh	September 15, 2014
43.	Hindi Anuvaad Pratiyogita	September 16, 2014
44.	Kavita Paath Pratiyogita	September 17, 2014
45.	Note Lekhan Pratiyogita	September 19, 2014
46.	Hindi Bhashan Pratiyogita	September 22-24, 2014
47.	Hindi Tankan Pratiyogita	September 25, 2014
48.	Hindi Vaad-Vivaad Pratiyogita	September 26, 2014
49.	Hindi Pakhwara Samapan Samaroh	September 29, 2014
50.	First Innovators Day	November 17, 2014
51.	Second Innovators Day	January 22, 2015
52.	Sensitization Programme for Teachers of Elementary, Primary, Secondary and Senior Higher Secondary Education on Water Quality Profile.	February 12, 2015
53.	Third Annual Sports Meet	February 24-25, 2015
54.	Foundation Day 2015	February 28, 2015
55.	World Earth Day celebrations	April 22, 2015
56.	Extension Lecture on the 'Contribution of Dr. B.R. Ambedkar in Social Justice'	April 28, 2015
57.	Labour Day celebrations	May 1, 2015
58.	Awareness Camp on Human Rights organized at Village Gurchari	May 17, 2015
59.	Fascination of Plants day	May 18, 2015
60.	Biodiversity Day celebrations	May 22, 2015
61.	World Environment day	June 5, 2015
62.	Yoga week	June 15-21, 2015
63.	International Yoga Day	June 21, 2015
64.	International Day Against Drug Abuse and Illicit Trafficking	June 26, 2015
65.	Kids Fest	July 2, 2015
66.	World Population day	July 11, 2015
67.	Massive Plantation Drive at Main campus	July 18-18, 2015
68.	NSS Camps organised at Main Campus	July 24-25, 2015
69.	International Mother Tongue Day	July 31, 2015
70.	Ground Breaking Ceremony	August 17, 2015
71.	Foundation Stone laying Ceremony	September 7, 2015

4.2   Library as a Learning Resource

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

Yes, a local library committee consisting of the following members has been constituted.

- Chairperson: Professor-in-charge library
- Members: 7 faculty members from various schools/centres/library staff

The present composition of Library Committee is as below:

Members	Designation
Prof. S.K. Bawa	CoC, Education
Prof. Anjana Munshi	CoC, HGMM
Dr. Sanjeev Kumar	Assistant Professor, Plant Sciences
Dr. Felix Bast	Assistant Professor, Plant Sciences
Dr. Anil Kumar Mantha	Assistant Professor, Animal Sciences
Dr. Deepak Kumar	Assistant Professor, Law
Dr. Kiran Singh	Assistant Professor, Geography
Dr. Bhupinder Singh	Professional Assistant

The Library Committee meets regularly and has held seventeen meetings so far, as per details in *Table 4.4*.

The significant initiatives taken by the committee to render the library student friendly include:

- *Extension of Library Timings*

    The library opens 24 hours on all working days and 9:30 am to 5:30 pm on weekends and holidays. It remains closed only on three national holidays.

- *Separate Section in the Library*

    The books in the library are segregated into three major sections – Text books, General books and Reference books.

    Library is stocked with multiple copies of text books and general books, if suggested in the syllabi.

- *New Section*

  Two sections have been added to facilitate students (i) Thesis/dissertation section (ii) Digital media section.

- *Open source data base*

  A collection of open source materials is available in the university

  The library staff conducts workshops and training programmes as part of Current Awareness Service (CAS) for the faculty and students of the university to facilitate effective access to the resources. Workshops on Web of Science, Scopus and Grammarly have been conducted for the faculty and students of the university.

- *Selective Dissemination of Information (SDI)*

  Provides information and updates to the interested users on specific theme/area/topic as required.

- *Inter-library Loan (ILL)*

  Assistance to access materials and resources from the networking libraries through DELNET.

- *Computer facility*

  Ten computers with internet facility are provided for students to study and browse in the library

- Purchase of books

  The university has framed guidelines for the procurement of books. The faculty and students recommend books and a team of faculty are sent to Delhi for the purchase of the books as per the guidelines.

Table 4.4: List of Library Committee meetings

S.No.	Library Committee meeting	Date of Meeting	Chairperson and Members of committee
1	1St Library Committee meeting	15-Jan-2014	Prof. Chaman Lal (Chairperson) Dr. Anil K. Mantha, Dr.V.J. Varghese, Dr. Puneet Pathak
2	2nd Library Committee meeting	22-Jan-2014	Prof. Chaman Lal (Chairperson) Dr. Anil K. Mantha, Dr. V.J. Varghese, Dr. Puneet Pathak, Ms. Prerana
3	3rd Library Committee meeting	29-Jan-2014	Prof. Chaman Lal (Chairperson) Dr. Anil K. Mantha, Dr. V.J. Varghese, Dr. Puneet Pathak
4	4th Library Committee meeting	4- Feb-2014	Prof. Chaman Lal (Chairperson) Dr. Anil K. Mantha, Dr. V.J. Varghese, Dr. Puneet Pathak
5	5th Library Committee meeting	13-Feb-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. V.J. Varghese, Dr. Puneet Pathak, Ms. Prerana
6	6th Library Committee meeting	26-Feb-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. V.J. Varghese, Dr. Puneet Pathak
7	7th Library Committee meeting	11-Mar-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. V.J. Varghese, Dr. Puneet Pathak, Ms. Prerana
8	8th Library Committee meeting	10-Apr-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. Puneet Pathak, Ms. Prerana
9	9th Library Committee meeting	7-May-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. Puneet Pathak, Ms. Prerana
10	10th Library Committee meeting	4-5-June-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Mr. Bhupinder Singh
11	11th Library Committee meeting	12-June-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Mr. Bhupinder Singh

12	12th Library Committee meeting	02-Jul-2014	Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Mr. Bhupinder Singh
13	13th Library Committee meeting	15-Jul-2014	Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Mr. Bhupinder Singh
14	14th Library Committee meeting	21-Aug-2014	Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Mr. Bhupinder Singh
15	15th Library Committee meeting	11-Sep-2014	Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Mr. Bhupinder Singh
16	16th Library Committee meeting	16-0ct-2014	Prof. Chaman lal (Chairperson) Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Dr. Bhupinder Singh
17	17th Library Committee meeting	13-Apr-2015	Prof. P. Rama Rao (Chairperson) Dr. Anil K. Mantha, Dr. Puneet Pathak, Dr. Naresh Kumar Singla, Er. Surinder Singh Khurana, Dr. Bhupinder Singh
18	18th Library Committee meeting	19-August-2015	Prof. S.K. Bawa (Chairperson) Dr. Sanjeev Thakur, Dr. Felix Bast, Dr. Anil K. Mantha, Dr. Deepak Kumar, Dr. Kiran K Singh

4.2.2 Provide details of the following:

- Total area of the library (in sq. ft.)   5772 Sq. ft
- Total seating capacity   212
- Working hours (on working days, on holidays,   24 hours on working days
  before examination, during examination,   9 am to 5.30 pm on holidays
  during vacation)
- Layout of the library (individual reading carrels, Layout provided in *Figure 4.1*
  lounge area for browsing and relaxed reading,
  IT zone for accessing e-resources)
  -Individual Reading Carrels   No
  -Lounge for browsing and relaxed reading   Yes
  -Clear and prominent display of floor plan;   Yes
  adequate sign boards; fire alarm; access to
  differently-abled users and mode of access to
  collection
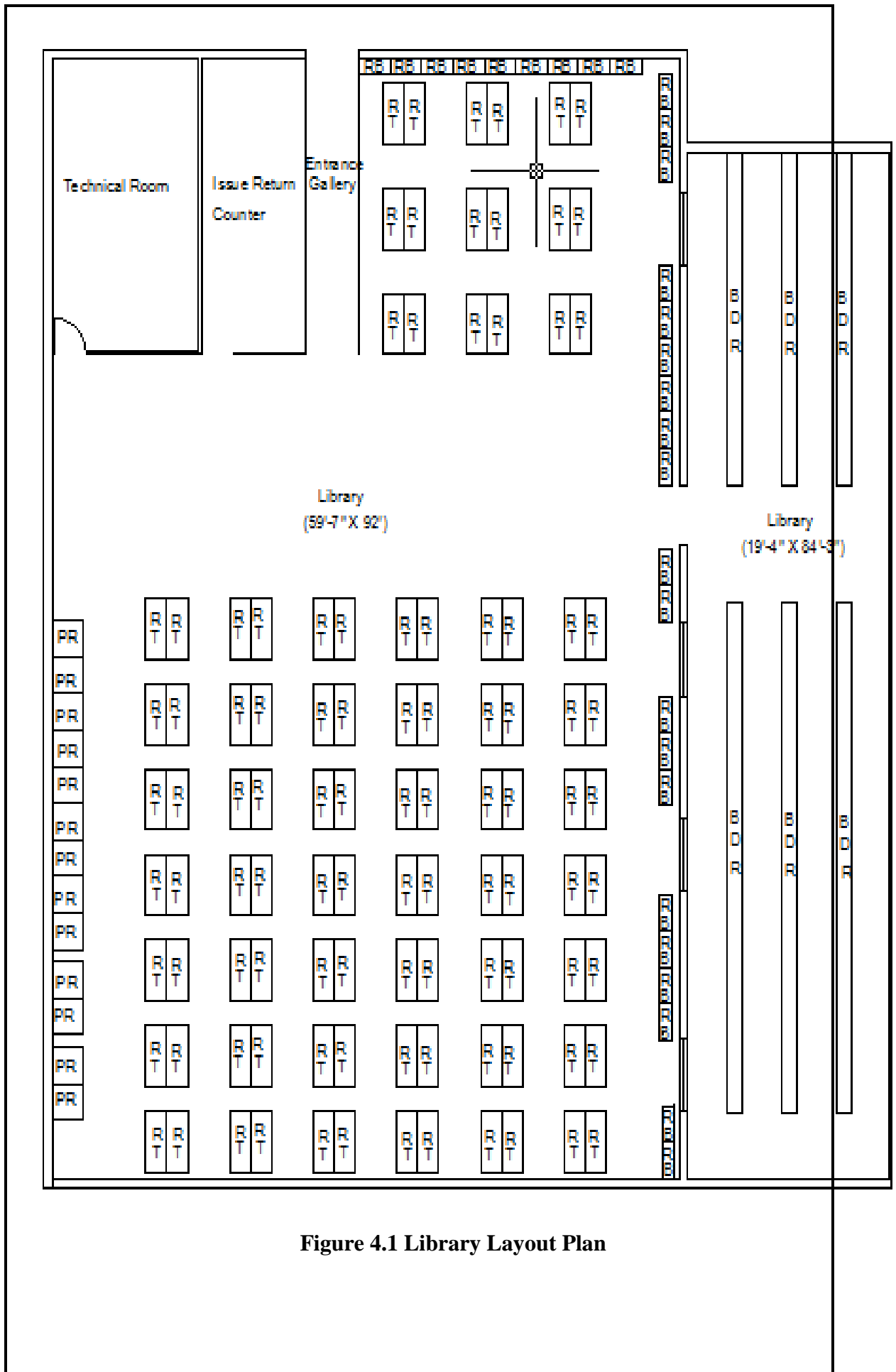
Figure 4.1 Library Layout Plan

4.2.3 Give details of the library holdings:

• Print (books, back volumes and thesis)	25,070
• Average number of books added during the last three years	3964
• Non Print (Microfiche, AV)	378
• Electronic (e-journals)	9105
• Special collections (e.g. text books, reference books, standards, patents)	A special section has been created for donated books. 3200 books are available in this section
• Book Banks	Efforts are being made to create a book bank.
• Question Banks	Initiatives are under way to create a question bank with questions from previous years question papers and objective questions to facilitate students in clearing NET and other competitive exams.

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

CUPB library is well organized and user friendly. The following approaches ensure access of users to various resources:

• Online Public Access Catalogue (OPAC)	University library is enabled with SLIM21 which allows cataloguing of diverse resources such as books, journals, articles, slides, maps, audio/video, films, cassettes, texts, drawings, clippings, serial publications, software and so on.
• Electronic Resource Management package for e-journals	Yes
-American Chemical Society	http://pubs.acs.org
-American Physical Society	http://publish.aps.org/browse.html
-Annual Reviews	http://www.annualreviews.org
-Cambridge University Press	http://journals.cambridge.org
-Economic and Political Weekly	http://www.epw.in
-Institute of Physics	http://iopscience.iop.org/journals

-JSTOR	http://www.jstor.org
-Oxford University Press	http://www.oxfordjournals.org
-Project Muse	http://muse.jhu.edu/browse
-Royal Society of Chemistry	http://www.rsc.org
-Science Direct (10 Subject Collection)	http://www.sciencedirect.com
-Springer Link	http://link.springer.com
-Taylor and Francis	http://www.tandfonline.com
-Wiley-Blackwell	http://onlinelibrary.wiley.com
-Science Online	http://www.sciencemag.org
-Sage	http://online.sagepub.com
-Economic Outlook	http://economicoutlook.cmie.com
-Prowess	http://prowess.cme.com
-States of India	http://statesofindia.cmie.com
-Indiastat.com	www.indiastat.com
-DELNET Online	http://delnet.nic.in/
-Possum Web	http://www.possum.net.au/
-ISID (The Institute for Studies in Industrial Development)	http://isid.org.in/
-JCCC (J-Gate Custom Content for Consortium)	http://jccc-indest.informindia.co.in /
-Hein Online	http://home.heinonline.org
-Manuparta	http://www.manupatra.com
-Westlaw India	http://www.westlawindia.com
-SCOPUS	http://www.scopus.com/
-Web of Science	https://webofknowledge.com
• Federated searching tools to search articles in multiple data bases	No
• Library Website	http://cup.ac.in/library.asp
• In-house/remote access to e-publications	Yes, available on campus network but only two publishers are allowing individual access outside campus

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

• Library automation	Yes. Library is fully automated with SLIM21 software. The University Library is equipped with Radio Frequency Identification (RFID) and Electro Magnetic Security System (EMSS) providing automated self-service facility for the users and high end security. RFID system installed

	in the University Library is with the latest technology and configuration in this regard. It ensures efficient service delivery and security with minimum human input.
• Total number of computers for general access	10
• Total numbers of printers for general access	01
• Internet band width speed	1Gbps. University is using 1Gbps line from National Knowledge Network
• Institutional Repository	Yes
• Audio-Video Repository	In tune with the increasing importance of audio and video materials for learning and research, the library is developing a separate Audio-Video Repository (AVR) for its users. 370 CDs of vital reference materials have been already procured to initiate the process. Library is keeping thesis/dissertation and project reports on IR.
• Content management system for e-learning	No
• Participation in resource sharing networks/ consortia (like INFLIBNET)	The university has signed an MoU with INFLIBNET for making all the E-resources of INFLIBNET available in the library and making the doctoral thesis from the university available online through their Shodhganga programme. Library is also a member of DELNET.

4.2.6 Provide details (per month) with regard to

Average number of walk-ins	7500
Average number of books issued/returned	2400
Ratio of library books to students enrolled	46
Average number of books added during the last four years	3209
Average number of login to OPAC	400
Average number of login to e-resources	600
Average number of e-resources downloaded/printed	1100
Number of IT (Information Technology) literacy trainings organized	6

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

Manuscripts	200
Reference	Yes. A separate section is allotted for reference materials such as reference books, encyclopaedia etc. It also provides the users with directional assistance in locating books and resources.
Reprography/Scanning	Yes. Reprographic facility is available at the issue and return counter to enable the users to get the photocopies of books and journals and other library materials. The library also has a bookeye 4 scanner, state of the art high resolution scanner, to preserve old manuscripts and archival resources.
Inter-library Loan Service	Yes. Assistance to access materials and resources from the networking libraries through DELNET.
Information Deployment and Notification	Yes through Current Awareness Service (CAS) and Selective Dissemination of Information (SDI).
Current Awareness Service (CAS)	Updating the users with the latest information in the academic front and new arrivals to the library.
Selective Dissemination of Information (SDI)	Provides information and updates to the interested users on specific theme/area/topic as required.
OPAC	Yes. The Online Public Access Catalogue (OPAC) system in the University Library is enabled with LMS which allows cataloguing of diverse resources such as books, journals, articles, slides, maps, audio/video, films, cassettes, texts, drawings, clippings, serial publications, software and so on. OPAC enables searching through clusters like author, keyword, subject, class, title, publisher, place of publication, main entry, material type, place of conference, subject name, ISBN / ISSN, serials title and year of publication. It also supports circulation, acquisition, front desk operations, serials control and data entry in vernacular languages.

Internet Access	Yes. Wi-Fi enabled
Downloads	Yes. The library has the facilities to download electronic resources available in the internet and data can also be downloaded from various search engines.
Printouts	Yes. Printers are available.
Reading list/ Bibliography compilation	Yes, reading list and bibliographic compilations are periodically done by the library.
In-house/remote access to e-resources	Yes access is provided to e journals and other e resources on each desktop/ laptop of CUPB.
User Orientation	Yes. Orientation is given to the newly joined students of the university by the library staff, at the beginning of every year.
Assistance in searching Databases	Yes. Library staff is entrusted with the job of assisting the students and the faculty in searching the databases.
INFLIBNET/IUC facilities	Yes. The university has signed an MoU with INFLIBNET for making all the E-resources of INFLIBNET available in the library and making the doctoral thesis from the university available online through their Shodhganga programme.

In addition to above, following services are also provided:

- Reference books, periodicals, newspapers and journals can be accessed.

- Issue of books and reference books for teaching for the entire duration of the semester.

- Other study materials like CDs, VCDs are available to which the students and staff have access.

- INFLIBNET services provided to the students and staff.

- The library staff displays articles of relevance and interest on the notice board and clip set for students to read. These articles are then filed.

- The library staffs provide assistance to both staff and students in utilizing the library facilities so that the optimum use is made of them. This ensures that the library is user friendly.

- E-Library: The university has fully computerized its library which has its own OPAC system. The students can browse for the available e-books, and journals from nationally subscribed repository. Moreover, students and faculty members deposit dissertation thesis, question papers, research articles and e-books for digital repository. Using database software D-space all are collected and organized for use of the students (student database, alumni database and scientific database)

- DVDs – Around 370 educational DVDs are available in the library for students' access and usage. In addition, the power point presentations of the lectures are available in the library.

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

Library budget is used to procure information resources and provide access to the resources. The present annual budget of the library has the following components:

- UGC plan grants

- Budget also has contingency funds for binding and other stationery needed to process and maintain the books and journals.

- The budget details are as provided in *Table 4.5* and *Figure 4.2*.

Table 4.5: Budget details of CUPB's University Library

Financial Year	Number of Additions (Annual)	Cumulative Stock	Annual Spending (Rs. in Lacs)	
			Books	Journal
2009- 10	2848	2848	51.29	44.29
2010- 11	4805	7653	34.19	54.85
2011- 12	2477	10130	38.15	34.55
2012- 13	4092	14222	50.17	38.71
2013- 14	3060	17282	48.25	88.18
2014-15	3318	20800	47.8	48.32
2015-16	Allocation for the year is Rs.112 lacs			

Books purchased through Projects	480	480	4.77
Donated Books	3200	3200	Nil
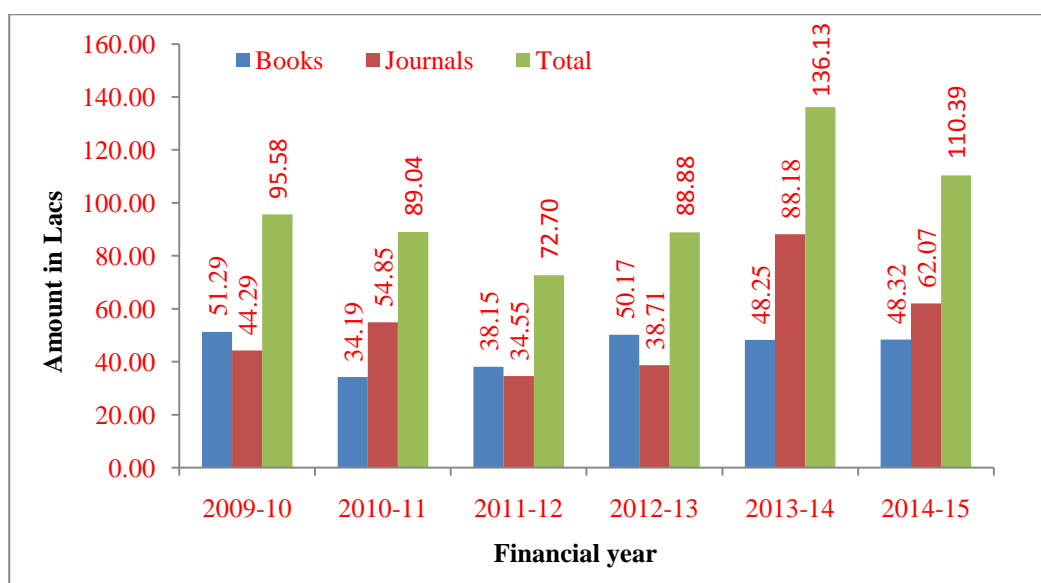
Figure 4.2: Annual Expenditure on Books and Journals

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

- Cleanliness and hygiene of the library premises with regular sweeping, cleaning and mopping of floors ensures neat physical ambience.

- It is ensured that essential support gadgets (photocopier, computers, AC-Fans in summer /Heater in winters etc.) in the library are working at all times.

- Library has well designed floor plans, proper directions and guide posts for smooth and convenient access of the library.

- Prompt services are provided to the users and their problems, if any, are addressed immediately.

- CUPB library is e-library. The Wi-Fi access inside the library enables students to have access to online materials.

- Newly procured books and journals are screened in the LED display boards.

- Lectures and talks on new software (e.g. for plagiarism) are organized for faculty and students to ensure use of the software. *Table 4.6* lists workshops, trainings and awareness programmes organized by the library.

Table 4.6: Workshops, trainings and awareness programmes organized by library

S.No.	Event	Programme date
1.	Workshop cum training programmes about different online resources (i.e. Web of Science, End Note, SCOPUS etc.).	07.05.2015
2.	Training programme on 'Grammarly' software for proof reading and plagiarism.	01.05.2015
3.	One day training workshop on plagiarism detection web tools and also generation of faculty accounts on plagiarism detection software.	12.09.2014
4.	E-resource awareness programme.	19.05.2012
5.	Science Direct user awareness programme.	19.09.2011

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

The feedback forms are available online and the faculty and staff register their feedback online. Any user can send feedback to library.cup@cup.ac.in. The feedbacks are taken positively and action is taken quickly. The library committee discusses the issues and acts on these.

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

The University Library is on a rapid and consistent path of expansion and development since its inception in 2009, catering to the learning and research requirements of teachers and students of the university. The library started in a small room and has developed to one of the best libraries in the last four years. It is fully air-conditioned and well equipped with stacks and modular furniture. It is located at a central place in the Academic Block with ample seating and a quiet and restoring ambience. The interior of the library is enabled with Wi-Fi connectivity allowing the users to work within the library by accessing both offline and online resources.

The library has Radio Frequency Identification (RFID) and Electro Magnetic Security System (EMSS) providing automated self-service facility for the users and high end security. It is also equipped with an advanced Online Public Access Catalogue (OPAC) and modern reprographic facilities. The library has around 20 CCTV cameras for surveillance.

Awareness of E-resources:

The University Library has also taken initiatives to create awareness about e-resources among the users.

Reference Resources:

The Library has a large collection of multivolume reference materials and encyclopaedias acquired over the last four years.

Thesis and Dissertations

There is a separate section for thesis and dissertations being submitted by the research scholars of the university for ready reference.

Audio-Video Repository:

In tune with the increasing importance of audio and video materials for learning and research, the library is developing a separate Audio-Video Repository (AVR) for its users. A total of 370 CDs of vital reference materials have been already procured to initiate the process.

Newspaper Corner:

Twenty one newspapers in English, Hindi and Punjabi are subscribed by the University Library. The library preserves an archive of the back issues of all newspapers subscribed right from its inception for ready reference by the users.

Maps and Atlas Section:

The University Library has a substantial collection of geographical maps, political maps and atlases of the world and different countries and regions. The section also has a good collection of human atlases and anatomical sketches. Special drawing file cabinets have been purchased for safely storing such maps and posters.

Reading Area:

The Library has a large reading area with comfortable seating facility and working tables and Wi-Fi connectivity. Currently, over 212 users can sit and work in the reading area at a time. It is being expanded to a capacity of seating over 300 users.

The Online Public Access Catalogue (OPAC) system in the University Library is enabled with SLIM21 which allows cataloguing of diverse resources such as books, journals, articles, slides, maps, audio/video, films, cassettes, texts, drawings, clippings, serial publications, software and so on.

The Radio Frequency Identification (RFID) system installed in the University Library is with the latest technology and configuration in this regard. It ensures efficient service delivery and security with minimum human input.

Book Exhibitions:

The University Library has organized five book exhibitions on the campus for readily procuring books by ensuring the participation of leading publishers and distributors in the country.

MoU with INFLIBNET:

The university signed MoU with the Information and Library Network (INFLIBNET) on 19 May 2012 for making all the E-resources of INFLIBNET available in the library and making the doctoral thesis from the university available online through their Shodhganga programme.

The acquisition of books for the library over the last five years has been impressive, reaching a stock of over 25,070 titles presently on its shelves for open access. This includes 595 titles in Hindi, 1867 in Punjabi and 55 in Sanskrit.

The University Library has a large collection of multivolume reference materials and encyclopaedias acquired over the last four years. The number of books and periodicals, as well as, other teaching materials has increased over the years.

Security:

Apart from the electro-magnetic security system which is integrated with RFID, the university has put in place additional security infrastructure inside the library. The interior of the library is under constant watch of close circuit cameras for the security of the library materials and that of the users. Fire extinguishers are placed in the library with sign boards indicating the exit route.

4.3   IT Infrastructure

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

Yes, CUPB has a comprehensive IT policy duly approved by the Executive Council of the University (*Annexure 4.2*). Accordingly:

- All IT resources are secured by strong password and password-protected screensaver with the automatic activation feature set to 10 minutes or less.

- Unauthorized access to information or facilities is strictly prohibited.

- The users are advised to be cautious while opening e-mail attachments received from unknown senders, which may contain malware.

Information and Network Security

The university's IT policy clearly states the guidelines and rules related to information and network security. Some of the prohibitions are:

- Violations of the rights of any person or company protected by copyright, trade secret, patent or other intellectual property, or similar laws or regulations, including, but not limited to, the installation or distribution of "pirated" or other software products that are not appropriately licensed for use by Central University of Punjab.

- Unauthorized copying of copyrighted material including digitization and distribution of photographs from magazines, books or other copyrighted sources, copyrighted music, and the installation of any copyrighted software for which the university or the end user does not have an active license.

- Accessing data, a server, an account or any IT equipment for any purpose other than academics, research and official work related to Central University of Punjab.

- Exporting software, technical information, encryption software or technology, in violation of international or regional export control laws.

- Introduction of malicious programs into the network or server (e.g., viruses, worms, Trojan horses, e-mail bombs, etc.).

- Revealing your account password to others or allowing use of your account by others including family and other household members while working at home.

- Using a Central University of Punjab computing asset to actively engage in procuring or transmitting material that is in violation of sexual harassment or hostile workplace laws in the user's local jurisdiction.

- Making fraudulent offers of products, items, or services originating from any Central University of Punjab account.

- Effecting security breaches or disruptions of network communication.

- Circumventing user authentication or security of any host, network or account.

- Introducing honeypots, honey nets, or similar technology on the Central University of Punjab network.

- Using any programme/script/command, or sending messages of any kind, with the intent to interfere with, or disable, a user's terminal session, via any means, locally or via the internet or intranet.

- Electronic monitoring is also strictly prohibited except under special conditions.

Risk Management

- The network devices in the university are configured with Access Control Lists (ACL) to filter the packets that flow into or out of network interfaces. This significantly reduces the risk of network hacking.

- The websites with insecure contents are blocked for access to prevent the risk of access of untrusted websites.

- Attacks on the university network or systems are detected by university network and system administrators.

Software Asset Management

- University purchase committee make purchases of computers and network related equipment for the university.

- Adheres to the terms and conditions of licence agreements of IT resources software.

Open Source Resources

- When purchasing new software, free and open-source software and proprietary software are to be considered on an equal footing.

Green Computing

To reduce the electronic hazards (e-waste) and improve the energy efficiency, the university prefers to adopt buyback scheme where the computers are purchased from companies with a buyback scheme. Also, thin clients are encouraged instead of desktops.

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

The university has well equipped and furnished computer centre. The layout of the computer centre is provided in ***Figure 4.3***.

No. of systems: 511 computers, 10 high end workstations and 52 laptops (***Table 4.7***)

Computer-Student Ratio:	1:1.9
Dedicated computing facility:	Yes
LAN Facility:	Yes
Proprietary software:	List of software are provided in T***able 4.8***

Number of nodes/ computers with internet facility:

700 (including faculty, laboratories and administrative block)

Any other (please specify)

Whole campus is Wi-Fi enabled with 16 Blade Servers (12 are active) and 10 High-end workstations.

Exsisting Layout of Computer Centre
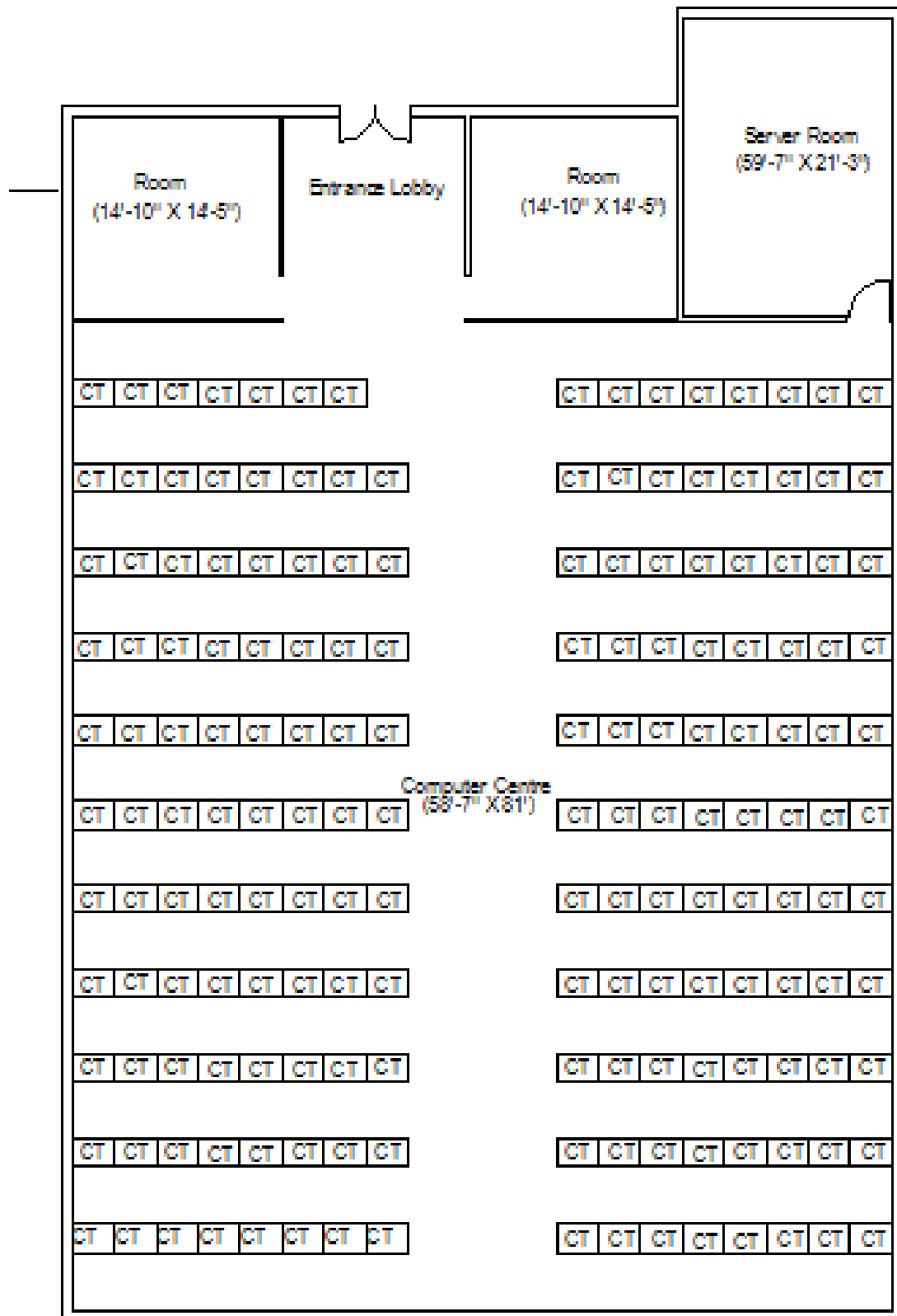
Figure 4.3 : Layout of Computer Centre

Table 4.7 : Details of Computers

S.No.	Make/Model	Number
1	HP	50
2	Wipro	20
3	DELL C2D	50
4	DELL 780	48
5	DELL 980	48
6	DELL 990 MT	40
7	DELL 9010	100
8	DELL 9020	105
9	APPLE MAC	30
10	HP i7	20
11	Laptops	
	Apple	1
	Sony C2D	6
	Sony I3	15
	HP	20
	Toshiba	10
12	HP Z800 Workstations	10
13	HP 2620	4
14	Blade Servers (HP 2.80 GHz processors)	12
15	SAN storage 30TB	1

Table 4.8: List of software available at CUPB

S.No	List of Proprietary Software
1	Office standard 2010 and Office Professional Plus 2007+ MS office professional 2013
2	Adobe CS5 web premium
3	ChemBio Office
4	Sigma Plot
5	SPSS
6	Origin
7	Autodock
8	MEGA
9	PHYLIP
10	Image J
11	Viper
12	Photoshop CS5
13	Corel Draw X5
14	Symnatec End Point correction 12.1
15	Juniper Hardware Firewall – Junos
16	Trend Micro
17	BitDefender
18	Operating System – Windows 7 and 8, Cent OS, Windows Server 20B8R2
19	MATLAB + 13 toolboxes
20	Embarcadero C++
21	ArcGIS
22	Schrodinger
23	Tally ERP
24	Geomatica

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

- To deploy e-governance throughout the institution through expansion of Information Management System and to create paperless office, using cloud computing technology.

- The university has developed an intranet that provides all the information about the activities and events of the university.

- To upload the class lectures and power point presentations in the intranet for better understanding of concepts and fundamentals.

- To increase the bandwidth of internet facility.

- Upgrade the old and outdated computers if any. They are either replaced or enhanced with respect to configuration. Intel Pentium 7, MAC machines are recently added to the computer centre. The university is planning to get into the agreement of 'buy back policy' with the suppliers. Addition of computers is made according to the requirement.

- To develop e-learning facilities.

- Fibre-optic cables for faster and efficient connectivity.

- High end work stations for research purposes such as Remote sensing and GIS applications, Environmental modelling, bioinformatics, chemical modelling etc.

- Annual maintenance contract (AMC) is made with the companies for the system servicing.

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

- Audio-video lecture programmes –computer centre arranges for live interactive audio video lectures through A-View software.

- The centre for Environmental Science and Technology has coordinated two outreach programme (13th and 14th) of Indian Institute of Remote Sensing sponsored by NNRMS, Department of Space, Government of India.

4.3.5 How does the university address issues such as authenticity and copyright with regard to online resources that lie outside the university?

The computer centre assists the university library to provide access to anti-plagiarism and grammarly software. The university has an antiplagiarism policy and ensures strict abidance to the policy. An IPR cell is active in the university to provide IPRs protection information, orientation and facilities to university researchers and scientists. The university emphasises proper acknowledgement of the sources in thesis, papers and any other articles published.

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

- The University Library provides access to e-books and e-journals and also has digital library.

- Display of new books and journals in the LED screen inside the library.

- Ambient environment for the students to study inside the library.

- Extended library timings, thus, enabling students study in the library for longer hours.

- Wi Fi enabled campus is also one another initiative to enhance the student learning.

- Video lectures using A-View software and Skype.

- Screening of documentaries to facilitate better understanding.

- Guest lectures of subject experts.

- Trainings and workshops on software such as SPSS, Arc-GIS, Geomatica

- Training programme on Grammarly, Web of Science and Scopus.

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

- A desktop with internet connectivity has been provided to each faculty.

- Official email id (staff@cup.ac.in) and Wi-Fi connectivity/access to their electronic gadgets are provided.

- ICT class room in each centre equipped with whiteboard, Wi-Fi connected projector, wireless access point, and necessary network and other accessories, which enable effective teaching.

- Web-based audio/video educational contents.

- Online access to journals and e-books with internet bandwidth of 1 Gbps.

- E-classroom using A-View software.

- High-end computing workstations with software for research e.g. Arc GIS, SPSS, Mathlab, Sigma plot, Geomatica (5 user licence).

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

- ICT class rooms with well-equipped interactive white board with Wi-Fi connected projector, wireless access point and necessary network and other accessories are available in auditorium, seminar hall and three other centres of the university (Centre for Environmental Science and Technology, Centre for Plant Sciences and Centre for Education). In addition class rooms in all other centres have projector facility.

- High-end computing workstations with software for research e.g. Arc GIS, SPSS, Mathlab, Sigma plot are available.

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

- CUPB organized a workshop for its faculty on "Capacity Building of Higher Education Teachers on e-Content Development using Moodle" on September 15-16, 2015. Nearly 30 faculty of the university attended this two day programme and the software was uploaded on university website.

- High bandwidth internet connectivity with a dedicated uninterrupted individual system paves the way to prepare and collect materials for teaching with online access to journals.

- A desktop with internet connectivity has been provided to each faculty.

- The computer centre has a manager and technical assistants to attend to the issues related to the systems and software. Online complaint and e-ticketing facility is available for the same.

4.3.10 How are the computers and their accessories maintained?

- The computers are maintained through AMC which is outsourced.

- The software AMC is maintained with the supplier.

- The computer centre has a manager and technical assistants to maintain the systems and to attend to the issues related to the systems and software.

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

- Yes, e-classes through A-View, videoconferencing, other internet services.

- NKN connectivity is available.

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

University internet firewall policies allow access to Wikipedia, online dictionary and other educational and technical open source software access/download.

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

The Computer Centre is provided funds for update, deployment and maintenance of computers on need basis.

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

- The university plans MOOC (open online courses) for transfer of knowledge from closed network to open environment.

- Further the power point presentations of the lectures are to be uploaded in the intranet.

- University plans to create 'Virtual' learning labs.

- The university also has plans to augment e learning resources available in the university website and in the library.

4.4   Maintenance of Campus Facilities

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

The university has an Estate Office with an Executive Engineer, Assistant Engineer, Campus Manager and an Assistant Estate Supervisor. The university has also employed electricians, plumbers, carpenters, gardeners through outsourcing. In addition a campus up keeping committee with a few Assistant Professors as members also exists to take care of the ambience of the campus. The Estate Office maintains classrooms, laboratories and other building area. The initiatives to maintain the ambience include:

- To provide 24 hr electricity supply to the campus, the university has installed four diesel generating sets, one of 315 KVA, two of 125 KVA each and the other of 90 KVA capacity. The university has already installed two 5KW Solar-Wind Energy Hybrid Systems with subsidy from Ministry of New and Renewable Energy (MNRE), Government of India. The systems ensure uninterrupted power supply for tube lights, fans and computers. In addition, MNRE has also approved 50% subsidy for the installation of 60 KW SPV Solar Roof Top System for the university. It is being installed and commissioned through Punjab Energy Development Agency (PEDA) with a total estimated cost of Rs. 150 lacs.

- Street lights in its 35 acre city campus are on solar cells, making the campus environment friendly.

- To provide salt free water, the university has installed a desalination plant of 4000 LPH capacity.

- A fully air-conditioned modern auditorium well equipped with state-of-the-art remotely operated multimedia projectors, tablet PCs (Apple iPad) and 5.1 surround-sound theatre system with a sitting capacity of around 250 is available for the academic and cultural activities of the university.

- Maintenance of all classrooms.

- Lawns, garden, beautiful walking trails and bikeways around the campus.

- Four big parking slots for two and four wheelers.

- RO plants with water coolers at main places of the campus.

- 24 hour security is available at the main gate, entrance of the administrative, academic (science and humanities) and hostels (boys and girls). Female security guards are appointed for girls' hostel.

- The university is under round the clock camera surveillance.

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

- The Estate Office has plumbers, electricians, carpenters and helpers through whom the maintenance of the buildings, class rooms and laboratories are carried out. A complaint register is placed at the estate office to attend to the various maintenance problems.

- The Estate Office also looks into the logistics of the university.

- The air conditioners are serviced every year before the start of the summer season.

- Almost all equipment is under AMC for maintenance. In case of unavailability of AMC for any specific instrument/ equipment or software, the respective centre or school in charge can propose for necessary maintenance/repair to the Vice Chancellor through the Centre Coordinator and Dean.

- In the Central Instrumentation Laboratory, engineers are hired from the companies as a part of AMC for 5 years to ensure proper handling and efficient working of the instrument.

- Cleaning of the building, laboratories and washrooms are done regularly by outsourced employees.

- The cleanliness of the campus and gardens are also maintained through outsourced employees.

4.4.3. Any other information for infra-structure and learning resources

Saving precious energy is of utmost concern to the university. Steps taken in this regard are:

- **Renewable Energy Systems**

  In 2009-2010 a 5 kw Solar-Wind Energy Hybrid System was installed at the City Campus of the university through Punjab Energy Development Agency (PEDA) at a cost of Rs. Rs. 17,00,000 of which Rs. 8,05,000 were provided by the Ministry of New and Renewable Energy, Government of India.

- **Diesel Generating Sets**

  A hotline from the Punjab State Power Corporation Limited was obtained to ensure uninterrupted supply of electricity to the university. Four eco-friendly diesel generators with a total capacity of 655 KVA are also installed for the supply of electricity to important installations in the City Campus in case of breakdown of hotline. The diesel generators are purchased as per the pollution control norms (2013).

- **Genetic Heritage Park**

  In order to preserve rare and endangered species of plants, a Genetic Heritage Park has been established in a 6.5 acre area near the residential area. Saplings of Imli (*Tamarindus indica*), Lasuda (*Cordia dichotoma*), Phalsa (*Grewia asiatica*), Phalahi (*Acacia modesta*), Banyan (*Ficus religiosa*), Neem (*Azadirachta indica*), Drek (*Melia azadirachta*), Guggul (*Commiphora wightii*) and Pomegranate (*Punicagranatum*) have been planted.

- **Waste Management Facility**

  The university has pits for degradation and disposal of the food waste generated in the canteen/mess. Vermicomposting pits are also available inside the campus.

- *Research Infrastructure developed by the university:*

  CUPB has an excellent research infrastructure as described in *Section 3.3.1.*

University Health Centre

The university greatly values the health services for its students and staff. A fully-equipped Health Centre has been established to provide OPD, indoor, emergency, referral and other services to its employees and students. Fifty two authorized medical doctors have been empanelled for providing specialist services. The health centre also looks after the preventive health of the campus. The University Health Centre functions round the clock. A nurse and university vehicles are employed for emergency purposes. The university has its own ambulance. The faculty and the non-teaching staff are also provided reimbursement of medical expenses.

Authorized Medical Specialists

The Central University of Punjab has nominated 52 authorized medical specialists located in Bathinda City, the details of which are given as under:

S. No.	Name of Doctor	Qualification	Consultation address
1	Dr. Amrit Gupta	MS(Ortho)	Power House Road, Bathinda
2	Dr. Amit Gupta	MD(Psychiatry)	Power House Road, Bathinda
3	Dr. Bant Singh Khippal	MS (ENT)	Ajit Road, St No.2, Bathinda
4	Dr. D.S. Dhillon	MS (ENT)	Ajit Road, Bathinda
5	Dr. Jagpal Singh	MS (Surgery)	Opp. DAV College, Bathinda
6	Dr. H.S. Sodhi	MS (Eye)	G.T. Road, Bathinda
7	Dr. Narinder K. Singla	MD (Eye)	Main road, Minocha Colony, Bathinda
8	Dr. Ashok K. Goyal	MD (Med)	Ajit Road, St No. 1, Bathinda
9	Dr. H.S. Narang	MBBS, MD, DCH	Bibiwala Road, North Estate, Bathinda
10	Dr. Rajesh Maheshwari	MD (Skin and VD)	100 Ft Road, Bathinda
11	Dr. (Mrs.) Shelly Gupta	MBBS, DGO, MD (Obgyn)	100 Ft Road, Bathinda
12	Dr.(Mrs.) SuneetaChahal	MD (GynaeandObst.)	Opp. DAV College, Bathinda
13	Dr. (Mrs.) RekhaMaheshwari	MBBS, DGO, MD (Obgyn)	100 Ft Road, Bathinda
14	Dr.(Mrs.) GaganLata	MBBS, DGO	Near Bhana Mall Trust,

		(GynaeandObst.)	Bathinda
15	Dr. Parminder Singh	BAMS, MD	Bhagu Road, Bathinda
16	Dr. Kuldip K. Garg	BAMS	Bhatti Road, Bathinda
17	Dr. J.L. Bansal	DHMS	Model Town, Bathinda
18	Dr. O.P. Garg	DHMS	Aggarwal Colony, Bhatti road, Bathinda
19	Dr. Manjit Singh Sidhu	MBBS, MD, DNB	Shant Nagar, Bathinda
20	Dr.(Mrs.) AnupmaSingla	BHMS	Singla Homeopathic Clinic, GoleDiggi, Bathinda
21	Dr. Anil Singla	MBBS, MD	Vandana Hospital, GT Road, Bathinda
22	Dr. Vandana Singla	MBBS, MD (Psy.)	Vandana Hospital, GT Road, Bathinda
23	Dr. Dhiraj Jindal	BAMS (Ayn)	Jindal Hospital and Maternity Centre, Dhobinna Road, Bathinda
24	Dr. Baljindersingh	GAMS, MD (Med. Alt.)	Sushrat Hospital, near GhoreWalaChowk, near Gurudwara, Bathinda
25	Dr. Jagjit Singh	MD (Med.), MBBS	Lifeline Hospital, Kidney and Dialysis Centre, Bathinda
26	Dr. Ravinder Kumar	MD (Med.)	Ravinder Hospital, Agarwal Colony, Bhatti Road, Bathinda
27	Dr. Rajinder Kumar	MBBS	St. No. 18. Partap Nagar, Bathinda
28	Dr. Sanjay Garg	MS	Delhi Store Clinic, Bibiwala Road, Bathinda
29	Dr. Ashwani Mittal	MD (Med.)	100 Ft Road, Bathinda
30	Dr. Gulsharan Singh Sethi	MBBS(GP and Skin)	Sirki Bazar, Bathinda
31	Dr. Preetinder Kaur Sidhu	MBBS, DGTO(AFMC)	Shant Nagar, Bathinda
32	Dr. J.L. Bansal	MBBS, Skin Specialist	Opp. Canara Bank, Mall Road, Bathinda
33	Dr. Bharat Bhushan Jindal	MD (Med), Chest Diseases spl.	Dr. Bharat Bhushan Jindal's , Power House Road, Bathinda
34	Dr. H.S. Bakshi	MS, Ortho	Barnala Road, Bathinda
35	Dr. Shivani Gupta	MBBS, (GynaeandObst.)	Gupta Hospital, Power House Road, Bathinda

36	Dr. Abhinandan Gopal	BAMS (pb.), MD	Aarogyam Clinic, Backsise Punjab Clinical Laboratory, NaiBasti, GT Road, Bathinda
37	Dr. Neera Gupta	MD, Gyn. and Obs.	40 Ft Road, Namdev Marg, Bathinda
38	Dr. Aman Gupta	MBBS, MS(Surgery)	40 Ft Road, Namdev Marg, Bathinda
39	Dr. Anita Jindal	MD, (Gyn. andObst.)	Power House Road, Near Bus Stand, Bathinda
40	Dr. Aman Jindal	MBBS, MD(General Surgery)	Power House Road, Near Bus Stand, Bathinda
41	Dr.(Mrs.) Mandeep Chitkara	MBBS, (Gynae. And Obst.)	St. No. 13, Bhagu Road, Bathinda
42	Dr. P.C. Sharma	MBBS, MS (Eye)	Opp. Pokhraj Cinema, near Wadi Hospital, Bathinda
43	Dr. M.L. Garg	MBBS, MD	The Mall, Bathinda
44	Dr. Baljinder Jaura	DHMS (Homeopathic)	Ajit Road, Ghora Chowk, Bathinda
45	Dr. Kashish Gupta	MS, Eye and Phaco Surgeon	The Mall, Bathinda
46	Dr. Shweta Grover	MBBS, MS (Eye)	The Mall, Bathinda
47	Dr. Sameer Grover	MBBS, MS, Mch Urology	The Mall, Bathinda
48	Dr. Sanjeev Kumar	MBBS, MS Surgey	Bhatti Road, near Namdev Marg, Bathinda
49	Dr. Amita	MBBS, MS, (Gynae. andObst.)	Bhatti Road, near Namdev Marg, Bathinda
50	Dr. Deepak Bansal	MBBS, MS, Ortho	Bhatti Road, near Namdev Marg, Bathinda
51	Dr. Manmohan Singh Deol	MS, Ortho	Power House Road, Bathinda
52	Dr. Devinder Jindal	MBBS, MS, ENT	Jindal ENT Hospital, Opposite St. No 18, near Ghora Chowk, Ajit Road, Bathinda.

IT POLICY OF CUPB

1.   **Aim and Objective Statement:**

The purpose of this policy is to sketch out the acceptable and ensure the legitimate use of IT resources at Central University of Punjab (CUPB). All CUPB's IT facilities and information resources shall be the property of the university and not of a particular individual school or centre. The aim of the policy is to facilitate the safe, secured, effective, target oriented and lawful use based on spirit of co-operation in pursuance of Vision Statement of CUPB.

The policy shall cover all Information Technology facilities and services provided by CUPB. It shall govern the use of resources of information technology by all the stakeholders of CUPB.

2.   **Scope of Application:**

This policy shall apply to the use of information, electronic devices, computing devices, and network resources of CUPB. All students, employees, consultants, temporary, and other workers at CUPB and its subsidiaries are responsible for exercising rational judgment regarding appropriate and judicious use of information, electronic devices, and network resources in accordance with followings:

- IT Act 2000 and its Amendment.
- Email Policy of the Government of India.
- Any other policy or standards issued by the Government of India from time to time.

Note: The above rules shall apply *with necessary modifications (mutatis mutandis)* to the users of CUPB network.
- Policies and standards issued by CUPB which shall be subject to modification from time to time.

3.   **Date of Commencement**: This policy shall be brought into force from the date of its approval by the statutory bodies of the university.

4.   **Definition Clause:** Unless the context requires otherwise, the expression defined hereinafter shall be construed in following sense-

   4.1   **IT Resource**: The expression IT resource shall include the computer equipment/s, portable and mobile devices, and facilities including

the network-internet and intra-net, wireless networks, external storage devices, peripherals like printers and scanners and the software associated therewith in addition to information and data generated for official purpose and all electronic information and communication contained on the network.

4.2 **Network Resource**: It shall include any electronic/electrical and/or mechanical devices connected to computer network of CUPB.

4.3 **Users**: It shall include all students, employees, consultants, temporary, and any other person permitted by the Competent Authority using IT Resources/facilities at CUPB.

4.4 **Malicious Program:** It includes software that appears to perform a useful or desirable function, but actually gains unauthorized access to system resources or tricks a user into executing other malicious logic.

4.5 **Disruption**: It means a circumstance or event that interrupts or prevents the correct operation of system services and functions.

4.6 **Blog**: A discussion or informational site published on the World Wide Web.

4.7 **Competent Authority**: The expression in reference of Section 3 shall stand for statutory body and for section 4.3, it shall be any official designated for the above-said purpose.

4.8 **Proprietary Information**: It shall include any data, information that has been the part of official assignment and a password of resource, if any.

5. General Use, Access to Network and Ownership:

5.1 The proprietary information of CUPB stored on electronic and computing devices whether owned or leased by the university, the employees, and students or a third party, remains the sole property of Central University of Punjab.

5.2 The users of IT facilities and services of university shall be responsible to promptly report the theft, loss or unauthorized disclosure of CUPB proprietary information.

5.3 The users shall access, use or share CUPB proprietary information only to the extent it is authorized and necessary to complete the assigned job responsibilities.

5.4 For connecting to a CUPB wireless, user shall ensure the following:
   (a) A user shall register the access device and obtain one time approval from the competent authority before connecting the access device to the CUPB wireless network.
   (b) Wireless client systems and wireless devices shall not be allowed to connect to the CUPB wireless access points or remote network without due authentication.

(c) To ensure information security, it is recommended that users should not connect their devices to unsecured wireless networks.

(d) The users shall be allowed to remotely access the services and resources of CUPB by adhering the procedure to be notified and specified by the competent authority from time to time.

6.   Filtering and Blocking of Sites:

6.1   CUPB, through its Competent Authority by issuing a circular about the information, may block content over the internet which is in contravention of the relevant provisions of the IT Act 2000 and other applicable laws or policy of CUPB or which may pose a security threat to the network or undermine the interests of CUPB.

6.2   CUPB may also block content which, in the opinion of the Competent Authority, is inappropriate or may adversely affect the productivity of the users.

7.   Security and Password:

7.1   All IT resources shall be secured by strong password including document as well as equipment password. The password should include a combination of lowercase and uppercase alphabets, numerical and special characters.

7.2   All computing devices shall be secured with a password-protected screensaver with the automatic activation feature set to 10 minutes or less. You must lock the screen or log off when the device is unattended.

7.3   No PC shall be left unattended without logging off and the user shall be responsible for any misuse of such a device.

7.4   The users shall use extreme caution while opening e-mail attachments received from unknown senders, which may contain malware.

7.5   Users shall be responsible for all activity performed with their personal user ID and/or passwords. Users shall not permit others to perform any activity with their user IDs and/or passwords or perform any activity with IDs and/or passwords belonging to other users. Permitting any other person to perform any activity with one's user ID and/or passwords shall be permissible with prior written approval from the competent authority with an undertaking that such a password shall be subsequently changed. These shall be treated as sensitive and confidential information.

7.6   No official of the university shall require, for whatever purpose, the password of other officials on any kind of questionnaire, in writing or oral, through phone or electronic message service unless

> permitted by the competent authority in writing with an undertaking that such a password shall be subsequently changed.

    7.7   Users shall refuse all offers by software to place a cookie on their computer such that they can automatically log on the next time that they visit a particular Internet site.

6. Electronic Monitoring:

    8.1   CUPB shall have the right to audit networks and systems at regular intervals, from the point of compliance to this policy in the case of a specific alleged misconduct or to redress any fault in the functioning of the system.

            Provided that above access shall be lawful only with the prior approval of competent authority and under intimation to the user.

    8.2   CUPB or any person authorized on its behalf, for security related reasons or for compliance with applicable laws, may access, review, copy or delete any kind of electronic communication or files stored on CUPB provided devices by adopting the procedure given below:

        (a)   The user must be intimated.

        (b)   Should such access be necessary without seeking the user's permission, it should, wherever possible, be approved by a competent authority prior to inspection.

        (c)   If it has not been possible to intimate the user, any access should be reported to the user or to an appropriate authority as soon as possible.

7. Unauthorized Access:
Access to any system or its part/s, information or facilities shall be strictly prohibited and invoke disciplinary action.

8. Unacceptable Use:
Under no circumstances, a user of IT resources and facilities of CUPB shall be authorized to engage in any activity that is illegal under Indian or international law.

Following activities shall be, in general, prohibited but the authorized users shall be exempted from these restrictions during the course of their legitimate job responsibilities. The lists below are by no means exhaustive, but this is an attempt to provide a framework of activities falling into the category of unacceptable use.

    8.1   **System and Network Activities:**

        (a)   Users shall not undertake any activity through any website or applications to bypass filtering of the network or perform any other unlawful acts which may harm the network's performance or security.

(b) Violations of the rights of any person or company protected by copyright, trade secret, patent or other intellectual property, or similar laws or regulations, including, but not limited to, the installation or distribution of "pirated" or other software products that are not appropriately licensed for use by CUPB.

(c) Unauthorized copying of copyrighted material including, but not limited to, digitization and distribution of photographs from magazines, books or other copyrighted sources, copyrighted music, and the installation of any copyrighted software for which CUPB or the end user does not have an active license.

(d) Accessing data, a server, an account or any IT equipment for any purpose other than academics, research and official work related to CUPB.

(e) Exporting software, technical information, encryption software or technology, in violation of international or regional export control laws.

(f) Introduction of malicious programs into the network or server (e.g., viruses, worms, Trojan horses, e-mail bombs, etc.).

(g) Revealing your account password to others or allowing use of your account by others including family and other household members while working at home.

(h) Using a CUPB computing asset to actively engage in procuring or transmitting material that is in violation of sexual harassment or hostile workplace laws in the user's local jurisdiction.

(i) Making fraudulent offers of products, items, or services originating from any CUPB account.

(j) Making statements about warranty, expressly or implied, unless it is a part of normal job duties.

(k) Effecting security breaches or disruptions of network communication. Security breaches include, but are not limited to, accessing data of which the user is not an intended recipient or logging into a server or account that the user is not expressly authorized to access, unless these duties are within the scope of regular duties. For purposes of this section, "disruption" includes, but is not limited to, network sniffing, pinged floods, packet spoofing, denial of service, and forged routing information for malicious purposes.

(l) Executing any form of network monitoring which will intercept data not intended for the user's host, unless this activity is a part of the user's normal job responsibility.

(m) Circumventing user authentication or security of any host, network or account.

(n) Introducing honeypots, honey nets, or similar technology on the CUPB network.

    (o)   Using any programme/script/command, or sending messages of any kind, with the intent to interfere with, or disable, a user's terminal session, via any means, locally or via the Internet/Intranet/Extranet.

9.   Email and Communication Activities:

While using CUPB IT resources to access and use the Internet. Following points are to be followed:

9.1   the users must realize that they represent CUPB. Whenever users state an affiliation to CUPB, they must also indicate that "the opinions expressed are my own and not necessarily those of the CUPB ".

9.2   E-mail service authorized by CUPB shall only be used for all official correspondence after the specific notification as to the implementation of this Clause.

9.3   For personal correspondence, users may use the name-based e-mail id assigned to them on the CUPB authorized e-mail Service.

The following activities are strictly prohibited:

9.4   Sending unsolicited email messages, including the sending of "junk mail" or other advertising material to individuals who did not specifically request such material (email spam).

9.5   Any form of harassment via email, telephone or paging, whether through language, frequency, or size of messages.

9.6   Unauthorized use or forging of email header information.

9.7   Solicitation of email for any other email address, other than that of the poster's account, with the intent to harass or to collect replies.

9.8   Creating or forwarding "chain letters", or other "pyramid" schemes of any type.

9.9   Use of unsolicited email originating from within the network of CUPB or from other Internet/Intranet/Extranet service providers on behalf of, or to advertise, any service hosted by CUPB or connected via network of CUPB.

9.10   Posting the same or similar non-business-related messages to large numbers of Usenet newsgroups (newsgroup spam).

9.11   Retiring or the employees being relieved and the students leaving the university shall surrender a mail Id allotted on CUPB domain name or CUPB email server before clearing their No Dues Certificate.

10.   Blogging and Social Media:

In contrast to other traditional media, social media is more interactive, enables one-to-one conversation and facilitates instant response. However, CUPB is aware of the fact that on such platforms the perception of official and personal roles and boundaries is often blurred. Therefore, while using social media for official purposes, the following may be kept in mind to smoothen interaction. Blogging or access to social media is regulated. Limited and occasional use of systems of CUPB to engage in blogging is acceptable subject to the conditions specified hereinafter.

10.1   Social Media can be accessed only after office hours. If a user is required to use it for a part of his official assignment or collecting any information during office hours, it can be permitted by the competent authority.

Exception: Following shall be exempted from the application of this rule:

(a) Users or any other official working for the Department of Public Relations.
(b) Users or any other official working for community outreach under the Community Outreach Programme.

10.2   There shall be absolute prohibition on the users for making any discriminatory, disparaging, defamatory or harassing comments or bullying while blogging or using social media. The acts, omission or any statement resulting into instigation, abatement to commit any offence, creating communal hatred or apathy shall be strictly prohibited.

10.3   No user shall involve oneself in any kind of blogging resulting into compromise with the interests of the university including its employees.

10.4   No user shall attribute one's personal statements, opinions or beliefs to Central CUPB when engaged in blogging or accessing social media.

10.5   Apart from following all laws of the land pertaining to peace and order as well as the handling and disclosure of copyrighted or export controlled materials, the logos of CUPB and any other CUPB intellectual property shall also not be used in connection with any blogging activity.

10.6   Core Values for Users of Blogs and Social Media:

(a) Identity: In official communications, user must reveal his identity and his role in the department and publish in the first person. Disclaimer may be used when appropriate.

(b) Authority: Users shall not comment and respond unless authorized to do so especially in any of the following matters:
    i.   Recruitment;
    ii. Examinations;
    iii. Tenders;
    iv. Quotations;
    v.   Matter sub-judice (pending);
    vi. Draft Rules, Regulations, Notifications, Circulars;
    vii. Injuring and damaging the reputation of any Colleague, student and CUPB.

(c) Relevance: Users can comment on issues relevant to their area and make relevant and pertinent comments without compromising the interest of the CUPB. This will make conversation productive and help take it to its logical conclusion. However, CUPB shall not be responsible for any comments and it must be ensured by the user before making any comment or participating in the deliberation that the comments or idea expressed by him are his personal, not representing CUPB.

(d) Professionalism: Users must be polite, discrete and respectful to all. They shall refrain themselves from making any personal comments for or against any individuals or agencies. They should be careful not to politicize any kind of professional discussions.

(e) Compliance: Users shall be compliant to relevant rules and regulations. They should not infringe upon IPR, copyright of others.

(f) Privacy: Do not reveal personal information about other individuals as well as do not publish your own private and personal details unless you wish for them to be made public to be used by others.

11.   **Dissemination of IT Policy**: For dissemination, following measures shall be adopted:

    11.1 Mandatory disclosure of policy on the CUPB Website.

    11.2 Orientation session at the time of commencement for all Stakeholders.

11.3 One session during Orientation Programme for newly admitted students or all recruited Staff.

Disciplinary and Legal Measures:

11.4 Deliberated and serious breach of the policy statements in this section shall invoke disciplinary measures which may include, in addition to the penalties, person in conflict with policy/offender being denied access to IT services and facilities offered by CUPB. Nonetheless, if the act is covered with the meanings and definitions of offences defined under Indian Penal Code, 1860, Information Technology Act, 2000 (with Amendments) and any other allied laws, regulations, the legal proceedings against the person in conflict with policy or offender shall be initiated within the prior written approval of the Competent Authority.

11.5 Notwithstanding discussed above, the Competent Authority shall have the Authority to take appropriate action in case any act is not covered under the provisions referred hereinbefore if the act or omission affects national interest, interest of the CUPB or proves otherwise offensive.

12. **Power to Revise:** The rules under this IT Policy of CUPB shall be subject to revision by the Competent Authority from time to time.

CRITERION-V

STUDENT SUPPORT AND PROGRESSION

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CRITERION-V STUDENT SUPPORT AND PROGRESSION

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5.1   Student Mentoring and Support

Central University of Punjab has a strong mentor–mentee system in place, whereby, students are mentored by the faculty from the day of orientation to the day of graduation. The mentor-mentee peer groups, programme advisors, research supervisors, hostel wardens, Dean Students Welfare and Students Counselling Cell all organize mentoring and support to students.

Class room teaching apart, students are provided mental, physical and job-oriented training. Support services like library, internet, hostel, language laboratory, sports facilities, health centre and canteen are available. Facilities at CUPB have attracted more and more students over the years. Also, there is a continuous improvement in students' performance in curricular, co-curricular and extra-curricular activities.

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

The university has academically sound and rewarding environment and considers student support as an essential component of its functioning.

Structural characteristics of CUPB's Mentoring system

CUPB has a unique system of students mentoring. On the day of orientation, the students are divided in groups of 5-8 and allotted a faculty member as a mentor. In a rather unconventional procedure, an attempt is made to group students of a region together and allot a mentor of the same region. It is believed that this creates a comfort zone for the students in their mentor group and yet there will be plenty of opportunities for them to mix with students from other regions during various activities at CUPB. Students are provided with one opportunity to change the mentor group, if they like, and thereafter the group remains with the same mentor until graduation. Contact details of the mentors are provided to the parents and thus mentor is a single point source for the parents to seek all academic, general or personal information about the student's performance at the CUPB. Parents can also reach the mentor for any emergency. Each year more and more students join the mentor group: the seniors treat freshers as their "siblings".

Apart from the mentor-mentee groups, each academic programme in the university has a designated "Programme Advisor" for advising the students on academic matters. Again a unique feature of students support system is that as per the Executive Council's decision, programme advisors must

ensure that the students are guided properly on choice of courses and other academic regulations. Wherever necessary, the programme advisors must advice the students in writing or through e-mails, particularly about the requirements for completing their degree programmes.

Students also have other support systems: Research supervisors, Hostel wardens, the Dean Students Welfare and Students Counselling Cell. All of these provide the necessary support for growth of students.

Functional characteristics

Mentor-mentee groups are strong personally bonded peer groups for academic, residential, personal, health and financial support. Programme Advisors are responsible for advising the students on choice of courses in order to complete their programme successfully. Research supervisors provide technical guidance and support for research; and wardens, DSW and Students Counselling Cell ensure comfortable stay and good mental health of the students.

In addition to the mentoring systems, CUPB also has support systems such as:

(i)   Soft skill coordinator on campus is involved in enriching the soft skills with the support of in-house language laboratory.
(ii)   Computer Centre for IT services.
(iii)   Medical facilities including an ambulance as per specifications.
(iv)   Financial-loan from the bank
(v)   Wi-Fi internet
(vi)   Sports
(vii)   University cafeteria
(viii) Reading rooms
(ix)   Gymnasium
(x)   Tuck shop
(xi)   ATMs- Two (State Bank of Patiala and Punjab National Bank)

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

In addition to class room interaction, mentor groups have regular meetings. Also, students are taken to the field trip and educational tours to visit the various institutions and industries located in the different parts of the country. Besides, students are given personal counselling and remedial coaching. Special coaching classes for competitive examinations (UGC-CSIR) are provided for advanced learners. Tutorial classes are held as per timetable and

teachers have face to face interaction with students individually for their academic problems.

Further, various research societies/associations at CUPB and faculty of different centres invite eminent scholars and scientists for interactive sessions with students and faculty.

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

University conducts various programmes required for personal enhancement and development of students.

Personality and Language Development Cell: Personality and Language Development Cell of the university has been established to foster soft-skills and communication skills for the students. A three month short course on Communication and Soft Skills is organized every semester and classes are held in the evening for interested students. The cell regularly organizes activities including, communication skills training and general knowledge quiz competitions. Students actively participate in these programmes in view of today's highly competitive and stressful academic/career environment.

As a part of the activities of this cell, a Japanese language course is being conducted on every Saturday between 3-4 p.m. This elementary course introduces the students to Japanese alphabet (Hiragana, Katakana and elementary Kanji), basic grammar and commonly used/ spoken Japanese expressions.

Career Counselling: The university has a "Placement Co-ordination Cell" and then each centre has its own Placement Cell. These cells offer personalized career counselling. With increasing strength of the students graduating from CUPB, Placement Cells are becoming more and more active.

Orientation programme: Orientation programmes are held at various levels for the newly admitted students at the beginning of every academic year. At the university level, orientation led by the Vice Chancellor, CUPB is organized in the main auditorium. The Deans, Registrar, CoE, CoCs and all faculties are introduced with power point presentation of their biodata. Examination system, ragging, sexual harassment, academic system and grievance redressal systems are explained and a virtual tour of university is given.

Thereafter, the students are given orientation in their respective centres, whereby the activities of the centre and various programmes are explained.

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

CUPB has raised a corpus "Students Financial Assistance Fund" to help the students in need. Also, CUPB has arrangement with four local banks for education loan facility to students. Apart from this, Rajiv Gandhi National Fellowship and Maulana Azad National Fellowship are two schemes where students are encouraged to apply with a proposal and mentorship from CUPB. A large number of students have fellowships from national agencies. University fellowships are also provided to M.Phil. and Ph.D. students.

(a)   University Financial Assistance Scheme:

Financial assistance is given to the economically weaker students equal to tuition fee/hostel fee/half hostel fee. The Financial Assistance Scheme was initiated in 2013. A committee comprising of CoCs and OICs of the related centres screens applications of needy students and recommends suitable financial assistance. A sum of Rs 2,31,970/- and 3,95,850, respectively was disbursed to the selected students in last two years. (***Table 5.1***)

(b)   Earn While You Learn Scheme:

Central University of Punjab, Bathinda, attempts to make the students self-reliant and develop their creativity and skills during their stay at the university. CUPB encourages students to take up part-time jobs at the university under the "Earn While You Learn" scheme on campus. (***Annexure 5.1***)

(c)   **University Financial System**

Central University of Punjab provides scholarships to the selected M.Phil. and Ph.D. students (***Table 5.2***). There is a facility of providing interest-free loan to the students also.

Apart from the university fellowship, GPAT and GATE qualified M.Pharm. and M.Tech students get fellowship from AICTE. Till today, 258.97 lacs have been disbursed to the students as fellowship. (***Table 5.3***)

Table 5.1 : Number of applications and students given financial assistance under CUPB Financial Assistance Scheme

Year	No. of applications received	Number of students recommended	Total amount disbursed from student aid
2013-14	42	29	2,31,970/-
2014-15	116	63	3,95,850/-

Table 5.2 : Number of M.Phil. and Ph.D. fellowships disbursed since 2009

S.No.	Year	University Scholarships /Fellowships	
		M.Phil.	**Ph.D.**
1	2009-10	10	NIL
2	2010-11	38	NIL
3	2011-12	58	NIL
4	2012-13	70	21
5	2013-14	117	34
6	2014-15	135	55

Table 5.3 : GPAT and GATE fellowships disbursed to students

S.No.	Year	Fellowship disbursed (Lacs)
1	2009-10	Nil
2	2010-11	8.83
3	2011-12	23.32
4	2012-13	43.68
5	2013-14	72.74
6	2014-15	110.40
	Total	**258.97**

(d) **CUPB Helping hand**

- The students' of Central University of Punjab have formed a society named **"CUPB Helping Hand"** where by the student volunteers collect money from students, staff and faculty and use it for helping the needy students for paying their mess bills, fees etc. This group also carries out other noble works. This society collected approximately Rs 80,000/-, blankets, clothes and medicines and donated to people in J and K flood hit camps.

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

Yes, the university publishes a Students Manual/Hand Book in electronic version and with few print copies. These include information like programmes offered and their structure, eligibility for admission, credits, marks and grading system, requirements of attendance, examination pattern, evaluation and syllabi, students welfare activities, campus amenities, UGC schemes, and details of teaching and non-teaching staff. Students download their syllabi, various forms, applications through our university website also.

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

CUPB provides fellowships to the students as per UGC rules. All scholars of M.Phil. and Ph.D. are given fellowship of Rs. 5,000 and Rs. 8,000 per month. Fellowship also carries a working contingency of Rs. 8,000 and Rs. 10,000 per annum for humanities and sciences, respectively. (***Table 5.2***)

All the fellowships are disbursed on time directly to the bank account of students. There have been no complaints from the students in this regard.

University has also started a Diploma in Green Farming Technology under UGC scheme of Community Colleges. The students of the programme are given Rs. 1000/-. per month as scholarship.

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

- University does not have undergraduate programmes and therefore, no financial assistance under these schemes has been received so far.

- However, six students belonging to SC category have received post metric scholarship from Punjab Government under Ashirwad Scheme which covers 75% of the fee paid to the university by a student.

- Also, financial assistance in the form of fellowship from agencies like UGC, CSIR, ICMR is being received. No student of M.Phil. and Ph.D. is without financial assistance.

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

University has established an International Collaborations Division (*Annexure 5.2*) that looks into the international students admission, liaising and needs and other international activities. CUPB has a well-defined and duly approved policy for admitting international students (see section 1.2.3).

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

The question is same as 5.1.4.

5.1.10. What types of support services are available for

- **Overseas students**

  University has established an International Student Cell as a part of International Collaborations Division, which caters to the eligibility, admission, hostel and other needs of the International students.

- **Physically challenged / differently-abled students**

  University follows the reservation policy of Government of India. Also, the physically challenged / differently abled students are given preference in the hostel accommodation.

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

  Reservation policy of Government of India is followed for admission and hostel accommodation. Apart from these, remedial coaching classes are conducted after the class hours to improve academic performance of the students.

  A proposal has been submitted to Ministry of Social Justice and Empowerment under the Central Scheme of "Free Coaching for SC and OBC Students".

- **Students participating in various competitions/ conferences in India and abroad**

  Students are encouraged to participate in various competitions and conferences in India and abroad. The Students Financial Assistance scheme has specific provisions for supporting students for such activities. Apart from this students can use their contingent grant for attending the conferences.

- **Health centre, health insurance etc.**

  A well-equipped Health Centre with 24 x 7 emergency care services is available on campus. The students get good treatment free of cost. An ambulance and driver are available on campus for any emergencies. Patients requiring specialized care are referred to civil hospital and on recommendations of the civil hospital to private super speciality hospitals.

  CUPB has a Winger High Roof Ambulance: It has a single stretcher, bench seats for paramedics, special doctor's seat, single oxygen cylinder cage, 4 bottle holding hooks, first aid box, electric plug point, overhead revolving beacon, wide 180° opening rear door, anti-skid flooring, factory-fitted dual AC, 2 cabin lights, 2 co-driver seating, and 5 attendant seats.

  A proposal for health insurance of students and faculty is being finalized.

- **Skill development (spoken English, computer literacy, etc.)**

  Language for communication and basic computer course are included in the regular curriculum for the students to develop their communication skills and a separate computer lab is also available for computer knowledge development. Details of courses in

Communication and Soft Skills Development, Green farming Technologies, Vermicomposting, Apiculture, Mushroom Cultivation and Sericulture have been included in Section 1.3.4. B.Voc. programme has been sanctioned by UGC and will begin from session 2016-17.

- **Remedial Classes in English**

  Remedial classes in English are conducted for the students who are weak in English. These are voluntarily opted by the students.

  CUPB has a Language Laboratory established in the Centre for Languages, Literature and Culture. It started with eleven computers in the laboratory. In order to cater this facility to a large number of students, the lab has been expanded with 31 computers and software for English installed to accelerate the language learning process. The laboratory is used for language tutorials to help students improve in English and build their confidence.

  With an aim of improving the reading, writing and speaking skills of students of the university, Communication and Soft Skills Development classes are held in the Language Lab every day. Course work includes English grammar, academic and technical writing and additionally students are prepared for facing interviews, group discussions, etc.

- **Performance enhancement for slow learners**

  Special attention is given to the average and below average students. The Dean Academic Affairs, CoCs and Faculty monitor the progress of slow learners and students with learning disabilities.

- **Exposure of students to other institutions of higher learning/corporate/business houses, etc.**

  The students are taken to the field trips, educational tours to visit the various institutions, central and state research stations and industries located in the various parts of the country.

- **Publication of student magazines**

  The students publish a "Wall Magazine", which is a feature of the attraction for visitors. The editorial board comprises of four faculty members and five students.

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

Yes. A "Competitive Examination Cell" has been created to prepare the students to face different competitive examinations and help them acquire the requisite knowledge to excel in their studies. The cell conducts coaching classes for exams like UGC/CSIR-NET, ICMR, DBT, GATE, GPAT, Civil services examination, etc. Classes for these competitive examinations are held in the evening, so that the regular class schedule of the university is not disturbed. Of the students who sought coaching in this cell, 46% are females, 13% are SC and 21% are OBC.

Outcome: As many as 194 students at CUPB have cleared CSIR JRF/NET/ SLET/ICAR-NET/GATE/GPAT examinations in the recent years as described in *Section 3.4.4*. Many have joined world class universities and institutes (Yale University, Oxford University, University of Kent and University of Lund).

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

- **Additional academic support and academic flexibility in examinations**

  CUPB provides flexibility in the university examination system to sportspersons. Also, supplementary and improvement examinations are conducted in the respective academic sessions to support students.

- **Special dietary requirements, sports uniform and materials**

  A Centre for Sports as an independent academic centre is being established in the university. Presently, university has a Sports Officer who takes care of the fitness and sports activities of the students. Yoga classes for the students and faculty are also held. Sports materials that are consumed in the indoor, as well as, outdoor games are provided.

- **Any other (please specify)**

  (a)   University celebrates Foundation Day (28th Feb) every year. This weeklong celebration includes annual sports-cum-athletic week, singing and dancing competitions, literary

activities and community service (blood donation camp organized twice with 101 and 141 units donated to Civil Hospital, Bathinda).

(b) University offers sports uniform and materials for the winning team members.

(c) The outstanding sportspersons are given university's Best Sports Men and Woman trophy with track suit.

(d) High altitude tracking club is proposed by a trained faculty who will conduct annual camp every year.

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

To coordinate various placement activities, CUPB has multiple levels of support. A university level "Placement Coordination Cell" mainly coordinates the placement activities. In addition, three main faculties have their own Placement cells and then each centre has constituted a placement cell. (*Annexure 5.3*). These cells expose students to job opportunities, prepare them for group discussion and interview and develop entrepreneurial skills. The constitution is as under:

- *Placement Coordination Cell*

  - Prof. P. Ramarao, Dean Academic Affairs
  - Prof. A. K. Dhawan, Dean School of Health Sciences
  - Dr. Tarun Arora, CoC for Law
  - Ms. Shweta Arora, Deputy Registrar

The Placement Coordination Cell looks after the activities of the various placement cells of the university and is responsible for generation of the reports / presentations etc.

- *Placement Cell - Sciences:*

  - Prof. R.C. Sharma, Dean School for Environment and Earth Sciences- Chairman

  - Dr. Pankaj Bhardawaj, Assistant Professor, Centre for Plant Sciences

- Dr. Yogalakshmi K.N., Assistant Professor, Centre for Environmental Science and Technology

- Dr. Sandeep Singh, Assistant Professor, Centre for Human Genetics and Molecular Medicine

- Dr. Preeti Khetarpal, Assistant Professor, Centre for Human Genetics and Molecular Medicine

- Dr. Achchhe Lal Sharma, Assistant Professor, Centre for Physical Sciences

- *Placement Cell - Engineering and Technology:*

  - Prof. Dr. A. K. Jain, Dean, School of Engineering and Technology- Chairman

  - Er. Meenakshi, Assistant Professor, Centre for Computer Science and Technology

  - Dr. Vinod Kumar, Assistant Professor, Centre for Pharmaceutical Sciences and Natural Products

- *Placement Cell - Humanities:*

  - Dr. Zameerpal Kaur, Assistant Professor, Centre for Comparative Literature- Chairperson

  - Dr. Kiran K. Singh, Assistant Professor, Centre for Geography and Geology

  - Dr. Deepak Kumar, Assistant Professor, Centre for Law

In addition to above committees, each centre of the university has a Placement Cell consisting of the following:

- CoC as Chairperson
- One Professor
- Two Associate Professors
- Two Assistant Professors

Personalized counselling and students' to students' relations has helped the students to get placements as in *Table 5.4*

Table 5.4 List of students placed at various organizations

S.No.	Name of Student	Centre	Organisation/Institution where employed
1.	Mr. Shokit Amin Poswal	Centre for Biosciences	Teacher, Department of Education, State of Jammu and Kashmir, Srinagar.
2.	Mr. Ashish Kumar Pandey	Centre for Biosciences	Resident Engineer, Confocal Laser Scanning Microscope, Ms. DSS Imagetech, New Delhi, Placed at Imaging facility, CUPB.
3.	Mr. Rajiv Kumar	Centre for Biosciences	Scientific Assistant, Forensic Science Laboratory, Punjab Police Academy, Phillaur, Ludhiana.
4.	Sheetal Sharma	Centre for Biosciences	Senior Associate (Indexing and Abstracting) Innodata India Pvt. Ltd., Sector 62, Noida.
5.	Deependra Kumar	Centre for Chemical and Pharmaceutical Sciences	Data Analyst Innodata, New Delhi.
6.	Vinay Gupta	Centre for Chemical and Pharmaceutical Sciences	Technical Analyst Evalueserve, Gurgaon, New Delhi.
7.	Prakriti Monga	Centre for Chemical and Pharmaceutical Sciences	Chemical Analyst Ind Swift, Chandigarh.
8.	Nidhi Singh	Centre for Chemical and Pharmaceutical Sciences	PGT teacher, Ghaziabad, UP.
9.	Ramandeep Kaur	Centre for Chemical and Pharmaceutical Sciences	Lecturer, Mata Sahib Kaur, college Talwandi Sabo.
10.	Ashish Ranjan Dwivedi	Centre for Chemical and Pharmaceutical Sciences	Research Associate Integral Biosciences, New Delhi.
11.	Anil Rana	Centre for Chemical and Pharmaceutical Sciences	Research Associate Integral Biosciences, New Delhi.
12.	Vijayinder Saini	Centre for Chemical and Pharmaceutical Sciences	Research Associate Integral Biosciences, New Delhi
13.	Gagandeep Kaur	Centre for Chemical and Pharmaceutical Sciences	Data Analyst Parexal (Heron), Chandigarh.
14.	Mayank	Centre for Chemical and Pharmaceutical Sciences	Pharmacist, NRHM, Bathinda.
15.	Gaurav Joshi	Centre for Chemical and Pharmaceutical Sciences	Project Fellow (UGC Major Project), Central University of Punjab, Bathinda.

16.	Khushmeet Singh	Centre for Computer Science and Technology	Inspector (Grade 1), Department of Food Civil Supplies and Consumer Affairs, Govt of Punjab.
17.	Mandeep Singh	Centre for Computer Science and Technology	Inspector (Grade 1), Department of Food Civil Supplies and Consumer Affairs, Govt of Punjab.
18.	Amandeep Kaur	Centre for Computer Science and Technology	Junior Research Fellow (JRF) Terminal Ballistics Research Laboratory (TBRL) –Defence Research and Development Organization (DRDO).
19.	Krishan Singh	Developmental Economics	Researcher, Planning Commission, Chandigarh.
20.	Rajpreet Kaur	Developmental Economics	Teacher, Govt. Sen. Sec. school, Pathrala, Bathinda
21.	Pushpinder Kaur	Developmental Economics	Teacher, Govt. Middle School, Mandi Khurd, Bathinda.
22.	Disha Bains	Comparative Literature	Assistant Prof in English at K.M.R.D. Jain college, Malerkotla.
23.	Manpreet Kaur	Comparative Literature	PGT-English Govt. Adarsh Sen. Sec. School, Bukan Khan Vala, Ferozpur.
24.	Rajbinder Singh	Centre for Environmental Science and Technology	Setia Paper Mill, Muktsar, Punjab.
25.	Kirti Shrama	Centre for Environmental Science and Technology	Satluj Jal Vidyut Nigam Ltd. Jhabri, Shimla, Himachal Pradesh.
26.	Parminder Singh	Centre for Environmental Science and Technology	ATMA Scheme, Govt. of India
27.	Tarandeep Kaur	Centre for Environmental Science and Technology	Akal College, Faridkot, Punjab
28.	Rimzim Gill	Centre for Environmental Science and Technology	Food Inspector, Govt. of Punjab, Muktsar
29.	Amita Bhatti	Centre for Environmental Science and Technology	University of Birmingham, UK

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

The Placement Cells have been established. Students are now completing the degrees from CUPB and placement cells are becoming active.

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

University has an Alumni Association which has been framed following a policy approved by the Executive Council of the university (***Annexure 5.4***).

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

University has a well-established mechanism for redressal of grievances of students and employees. The details are as below:

In order to attend to the students' complaints, a Grievance Redressal Cell has been set up in the university. It offers immediate and effective redressal to the problems reported to it and works towards providing a safe and secure atmosphere for the holistic growth of the students. Grievance Redressal of employees and students comprises of system as under:

Grievance Redressal Officer:
Every CoC/OIC of the centre is designated as the Grievance Redressal Officer for the centre.

Appeals Committee:
   i.   Prof. A. K. Dhawan, Dean, School of Health Sciences – Chairperson
   ii.   Prof. S. K. Bawa, Dean, School of Education
   iii. Dr. Alpna Saini, Associate Professor
   iv.   Dr. Tarun Arora, Associate Professor
   v.   Dr. Harish Chander, Assistant Professor
   vi.   Mr. Rajender Kumar, Assistant Registrar (Examination) – Convener

Review Committee:
   i.   Prof. P. Ramarao, Dean Academic Affairs – Chairperson
   ii.   Prof. R. G. Saini, Invited Professor
   iii. Prof. R. C. Sharma, DSW
   iv.   Prof. S. K. Bawa, Dean, School of Education

v.   Dr. Anjana Munshi, CoC for Human Genetics and Molecular Medicine
vi.   Dr. Dhanya M.S., Assistant Professor
vii.   Dr. Pankaj Khare, Registrar – Convener

Mercy Appeals:

Vice Chancellor, CUPB considers mercy appeals

The above committees address the grievance of employees and students. However, for examination related grievances of students, there is a special committee. Also, there is a grievance committee for infrastructure related issues.

Grievance Redressal Committee (Examinations)

- Prof. P. Ramarao, Dean Academic Affairs
- Prof. R. C. Sharma, Dean Students Welfare
- Prof. R. G. Saini, Invited Professor
- Dr. Pankaj Khare, Registrar

Grievance Redressal Committee (Infrastructure)

- Prof. R. C. Sharma, Dean Students Welfare
- Dr. Tarun Arora, Boys Hostel Warden
- Dr. Sandeep Kaur, Girls Hostel Warden
- Er. Daljeet Singh, Executive Engineer

Thus, the university has a well-defined grievance redressal mechanism. These are Grievances Committees, Appeals Committee, Review Committee and Mercy Appeals (*Annexure 5.5*).

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

The CUPB community comprises of individuals from different regions, religions, caste affiliations, linguistic backgrounds and financial status. Therefore, discriminations based on caste/sex/appearance/state of domicile etc. is dealt with extreme seriousness.

The university puts in best efforts to ensure that no community faces incidents of discrimination on the campus. As per the guidelines given by UGC and Supreme Court of India, the university has set-up a separate cell

with the purpose of making the university a gender sensitive institution, where all the women employees and students could achieve their full potential.

Complaint Committee to deal with the complaints regarding sexual harassment/abuse in Central University of Punjab, Bathinda is as given in the ***Table 5.5***. There is online provision for filing the complaint. Also, CUPB has a very active Human Rights Club (***Annexure 5.6***), which organizes awareness programmes about human rights.

Table 5.5: Composition of Complaint Committee for cases of sexual harassment at CUPB

1.	Dr. Surinderjit Kaur Bawa Professor, Centre for Education CUP, Bathinda	Presiding Officer
2.	Dr. Sushil Kumari Gupta Officer on Special Duty (Academic and Admin)	Member
3.	Dr. Satwant Kaur Bhullar Principal, RBDAV Senior Secondary School, Bathinda	Member
4.	Mr. Jagmohan Kaushal Founder and President Teachers Home Trust, Bathinda	Member (NGO)
5.	Mrs. Shweta Arora (Member) Deputy Registrar, CUP, Bathinda	Member Secretary
6.	Dr. Deepak Kumar Assistant Professor CUP, Bathinda	Member
7.	Dr. Anil Kumar Mantha Assistant Professor CUP, Bathinda	Member
8.	Dr. Kiran Kumari Singh Assistant Professor CUP, Bathinda	Member

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

The university has a zero tolerance policy towards ragging-related matters. CUPB reiterates the message that the seniors and the freshers are siblings and future friends and harmony must prevail amongst them. Also, an anti-ragging committee is in operation to prevent ragging and create harmony among the freshers and senior students. In the first 30 days of the academic session, the committee members inspect the hostels during evening and night hours and submit the report to the registrar, every day. No ragging instances have been reported during the last four years because of the strict monitoring of the anti-ragging committee.

All issues in this regard are dealt with utmost urgency and stringent action is taken against those who are involved. A copy of UGC regulations on curbing the menace of ragging are distributed to all students upon admission. Undertakings and affidavits are procured from the students, as well as, their parents in this regard.

In compliance with the directions of University Grants Commission, the competent authority has constituted Anti-Ragging Committee, Anti Ragging Squad/Cell and Nodal Officer at Central University of Punjab for the year 2015-16.

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

CUPB has two independent bodies to establish a strong link with industries relevant to its domain areas:

    (a)   A University-Industry Forum has been set up to include important industries in domain areas of CUPB.

    (b)   A University-Industry Council consisting of five industries are selected from the forum members for a closer interaction.

Industry Forum and Council are the policy advisory bodies of CUPB in matters related to teaching, research, consultancy, skill development, entrepreneurship development, students placements etc. The university elicits the cooperation of these bodies and other stakeholders for development of its students.

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

The university ensures and provides adequate funds to support women students' activities. International Women's Day is celebrated by conducting competition and invited talks. Women are encouraged to participate in all sports and cultural activities. They are given special attention and consideration, with the motivational support of women faculty members.

5.2   Student Progression

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

The present total strength of students in the university for the academic year 2015-16 is 904. Year-wise students' intake is given in the *Fig. 5.1*.

There was no direct progression of the students from one programme to another, except M.Phil-Ph.D. Integrated programme.

Student Progression	%
UG to PG*	NIL
PG to M.Phil.*	1
PG to Ph.D.	NIL
Ph.D. to Post-Doctoral	NIL
Employed	
Campus selection	NIL
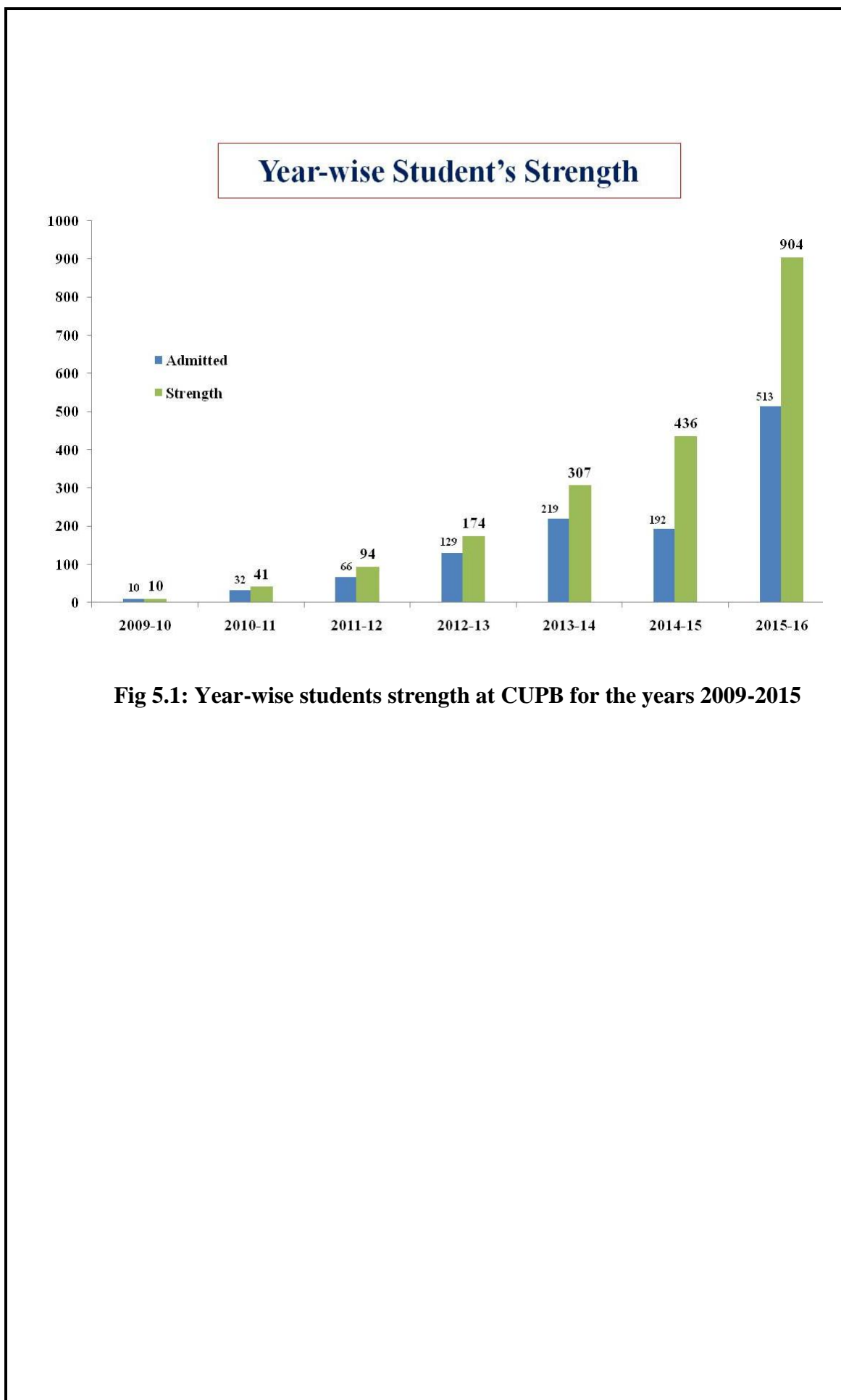
Fig 5.1: Year-wise students strength at CUPB for the years 2009-2015

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

Student Progression	%	Time span
UG	NA	NA
PG	100%	Two Years
M. Phil.	100%	18 Months
M.Phil-Ph.D.	NA as the first batch of M.Phil. Ph.D. integrated program is about to graduate.	4.5 Years

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

A total of 194 students have qualified national level competitive examinations. Centre wise list of the students who have qualified national level exams in last four years is given in *Section 3.4.4*.

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

The first batch of M.Phil Ph.D. Integrated program students for four programmes i.e. Biosciences, Environmental Science and Technology, South and Central Asian Studies and Comparative Literature is about to complete. Till date no Ph.D. thesis is submitted. However, 228 dissertations have been submitted in the last five years. Details are in *Section 2.3.13*.

5.3 Student Participation and Activities

5.3.1 List the range of sports, cultural and extracurricular activities available to students.

- *Range of Sports Activities*

   Sports events are organized every year in the university with the help of the sports officer and CUPB is also going to start academic programme in sports sciences.

   Annual Sports-cum-Athletic meet is a part of academic calendar. Also, university is managing intra-university sports competitions from last three years for students (boys, girls) and faculty. (*Table 5.6*)

Table 5.6 : Total number of games and medals in 2014 and 2015 sports

S. No.	Games		Medals
1.	*Indoor games 2014*	Badminton (Singles, Doubles, Mix Doubles for Men, Women, Faculty)	29
		Table Tennis (Singles, Doubles, Mix Doubles for Men, Women, Faculty)	26
		Carom (Singles, Doubles, Mix Doubles for Men, Women, Faculty)	21
		Chess (Men, Women, Faculty male female)	09
2.	*Outdoor games 2014: Track and field events*	50m (for girls and female faculty only)	06
		100m (Men Women Faculty)	04
		200m (Men Women Faculty)	09
		400m (Men)	09
		800m (Men)	03
		Relay Race (Men Women)	03 (one team with four athlete, three teams 6*4=24 medals)
		Discus throw (Men Women Faculty staff)	12
		Long jump (Men Women Faculty staff)	12
		Shot put (Men Women Faculty staff)	12
3.	*Major Games 2014*	Volleyball (Men teams only Three teams 1st 2nd 3rd)	36
		Basketball (Men Teams only Three teams 1st 2nd 3rd)	36
		Cricket (Men teams only Three teams 1st 2nd 3rd)	36
4.	*Fun Games 2014*	Sack race, Three lag race, Thread and needle race, Back race, Brick race, Spoon race, Tug of war	
5.	*Indoor games 2015*	Badminton (Singles, Doubles, Mix Doubles for Men, Women, Faculty)	16
		Table Tennis (Singles, Doubles, Mix Doubles for Men, Women, Faculty)	14
		Carom (Singles, Doubles, Mix Doubles for Men, Women,	14

		Faculty)	
		Chess (Men, Women, Faculty male female)	06
6.	*Outdoor games 2014* Track and field events	50m (for girls and female faculty)	06
		100m (Men, Women, Faculty male female)	12
		200m (Men Women)	06
		400m (Men)	03
		800m (Men)	03
		Relay Race (Men Women)	03 (one team with four athlete, three teams 6*4=24 medals)
		Discus throw (Men Women Faculty staff)	12
		Long jump (Men Women Faculty staff)	12
		Shot put (Men Women Faculty staff)	12
7.	*Major Games*	Volleyball (Men teams only Three teams 1st 2nd 3rd)	36
		Cricket (Men team's only three teams 1st 2nd 3rd)	28
8.	*Fun Games*	Sack race, Three lag race, Thread and needle race, Back race, Brick race, Spoon race, Tug of war	

After the completion of the sports-cum-athletic meet, the best athlete 'Boy' and 'Girl' is declared. Best Sports Person in students and faculty is also declared after analysing the overall participation and medals won by the individual.

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

At university level the students are participating in several co-curricular, extracurricular and cultural activities, but there is no participation at inter university/state/zonal/national and international level.

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

- The university conducts special drives and campaigns for its faculty and students to promote heritage consciousness. Faculty and students are also exposed to dance and cultural heritage through participation and assistance in local festivals like Lohri, Holi, etc.

- Central University is a hub of national diversity. Punjabi language classes are conducted for students, faculty and staff hailing from different states.

- Central University Museum is a place of local heritage.

- Keeping in view the importance of local language and to encourage local culture, university has introduced a masters level course in Punjabi Language and Literature.

University Museum:

- University Museum houses vast collection of archaeological exhibits, including that of Harappan civilization, excavated from Malwa region of Punjab. Exhibits also include a photo gallery on historical and cultural transformation of Bathinda City.

- The museum is being continuously expanded and more permanent galleries are scheduled to be opened for public.

- The museum reflects a true heritage picture of Punjab.

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

The university encourages creativity and freedom of thought among the students. CUPB publishes a wall magazine in which the major contribution is

of students even though four faculty members participated in the editorial team to guide them. There are many literary contests held in the university by the different departments where students get an opportunity to participate.

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

University has an association wherein students are elected based on their merit and interest as President, Vice President, General Secretary and Joint secretary. They are ably guided by teaching faculties. They look after various extracurricular and co-curricular activities and also represent students problems. This association is funded by students' contribution, as well as, assistance from the university. University has made a constitution for elections and its working.

The first council elections were conducted in 2012 where Class Representatives of various centres elected President, Vice President, General Secretary and Joint Secretary unanimously on 23rd Sep 2012.

President: Mr. Ravi Prakash Cholia, M.Phil. Ph.D. Integrated Biosciences.

Vice President: Mr. Gajendra Singh, M.Phil. Ph.D. Integrated EVST.

General Secretary: Ms. Amandeeep Kaur, M.Phil.-Ph.D. Integrated Developmental Economics.

Joint Secretary: Ms. Pawneet Kaur, M.Phil. Ph.D. Integrated Developmental Economics.

Same council operated in 2013, the position of General Secretary was replaced by Ms. Richa Mehra. M.Phil. Ph.D. Biosciences.

The Student Council in the academic session 2014-15 was as follows:

President: Mr. Satej Bhushan, M.Phil. Ph.D. Integrated Biosciences.

Vice President: Mr. Sapinder Singh, M.Phil. Ph.D. Integrated Programme in Comparative Literature.

General Secretary: Mr. Biswabhushan Bhuyan, M.Phil.-Ph.D Integrated Programme in Developmental Economics.

Joint Secretary: Mr. Sukhwinder Singh (Computer Science and Technology)

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

The representatives in class and hostel are engaged in academic and administrative activities as and when required. Each faculty has an association wherein students are nominated based on their merit and interest as secretary. The following bodies involve students:

- Academic and Administrative committee
  - This committee monitors curriculum and reviews working of the centre. Has one student of the centre.

- Board of Studies (BoS)
  - The BoS reviews the structure and syllabus of various courses. Has students as co-opted/invited members.

- Hostel Representatives
  - Hostel representatives are responsible for the general care of the hostel.

- Mess Representatives
  - This committee measures the quality and service of the mess.

- IQAC member (Full members)
  - This committee operates the overall quality check on the university services and functioning. Has one student member.

- NAAC committee (Full members)
  - Students are assisting the NAAC members in generating data and helping in managing the NAAC report.

- Environment Audit and monitoring unit (Full members)
- University tender process (Mess cum canteen Tender)
  - Students participate in the mess cum canteen tender process for transparency of the prices and process.
- Annual Report, Newsletter as student editors.

Annexure 5.1

EARN WHILE YOU LEARN SCHEME (EWYL).

The Secretary while presenting the item informed the Council regarding implementation of Earn While You Learn (EWYL) Scheme in the university.

The Chairman explained the House that the Central University of Punjab, Bathinda, supports to make the students self-reliant and develop their creativity and skills during their stay at university. The university encourages the students to take up part time jobs at the university to make then independent under the "**Earn While You Learn**" scheme on campus.

Objectives
- Exploit the immense potential of students as a valuable human resource.
- Involve the students in management and development of the institution.
- Give students hands on experience and thereby prepare them for jobs in future.
- Encourage young students to learn about dignity of labour.
- Prevent students from avoidable distractions and engage them in meaningful, positive activities.
- Enable meritorious and needy students to earn a reasonable amount every month to meet their expenses.

Eligibility
- Students who are registered in CUPB for any programme.
- The students should not be the recipients of fellowship/financial aid from any other funding agency, either private or public.
- All post graduate students (with above criteria) of the university departments can be considered for the assistants in library, laboratory, computer centre and store.
- A supervisor may be nominated to monitor the progress work and maintain the attendance record under each category and he/she may countersign with the CoC for forwarding the monthly claims.

In order to keep vigil on the deployment of students and payments to be made to them the following restrictions/ rules are required to be imposed:

1. Students may be assigned a task for maximum 1 hour per day during the weekdays and 4 hours/day during the weekends.

2. The working hours will be before or beyond the regular scheduled classes and studies should get affected due to working under EWYL scheme.

3. The EWYL committee shall make the recommendation for the selection of candidates.

4. Enrolment register is to be maintained by the concerned faculty/staff which may contain full particulars of the enrolled student and details of the work to be allocated to him mentioning therein actual working hours.

5. The concerned faculty/staff is to verify the work done and will record on the payment voucher that the student has actually worked for which the remuneration is being paid

6. The accounts section has to maintain the entire record and will produce the same for scrutiny as and when requested by the audit.

7. Any student claiming false payments will be immediately terminated from the EWYL scheme and disciplinary action will be taken against him.

Under the Earn While You Learn (EWYL) scheme the students can be assigned various tasks as listed below in the university campus:

Laboratories: In the labs/workshops the students can be engaged for making them responsible for handling the equipment/machinery, its maintenance and upkeep, storage of equipment and upkeep of Laboratories/Workshops. Senior students shall be useful for conduct of practicals.

- Preparing protocol handouts for practicals and research work.
- Helping the faculty in the purchase of essential laboratory accessories.
- Maintenance of stock registers and other record in the laboratory.

Library: The students engaged for library jobs such as cataloguing, re-shelving of the books and journals in shelves, display of books, repair and binding the books.

Office: The students can also be engaged for performance of various office jobs like preparation of statements, compilation and analysis of data, maintenance of student and faculty data and help in preparation of reports.

University Stores: Store inventory, data entry, maintaining registers.

Hostel/Mess: Maintenance of hostel records such as students attendance, general cleanliness in the mess and hostel.

The above job descriptions are only illustrative and not exhaustive. Other jobs/areas may be added subsequently based on the feedback from university staff and students.

How to Apply

Interested students may apply in the prescribed application form available on the university website (www. cup.edu. in).

Payment

The accounts section of the university may be directed to maintain the entire record and budget head. For doing the above jobs the students may be paid @ Rs. 40/- per hour and students would be permitted to work for maximum 1 hour a day during weekday and 4 hours/day during weekends and this ceiling on working hour is stipulated that the jobs are not pursued at the cost of study.

Selection Procedure

The applications from students would be invited any time a need of additional help is felt by any centre/office of the university. The EWYL Committee shall select the students on the basis of students' interest, expertise (if any) and the knowledge/skills the applicant has.

ESTABLISHMENT OF INTERNATIONAL COLLABORATIONS DIVISION AT THE UNIVERSITY

In view of the fast pace of university's growth and better research output, collaborations are essential. It would not be early to put in place an International Collaboration Division with the following objectives:

- Oversee and coordinate all international activities of CUPB such as students and faculty exchange visits abroad, international students admission and welfare and academic collaborations with foreign organizations
- To promote relationships between foreign universities and institutions and CUPB and to help define the scope of such relationships through appropriate Memorandum of Understanding (MoUs).
- To invite outstanding Scientists/academicians for lectures
- To partner with foreign universities and research institutes to enhance collaborative research.
- To interface with embassies and consulates of various countries to increase educational and cultural linkages between organizations in the foreign countries and CUPB.
- To recommend appointment of Adjunct/Visiting Faculty.

The activities of the division will include interfacing with the appropriate authorities at the collaborating institutions on all matters, establishing and fostering linkages between international researchers and experts in various areas and creating awareness about all such activities amongst the faculty and students of CUPB. It will promote participation of the students in course work and/or research work in partner institutions to give them international exposure and the opportunity to imbibe and learn global work cultures. The Division will facilitate and promote the internationalization of CUPB by setting up academic ventures in collaboration with global institutions and facilitate newer models of collaborations. The members of the cell in coordination with Dean, Academic Affairs and Dean, Students Welfare will decide policy matters affecting both outbound and inbound students participating in Exchange programmes.

Annexure 5.3

Ref. No: CUPB/CC/15/EC-15/18   Dated: 31.07.2015

<u>**NOTIFICATION-18**</u>

In pursuance to Item No. EC:15:15:41 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No: AC:7:2015:36) is hereby conveyed for creation of Placement Cell of the university comprising of the members:

Placement Coordination Cell:

     1.Prof. P. Ramarao, Dean, Academic Affairs
     2.Prof. A. K. Dhawan, Dean, School of Health Sciences
     3.Dr. Tarun Arora, COC for Law
     4.Ms. Shweta Arora, Deputy Registrar - Convener

In addition to the above committee each Centre of the University shall have a placement cell consisting of the following:

1. COC as Chairperson
2. One Professor
3. Two Associate Professors
4. Two Assistant Professors

The Placement Coordination Cell shall look after the activities of the various placement cells of the university and shall be responsible for the generation of the reports/presentations/brochures in consultation with the Placement cells. The Placement Coordination Cell will report to the Vice Chancellor.

The Chairperson will coordinate with the Placement Coordination Cell of the university.

This is issued with the approval of the Competent Authority.

Annexure 5.4

Ref. No: CUPB/CC/15/EC-15/17   Dated: 31/07/2015

<u>NOTIFICATION-17</u>

In pursuance to Item No. EC:15:15:30 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No:AC:7:2015:26) is hereby conveyed for establishment of **Alumni Association of Central University of Punjab (AACUP)** as per the guidelines enclosed with the notification.

This is issued with the approval of the Competent Authority

ALUMNI ASSOCIATION OF CENTRAL UNIVERSITY OF PUNJAB (AACUP)

CONSTITUTION

1. **Name of the Association**
    The Name of the Association shall be "The Alumni Association of Central University of Punjab" Bathinda (**AACUP**)

2. **Office**
    The Office of the Association shall be at the Central University of Punjab.

3. **Aims and Objectives of the Association are to:**
    i.   establish a link with the CUPB alumni and enrol them as members
    ii.   establish liaison between The Alumni Association of Central University of Punjab (**AACUP**)
    iii.   and similar other associations at the universities in the country and abroad;
    iv.   raise various endowment funds and award stipends out of it to the deserving students on need-cum-merit basis;
    v.   institute and disburse scholarships, fellowships, medals, awards, etc. to the meritorious students of the university out of the corpus of the Association;
    vi.   impart identity to its members by issuing them with photo-identity cards;
    vii.   seek donations from alumni and potential donors for promoting various righteous activities of the Association;
    viii. suggest ways and means for the participation of the Association in the working of the university;
    ix.   arrange get together of the alumni and social/cultural functions of the alumni;
    x.   send birthday greeting cards to its members to impart personal touch and interaction with them;
    xi.   Honour distinguished alumni of CUP, who have brought national/global acclaim in their respective domains;

4. **Membership**
    a) **Eligibility:**
        The following categories of persons shall be considered to be enrolled as members of the Association:
        A Graduate, diploma of at least one year duration after graduation, Post Graduate, M.Phil., Ph.D. from Central University of Punjab. Members of the teaching staff of the university even though they may not be graduates of this university.

Graduates of other Universities (Indian or Foreign) on whom membership is conferred by the Executive Council of the Association.

All the present and former Vice Chancellors and Registrars will be members of the Association.

b) **Categories of membership:**

There will be the following categories of members:

1) Patron
2) Life Members
3) Honorary Members

c) **Subscription for membership:**

1. **Patron:** A person may become a patron of this Association by contributing a sum of at least of Rs. 11,000/- or more (NRI/Overseas: US$ 1000 or equivalent with approval of the Chief Patron)
2. **Life Member:** Rs. 500/- (NRI/Overseas: US$ 100 or equivalent).
3. **Honorary Member:** On whom membership is conferred by the Association. The E.C. is authorized to revise the membership fees every five years.

5. **Office Bearers**

The following shall be the office bearers of the Association.

a) Chief Patron (Vice Chancellor - Ex-officio)
b) President: Dr. P. Ramarao
c) Vice-President: Dr. A. K. Dhawan
d) General Secretary (Dean, Alumni Relations - Ex - officio)
e) Secretary: Registrar
f) Joint Secretary-cum-Treasurer (Finance Officer - Ex-officio)

6. **Executive Council**

The Executive Council of the Association shall consist of 12 members, including the office-bearers. Three or more members of the Executive Council shall be nominated by the Chief-patron. The Executive Council shall frame the bye-laws of the Association. The term of the Executive will be three years.

7. **Duties and Functions of Office Bearers**

a) **CHIEF PATRON**

i. The Chief Patron shall preside over the meetings of the Association, the meetings of the Executive Council and all other functions that may be organized by the Association.

ii. The Chief Patron shall be the custodian of the property and interests of the Association.

iii. He shall call special meetings of the Executive Council/General Body of the Association if a written

requisition signed by at least 7 members in case of Executive Council and 30 members in case of the Association is presented to him.

b)   PRESIDENT / VICE-PRESIDENT

i.   The president shall perform the duties and functions of the Chief Patron in his absence. The Vice-President shall perform the duties and function of the President in his absence.

ii.   President/ Vice-President shall perform such other duties and functions as may be entrusted to him by the Chief Patron or the Executive Council.

c)   GENERAL SECRETARY

i.   He will be the custodian of all the records and documents of the Association.

ii.   He will be responsible for the safe custody of the funds of the Association and will operate bank accounts jointly with either Secretary or Joint-Secretary-cum- treasurer on behalf of the Association.

iii.   He will call and arrange meetings of the Executive Council and the Association.

iv.   He will record the minutes of the meetings of the Executive Council and the Association.

v.   He will represent the Association in all legal proceedings and sign all legal documents on behalf of the Association.

vi.   He will maintain an up-to-date register of members and of all subscriptions and donations.

vii.   He will maintain a property register and all such registers as may be necessary in connection with the work of the Association.

d)   SECRETARY

i.   He will assist General Secretary in the administrative matters

ii.   He will also assist General Secretary in conducting activities of the Association.

e)   JOINT SECRETARY-CUM-TREASURER

i.   He will assist the General Secretary in the discharge of his duties and functions regarding finances/accounts of the Association.

He will perform such other duties and functions as may be entrusted to him by the Executive Council.

Annexure 5.5

Ref No: CUPB/Notification/15/15-EC/13   Dated: 23/07/2015

<u>**NOTIFICATION-13**</u>

In pursuance to Item No. EC:15:15:37 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council is hereby conveyed for constitution of the committee for addressing the **Grievance Redressal of Employees and Students** comprising of the members as detailed hereunder:

Every CoC/OIC of the Centre will be the Grievance Officer for Redressal.

Appeals Committee:-
  i.   Prof. A. K. Dhawan, Dean, School of Health Sciences – Chairperson
  ii.   Prof. S. K. Bawa, Dean, School of Education
  iii. Dr. Alpna Saini, Associate Professor
  iv.   Dr. Tarun Arora, Associate Professor
  v.   Dr. Harish Chander, Assistant Professor
  vi.   Mr. Rajender Kumar, Assistant Registrar (Exams) – Convener

Review Committee
  i.   Prof. P. Ramarao, Dean Academic Affairs – Chairperson
  ii.   Prof. R. G. Saini, Invited Professor
  iii. Prof. R. C. Sharma, DSW
  iv.   Prof. S. K. Bawa, Dean, School of Education
  v.   Dr. Anjana Munshi, CoC for Human Genetics
  vi.   Dr. Dhanya M.S., Assistant Professor
  vii. Dr. Pankaj Khare, Registrar   - Convener

Mercy Appeals shall be considered by the Vice Chancellor.

The above committee shall address the Grievance of Employees and Students, if any, as per the guidelines enclosed with the notification.

POLICY FOR GRIEVANCE REDRESSAL OF EMPLOYEES AND STUDENTS

A Grievance shall include any discontent or dissatisfaction, whether expressed or not, whether valid or not, arising out of anything connected with CUPB that a student or an employee thinks, believes, or even feels, is unfair, unjust or inequitable. This policy shall aim at redressing grievances of students and employees of CUPB in just and fair manner with the following objectives:

a)   Linking with a well-defined disciplinary system to make it acceptable to all.

b)   Providing prompt redressal of Grievance.

c)   To make the redressal process fair, impartial, consistent, with prior warnings and commensurate with gravity of misconduct.

d)   To prevent misconduct rather than controlling through punitive measures.

Measures to address the Grievance of Students and Employees:

CUPB shall follow the following measure to redress the grievances of students:

a)   **Open Door:** General invitations to students/employees informally drop in the Concerned Officer's room and talk informally over their grievance. They may even present the grievance through the official contact numbers of the said officers.

b)   **Drop Boxes:** Students/employees can drop their anonymous complaints in the boxes.

c)   **Opinion Surveys:** Through mentor and other feedback schemes, the opinion surveys may be conducted for better understanding.

d)   **E-mails:** Through separate e-mails to COCs/OICs, Deans, Registrar or to an email created for grievances purpose grievances_students@cup.ac.in for students and grievances_employees@cup.ac.in) for employees

Grievance Redress Procedure for Students:

a)   An aggrieved student shall first present his/her grievance in writing to the concerned COCs/OICs of the Centre. The COCs/OICs is required to furnish the answer within one week of the presentation of grievance.

b)   If the student is not satisfied with the answer, he/she can approach to the '**Appeals Committee**' appointed for that purpose, directly. The committee

must give his/her answer within 3 weeks of the presentation of the complainant(s).

Appeals Committee shall be constituted school-wise and shall comprise of:

    1.   Dean of the School
    2.   Coordinators of Centres concerned

c)   If the student is not satisfied with the answer, he/she can approach to the '**Review Committee**' which shall evaluate the case and make its recommendations to the Vice Chancellor within three weeks of presentation of the case.

Review Committee shall comprise of:
    1.   Dean Academic Affairs
    2.   Dean Students Welfare

d)   If the committee fails to take the decision within the stipulated time or the student is not satisfied with the decision, he/she can an appeal to '**Mercy Appeals Committee**'. The committee is supposed to communicate its decision within 40 days of student's revised petition.

Mercy Appeals Committee shall comprise of the Vice Chancellor

e)   If the student is unsatisfied with the decision of this committee also, he/she may approach the Ombudsman of CUPB.

Grievance Redressal Procedure for employees:

a)   An aggrieved employee shall first present his/her grievance in writing to the concerned CoC/ head of section where he/she is posted. The head is required to furnish the answer within 1 week of the presentation of grievance.

b)   If the employee is not satisfied with the answer, he/she can approach to the '**Appeals Committee**' appointed for that purpose, directly. The committee must give his/her answer within 3 weeks of the presentation of the complainant(s).

Appeals Committee shall comprise of:
    1.   Dean of the School
    2.   Co-ordinator of Centre/Section or Department Heads

c)   If the employee is not satisfied with the answer, he/she can approach to the '**Review Committee**' which shall evaluate the case and make its

recommendations to the Vice Chancellor within 3 weeks of presentation of the case.

Review Committee shall comprise of:
1. Dean Academic Affairs
2. Registrar

d) If the committee fails to take the decision within the stipulated time or the employee is not satisfied with the decision, he/she can submit an appeal for revision to '**Mercy Appeals Committee**'. The committee is supposed to communicate its decision within 40 days of student's revised petition.

Mercy Appeals Committee shall comprise of the Vice Chancellor.

e) If the employee is unsatisfied with the decision of this committee also, he/she may approach the Ombudsman of CUPB.

Annexure 5.6

Ref. No: CUPB/CC/15/EC-15/32   Dated: 06-08-2015

NOTIFICATION NO 32

In pursuance to Item No. EC:15:15:42 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No:AC:7:2015:37) is hereby conveyed for establishment of **Human Rights Club** as per the guidelines enclosed with the notification.

Further to the above, approval of the Competent Authority is conveyed for the constitution of the committees comprising of members as detailed below under the **Human Rights Club:**

A. Executive Committee
1. Dean Academic Affairs **(Chairman)**
2. Dr Tarun Arora, Associate Professor (Member)
3. Dr Puneeta Pandey, Assistant Professor (Member)
4. Dr Monisha Dhiman, Assistant Professor (Member)
5. Er Sruinder Khurana, Assistant Professor(Member)
6. Dr. Puneet Pathak, Assistant Professor (Member)
7. Dr Deepak Kumar, Assistant Professor **(Convener)**

B. Organising Committee
i. Mr. Ramandeep Singh, Research Scholar
ii. Mr. Bibekananda Sarkar, Research Scholar
iii. Mr. Kovid Kumar, Research Scholar
iv. Mr. Dinesh Bassi, Research Scholar
v. Ms. Anamika Das, Research Scholar - Convener

This is issued with the approval of the Competent Authority

HUMAN RIGHTS CLUB

Vision:

The key stone to human rights protection is through education and awareness. Education should not only aim at producing trained professional workers but also inculcating in them a sense of higher purpose. Human Rights education aims to provide students and people with the ability to accomplish and produce societal changes. Education and awareness is widely acknowledged and seen as a way to empower people to improve their quality of life and increase their capacity to participate in the decision making process, leading to desired transformation in the social, cultural and economic policies of the nation.

Mission:

To create awareness regarding the basic human rights and duties. Rights and duties go hand with hand, right of one person depends upon the duties of other person. The mission of the club is to first make people aware connected with the university about the human rights and duties and then make it to a larger platform i.e. at the level of society.

Activities:

1. Organising awareness seminars/workshops/lectures/Panel discussions about human rights in the university and nearby areas.
2. Celebration of Human Rights Day and other related Days
3. Debate, essay writing, painting competition on the human rights
4. Collaboration with other organisations working on human rights
5. Organise awareness programmes outside the university campus
6. To help and support the needy persons whose human rights gets violated

Organisational structure:
The organisational structure of the club shall consists of two committees, namely

Executive Committee
Executive Committee will have nine members. This committee shall be headed by a Chairman and one member designated as Coordinator. There will be two student members included in the nine members of the body. Executive Committee shall have the powers to take decisions on all important matters including financial decisions.

Organising Committee
Organising Committee shall have eleven members. This committee will be headed by the Secretary. Three members of this committee will be faculty members and

eight student members. One student member will be designated as student coordinator. The main responsibility of the organising committee will be to implement the programmes planned and approved by Executive Committee.

Membership of committees

The members of both these committees shall be nominated by the Vice Chancellor, CUPB

Term of members
Members of these committees shall be nominated by the competent authority for a period of two year, normally starting from the beginning of academic session.

Meetings
Executive Committee shall meet at least twice a year and organising committee every three months. At least two days written notice is required for the ordinary meetings and in case of any emergency members can be informed by way of e-mail. Record of the meetings must be maintained in the written form by the committees.

General membership
Any student enrolled in CUPB or Ex-student can become the member of this club. An outsider can become the member of the club if approved by the executive committee.

Financial and Physical requirements:
The Human Right Club shall require space and financial assistance for meetings, organizing functions and other activities such as TA/ DA of speakers etc. These shall be provided by CUPB following procedures, as applicable

Patron
Vice Chancellor of Central University of Punjab is the patron of CUPB Human Rights Club.

The following Executive and Organizing Committees are suggested:
- A. Executive Committee
    1. Dean Academic Affairs (Chairman)
    2. Five Faculty Members
- B. Organising Committee: Six to ten students out of which the President of Student Union will be one of the members.

CRITERION-VI

GOVERNANCE, LEADERSHIP AND MANAGEMENT

CRITERION-VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1   Institutional Vision and Leadership

6.1.1 State the Vision and the Mission of the University.

Vision of the University:

- To uplift and upgrade the standards of teaching, learning and research to global levels of excellence.

- To create international benchmarks in research, patents and consultancy services.

- To strategize to become a global epicentre of knowledge, culture, skills and technologies.

- To develop a scientific temper and a performance culture of pro-active decision-making.

- To act as a catalyst of change by setting high benchmarks in infrastructural growth, academic and co-academic excellence, learning and evaluation, social interfacing with the stake-holders, human resource development, safety and security systems, process management, and in seamless integration with the surrounding communities.

- To cross-pollinate with new ideas, new technologies, new platforms and new world-views.

- To continue expanding, locally, nationally and globally.

Mission of the University:

- To offer a wide range of instructional and research facilities across integrated and cross-disciplinary studies.

- To promote innovation in teaching, learning, evaluation, research and consultancy services.

- To create an ignited workforce responsive to regional, national and global needs in tune with the requirements of academics, industry, business and administration.

- To participate in the problems and concerns of the surrounding community and the civil society.

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

Yes, indeed. The vision and mission of the university clearly defines its participation in problems and concerns of the society. It lays focus on "stake holders", "surrounding communities" and "regional, national and global needs". It focuses on innovative teaching and developing values based on academic and co-academic excellence. It is value oriented and futuristic in approach with special focus on quality of research and creation of knowledge.

6.1.3 How is the leadership involved in:

Ensuring the organization's management system development, implementation and continuous improvement

The Vice Chancellor is the head of the institution, next only to the Chancellor of the university. He is assisted by the Dean Academic Affairs, Registrar, Controller of Examinations and Deans of different schools. The University Court, Executive Council, Academic Council, Finance Committee, Planning Board and Building Advisory Committee are the statutory bodies of the university. The Centre Coordinators (CoC) fulfil the leadership role for the concerned centre. The CoC is the chairperson of Board of Studies and the Academic and Administrative committees of the centre.

CUPB is highly democratized. As the chairperson of various statutory bodies, leadership of the Vice Chancellor ensures a smooth functioning of the university. However, the development of management systems, implementation of policies framed and improvement of the system are all continuous process, whereby every member of CUPB participates. The attached charts of governance make it amply clear. (***Figure 6.1 and 6.2***)

At the beginning of every academic year, the Vice Chancellor constitutes different committees in accordance to the interest and expertise of individuals. The leadership team initiates its interaction with the student body through an orientation programme at the beginning of the academic session. Concerted efforts are made by the administrative team to convey the value and ethos of the university and to make the student body feel as a part of the institution.

The members of University Court, Executive Council and Academic Council periodically interact with the faculty members and students. The Chancellor also interacts with the faculty members and students from time to time. The Vice Chancellor has monthly meetings with the faculty members, students and administrative staff of the university.

In interacting with its stakeholders

The university has two important advisory bodies- the University Industry Forum and the University Industry Council. Both include the representatives of industries from domain areas of CUPB. Vice Chancellor is the chairperson of these bodies and senior faculty members co-ordinate and participate in these. These processes ensure the involvement of its stakeholders in decision making process of the university at all levels. During planning stages of the main campus, even local people were explained the development plans.

The Vice Chancellor, Dean Students' Welfare, Deans, CoCs and students supervisors meet the members of the Student Council to address any matter of concern pertaining to the students. All this ensures that the management continuously interacts with the stakeholders.

In reinforcing a culture of excellence

All the senior functionaries of the university, from Vice Chancellor to CoCs perform the leadership role in reinforcing a culture of excellence by giving their instinctive support to the faculty and students. CUPB leadership understands the importance of excellence in all its activities. Commitment to work, team spirit, love for CUPB and innovative ideas are highly encouraged.

The university has strong emphasis on academic excellence and for that purpose it announces various prizes annually, including: Best Teacher Award, Best Student Award, Best Non-Teaching Award. The university also has the Chancellor and Vice Chancellor's Medals for two students (one male and one female) from Science and two from humanities (one male and one female).

In identifying organizational needs and striving to fulfil them

The university leadership makes proactive efforts to identify organizational needs at all levels through regular meetings, discussions, feedback from faculty and feedback from students. At departmental level, the COCs identify the needs and strive to fulfil these. Plans for future expansion and arrangements for enhancing physical infrastructure as well as, resource augmentations are prime focus of university leadership.
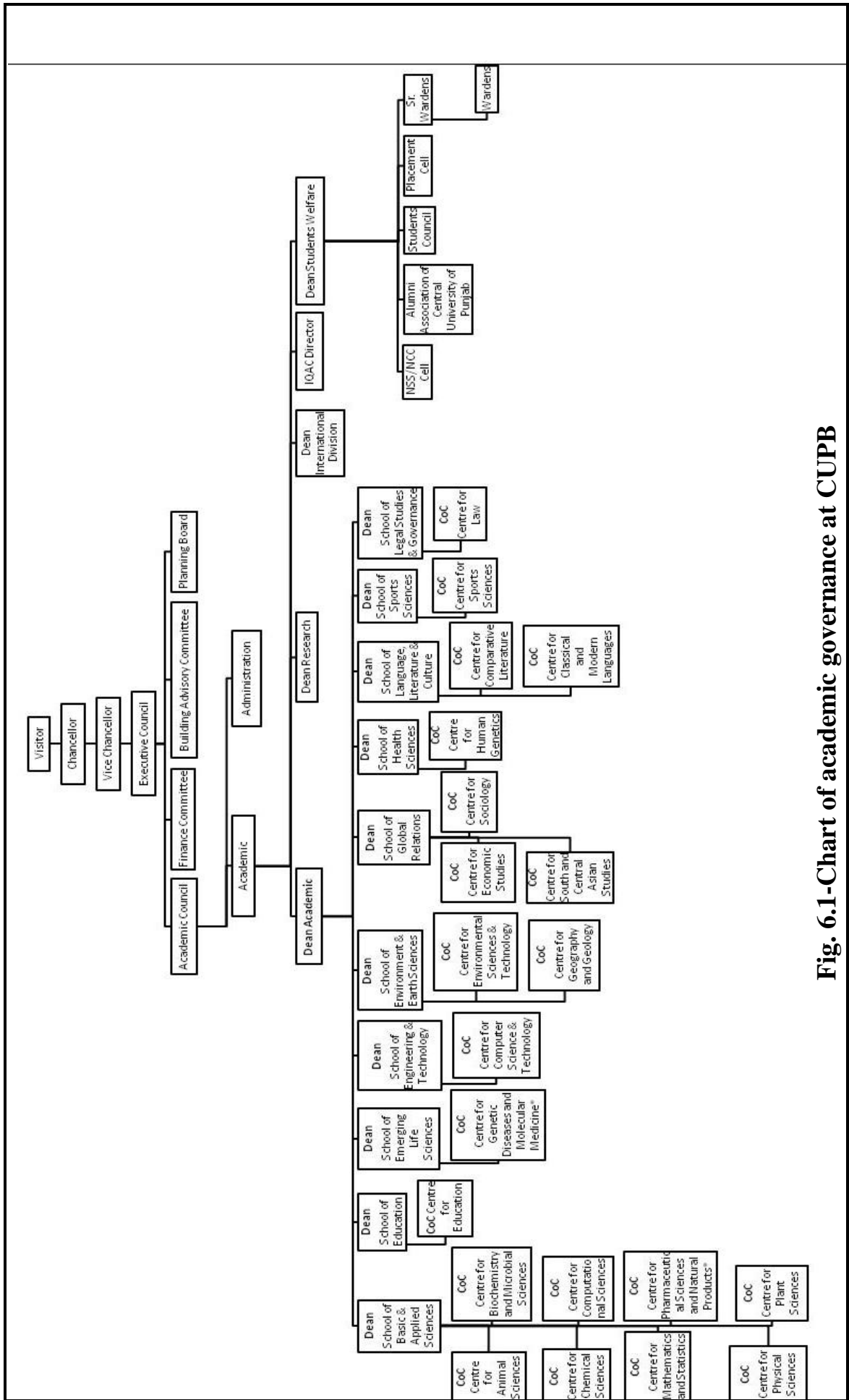
Fig. 6.1-Chart of academic governance at CUPB
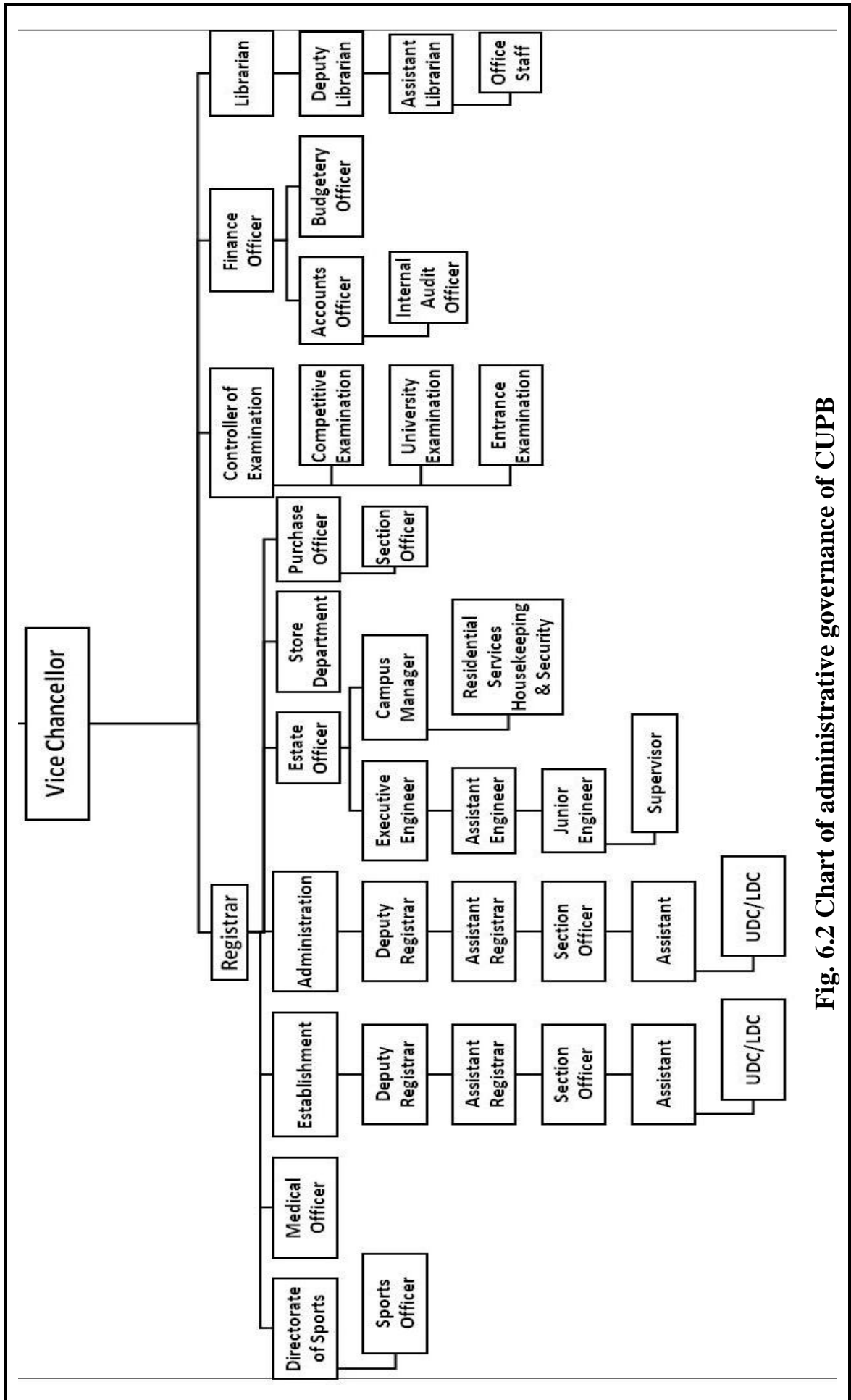
Fig. 6.2 Chart of administrative governance of CUPB

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

In spite of several advertisements, interviews for the post of Librarian and Finance Officer could not be conducted due to lack of required number of applicants. No other posts remained vacant for more than one year.

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

Yes, all members of the statutory bodies are appointed and meetings are conducted regularly. The details of meetings conducted are given in *Table 6.1* to *Table 6.7*

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

Functioning of CUPB is participatory and democratized to the lowest level. Each centre has an 'Academic and Administrative' committee with CoC as the chairperson and the faculty as members. This committee identifies thrust areas, designs curriculum, proposes qualifications of teaching positions, reviews research proposals and also carries out the routine works like course allotment, timetable, academic calendar of the department etc. The Board of Studies, School Boards and other statutory bodies such as Academic Council and Executive Council have representation of faculty and other stakeholders. Each centre has an independent budget to meet its needs.

Further, faculty members managing several auxiliary units such as library, laboratory, hostel and mess, collectively participate in administration and decision making. CUPB believes in participative management, where the Vice Chancellor is a facilitator, rather than a bureaucratic executive.

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

CUPB is a Central University and does not have the affiliated colleges as per the Act.

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

CUPB is a Central University and does not have the affiliated colleges as per the Central Universities Act.

Details of the Meetings

Table 6.1 : Meetings of the University Court

S.No.	Meeting	Date	Place	Members
1.	**First Court**	09 .07. 2014	CUPB	12+1 Chancellor
2.	**Second Court**	24 .11. 2014	CUPB	13+1 Chancellor

Table 6.2 : Meetings of the Executive Council

S.No.	Meeting	Date	Place	Members
1.	**1st Executive Council**	20.10.2009	CUPB	06+1 VC
2.	**2nd Executive Council**	06.02.2010	New Delhi	07+1 VC
3.	**3rd Executive Council**	28.10.2010	New Delhi	04+1 VC
4.	**4th Executive Council**	25.03.2011	New Delhi	05+1 VC
5.	**5th Executive Council**	17.09.2011	New Delhi	07+1 VC
6.	**6th Executive Council**	25.03.2012	New Delhi	07+1 VC
7.	**7th Executive Council**	30.06.2012	NIPER Mohali	04+1 VC
8.	**8th Executive Council**	16.07.2012	NIPER Mohali	05+1 VC
9.	**9th Executive Council**	12.10.2013	CUPB	04+1 VC
10.	**10th Executive Council**	22.08.2014	New Delhi	04+1 VC
11.	**11th Executive Council**	25.11.2014	NIPER Mohali	04+1 VC
12.	**12th Executive Council**	09.12.2014	NIPER Mohali	04+1 VC
13.	**13th Executive Council**	14.01.2015	CUPB	04+1 VC
14.	**14th Executive Council**	16.03.2015	INSA, New Delhi	04+1 VC
15.	**15th Executive Council** (Conducted in 2 sessions)	24.05.2015 02.06.2015	INSA, New Delhi INSA, New Delhi	06+1 VC 06+1 VC
16.	**16th Executive Council**	25.07.2015	PU, Chandigarh	05+1 VC
17.	**17th Executive Council**	07.09.2015	CUPB	05+1 VC

Table 6.3 : Meetings of the Academic Council

S.No.	Meeting	Date	Place	Members
1.	**1st Academic Council**	15.11.2009	CUPB	09+1 VC
2.	**2nd Academic Council**	04.10.2010	IISER, Mohali	09+1 VC
3.	**3rd Academic Council**	10.03.2012	CUPB	08+1 VC
4.	**4th Academic Council**	21.07.2012	CSIO, Chandigarh	10+1 VC
5.	**5th Academic Council**	15.11.2014	CUPB	05+1 VC
6.	**6th Academic Council**	05.03.2015	CUPB	07+1 VC
7.	**7th Academic Council**	23.05.2015	PU, Chandigarh	11+1 VC and 1 Special Invitee Prof. A. K. Dhawan
8.	**8th Academic Council**	07.09.2015	CUPB	05+1VC

Table 6.4 : Meetings of the Finance Committee

S.No.	Meeting	Date	Place	Members
1.	**1st Finance Committee**	13.08.2010	New Delhi	05+1 VC
2.	**2nd Finance Committee**	12.03.2011	NIPER, Mohali	04+1 VC
3.	**3rd Finance Committee**	12.11.2011	New Delhi	03+1 VC
4.	**4th Finance Committee**	24 .03. 2012	New Delhi	05+1 VC
5.	**5th Finance Committee**	19 .08. 2013	New Delhi	04+1 VC
6.	**6th Finance Committee**	22 .08. 2014	New Delhi	03+1 VC
7.	**7th Finance Committee**	25 .11. 2014	NIPER, Mohali	05+1 VC
8.	**8th Finance Committee**	16.03.2015	INSA, New Delhi	06+1 VC
9.	**9th Finance Committee**	01.06.2015	MHRD, New Delhi	04+1 VC and 3 special invitees
10.	**10th Finance Committee**	07.09.2015	CUPB	04+1VC

Table 6.5 : Meetings of Other Bodies

S. No.	Name of body	No. of Meetings	Dates
1.	Finance Investment Advisory Committee	3	31.10.2011
			21.09.2012
			10.04.2013
2.	Expert Committee on Sports Infrastructural Requirements	2	12.05.2012
			06.05.2013
3.	Expert Committee for the Library Infrastructural Requirements	1	14.05.2012

Table 6.6: Meetings of Building Advisory Committee

S. NO.	Committee	Date
1.	1st Building Advisory Committee	05.01.2010
2.	2nd Building Advisory Committee	18.02.2010
3.	3rd Building Advisory Committee	08.06.2010
4.	4th Building Advisory Committee	11.11.2010
5.	5th Building Advisory Committee	31.01.2012
6.	6th Building Advisory Committee	05.05.2012
7.	7th Building Advisory Committee	14.06.2012
8.	8th Building Advisory Committee	10.07.2012
9.	9th Building Advisory Committee	04.10.2012
10.	10th Building Advisory Committee	05.01.2013
11.	11th Building Advisory Committee	26.03.2013
12.	12th Building Advisory Committee	25.07.2013 (0930h)
13.	13th Building Advisory Committee	25.07.2013 (1130h)
14.	14th Building Advisory Committee	07.08.2013
15.	15th Building Advisory Committee	14.09.2013
16.	16th Building Advisory Committee	19.10.2013
17.	17th Building Advisory Committee	04.12.2013
18.	18th Building Advisory Committee	14.06.2014
19.	19th Building Advisory Committee	01.07.2014
20.	20th Building Advisory Committee	19 08.2015
21.	21st Building Advisory Committee	10 01.2015
22.	22nd Building Advisory Committee	20.04.2015
23.	23rd Building Advisory Committee	17.08.2015
24.	24th Building Advisory Committee	16.07.2015
25.	25th Building Advisory Committee	17.08.2015
26.	26th Building Advisory Committee	01.09.2015

Table 6.7 : Sub –Committee Meeting of Building Advisory Committee:

S. No.	Committee	Date
1.	1st Sub–Committee BAC	1.08.2013
2.	2nd Sub–Committee BAC	03.10.2013
3.	3rd Sub–Committee BAC	14.10.2013
4.	4th Sub–Committee BAC	11.01.2014
5.	5th Sub–Committee BAC	11.02.2014
6.	6th Sub–Committee BAC	02.04.2014
7.	7th Sub–Committee BAC	23.04.2014
8.	8th Sub–Committee BAC	12.05.2014
9.	9th Sub–Committee BAC	04.06.2014
10.	10th Sub–Committee BAC	22.07.2014
11.	11th Sub–Committee BAC	12.09.2014
12.	12th Sub–Committee BAC	15.10.2014
13.	13th Sub–Committee BAC	24.10.2014
14.	14th Sub–Committee BAC	15.12.2014
15.	15th Sub–Committee BAC	27.12.2014
16.	16th Sub–Committee BAC	02.01.2015
17.	17th Sub–Committee BAC	10.01.2015
18.	18th Sub–Committee BAC	04.02.2015
19.	19th Sub–Committee BAC	18.04.2015
20.	20th Sub–Committee BAC	16.07.2015
21.	21st Sub–Committee BAC	17.08.2015

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

CUPB aims at producing leaders of tomorrow in all spheres. The younger members of faculty are involved in all committees and decision making to ensure their path to leadership. Senior teaching faculty are assigned different leadership positions like CoCs, Deans of Schools, Dean of Students Welfare, Warden, Deputy Warden, Placement Cell members, members of grievances cell, office bearers of societies, time table committees etc. to groom leadership at various levels. Even at the administrative level, the Section Officer governs the supporting staff in each section. The students union (*Section 5.3.5*) is a training ground for students, where they learn the basic lessons of democratic functioning and value of dialogue.

The students of the CUPB have established various clubs that manage environment issues, weekly documentary movies, organize functions on commemorative days and carry out various cultural and sports activities. Students are given liberty to organize and manage on their own, with an objective of inculcating managerial skills, leadership, crisis management, rescue management, nurturing relationship and gaining confidence.

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

Any new segment of knowledge that is received or created at CUPB is well disseminated to all levels. Such a sharing of knowledge leads to better learning experiences and evolving of new programmes. New experiences by faculty members who are deputed to attend seminars, workshops or courses outside college, are shared in the faculty meetings or during the meetings of Centres.

Practical manuals, text-books and other reading materials prepared and published by the teaching staff are also numbered in the library. The University Library maintains complete database of all the publications by the faculty and students of the university. Hard copies and e-copies of Ph.D. dissertations are required to be submitted in the library and these are uploaded on *Shodhganga.* Lectures delivered by the faculty during faculty seminars and by the invited experts on various occasions are available on the university intranet.

The university also collaborates with national and international research organizations and universities and has signed various MOUs in an effort to diversify its interdisciplinary and inter-institutional, academic and research activities. All the knowledge and information from such efforts is well documented and disseminated.

The university has also published Research Booklets "Annotated Bibliography" and "Research Initiative" documenting all the knowledge generated by the faculty in the form of research papers.

6.1.11 How are the following values reflected in the functioning of the University?

(a) *Contributing to National Development*

The goal of higher education is to equip the individual with knowledge and skills that meaningfully contribute towards meeting societal needs and thereby contribute to the development of the nation. This goal has been embodied in the mandate of CUPB. Not only does the university try to produce knowledgeable and skilled individuals for contributing to national development, but also it has specific programmes in its Community College for skill development as per the national needs. The university continuously tries to contribute to national development and for the purpose, it has the following:

- Community Development Cell
- Rashtriya Avishkar Abhiyan
- Innovators Club

Schools and Centres at CUPB are aware of their regional and national obligations and develop programmes accordingly. Research programmes focus on national needs. For example, researchers of Centre for Plant Sciences at Central University of Punjab, Bathinda successfully identified a new microscopic '*Endyophytic Algae*' which has anti-cancer compounds similar to 'Taxol'. This was possible due to advanced microscopic facilities available at CUPB.

Unity in diversity is a valuable asset for the overall development of a nation and CUPB fosters this idea by having students and faculty from all parts of India.

(b) *Fostering global competencies among students*

- New programmes are continually planned and existing ones updated to meet national and global needs.

- Innovative teaching techniques ensure that the core competencies of students are developed to make them employable world-wide.

- Research students are encouraged to publish research articles in reputed journals to enable them to go for post-doctoral programmes in reputed foreign universities.

- Students are trained through soft skill development classes organized in the university to equip them with the requisite tools to compete in the highly competitive world.

- Significant e-learning resources are made available for acquisition and enhancement of knowledge to face competitive challenges.

- CUPB education has led its students to the top universities of the world such as Yale University, Oxford University, University of Kent and University of Lund.

(c) *Inculcating a sound value system among students*

Various cultural clubs are constituted to provide a platform to the students to benefit from the initiatives of CUPB.

- Clubs like Innovators Club, Environment Club, Cultural Club and Community Club have been constituted which make significant contributions towards making life better.

- The faculty, the mentors, the research guide, wardens, DSW and even the Vice Chancellor try to present the right model of conduct for students.

- The best academicians and thinkers are invited for lectures in an attempt to inculcate right values among students.

- University has started a certificate course in Human Rights and Duties to disseminate awareness of human rights and duties among the students.

- University also has National Service Scheme to engage students in the social work.

(d) *Quest for excellence*

- Students are offered training/exposure visits to national institutes, industries and laboratories to teach them new technologies and provide experience in using latest equipment.

- The university promotes a culture of excellence by a well-defined mechanism of awards and recognitions (*Section 2.4.6*) for outstanding teaching, research and general activities.

(e)   Promoting use of technology

Smart class rooms, Wi-Fi internet throughout the campus and hostels, well equipped computer centre, library with high-tech facilities, specialized laboratories and university intranet, all ensure the use of technologies in academic work at CUPB.

6.2   Strategy Development and Deployment

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

The university has a perspective plan for the development of new centres, infrastructure and research facilities. The development of policies and strategies is based on the mandate of the university, needs of students, faculty and stake-holders, national needs and directions of regulatory bodies. For example, the overall academic plan, new centres and schools are reflected in *Figure 6.3*. At present the university has nineteen centres under nine schools, but the overall plan is to establish 12 schools and 74 centres.

The perspective plan of the university is in line with:

- *Vision and Mission for which it has been established*: The mission of this university, which is located in a backward region, reflects equity in access for education, encompassing more of under privileged students and ensuring quality of education.
- *Teaching and Learning as outlined by the UGC*: The perspective plan of the university is designed to have periodical reforms, increased students' choices of courses, improved technology-assisted participatory teaching-learning processes and academic programmes updated by feed-back-based curriculum revisions. Further, it focuses on attracting and retaining the students from socially deprived backgrounds particularly in rural areas.
- *Research and Development:* University's prospective planning includes creation of international quality infrastructure and resource support to researchers in all disciplines with the aim to generate basic knowledge in frontline areas and to develop cutting-edge technologies.
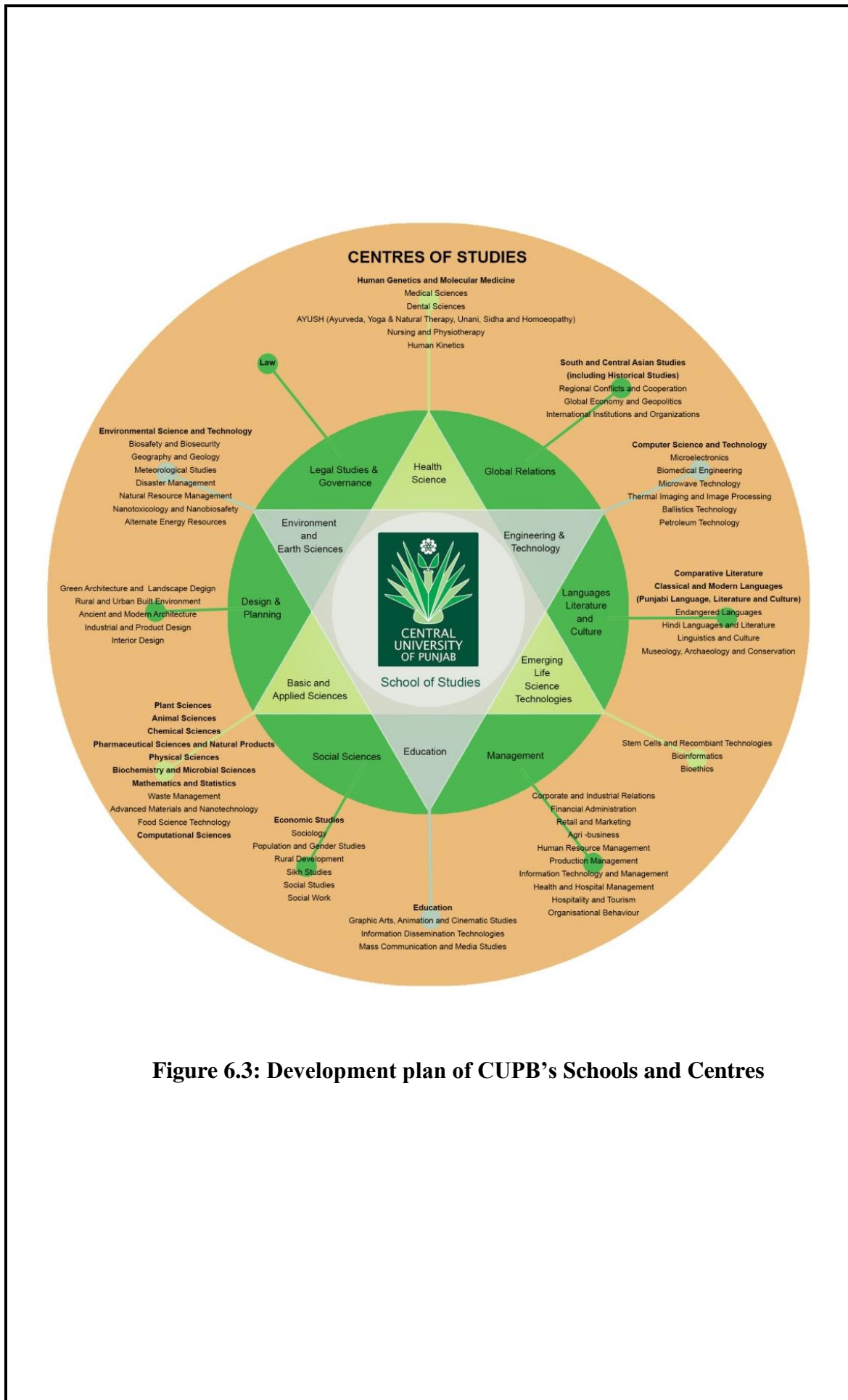
Figure 6.3: Development plan of CUPB's Schools and Centres

- *Community Engagement:* The university is constantly engaged in planning community based skill development programmes through community college and other schemes. The community development programmes include:

    – Computer literacy classes for the senior citizens of Bathinda
    – Constitution of Innovators Club
    – Organization of blood donation camp in the university
    – Visit of Cycle Club members to the university
    – INSPIRE internees visit to the university
    – Participation of the students of other institutions and of under privileged and physically challenged children in various programmes of the university

    The university has also made various groups for environment awareness and protection which includes i.e. Environment Awareness Club, Green Campus Group, Renewable Energy Group, Green Building Policy, Environment Auditing and Monitoring cell.

- *Human Resource Planning and Development:* The prospective plan of the university in human resource development includes capacity building and capability enhancement of the faculty resources through training in current developments and technologies. The university started its functioning in 2009 with two schools and has now expanded to 9 schools and 19 centres. Some unique centres have been introduced like Centre for Computational Science and Centre for Human Genetics and Molecular Medicine.

- *Industry Interaction:* In curriculum designing, major thrust is given to the employment avenues by arranging periodical industrial visits and campus interviews through placement cell. The university has University Industrial forum, University-Industry Council and a Placement Coordination Cell for enhanced industry interaction.

- *Internationalization*

    To make CUPB's programmes internationally acceptable, curriculum and evaluation system is designed and periodically revamped to fit requirements of changing global scenario. Students are provided hands–on training so as to widen their practical knowledge and competence in various facets. Computer related courses are also included in the curriculum. The university has created international collaboration division at CUPB to meet this objective.

6.2.2 Describe the University's internal organizational structure and decision making processes and their effectiveness.

CUPB believes in an organizational structure that should be participative and non-hierarchical in decision making, but effective and efficient in functioning and implementation of decisions. The Vice Chancellor is the Head of the institution. He is assisted by the Dean Academic Affairs, Registrar, Controller of Examination, Deans of Schools and Coordinators of Centres in all academic and administrative matters.

Academic Set up:

CUPB currently has nine schools with a total of nineteen centres. Each centre has a CoC as chairperson, but the real decision making lies with Academic and Administrative committee. The DAA and the Dean of School form the next level of internal organizational structure; next only to the Vice Chancellor. Important academic decisions taken in Academic and Administrative Committees of the centres are subsequently discussed in the Board of Studies and finally in the Academic Council.

Administrative Setup:

Both the academic and administrative activities are under the purview of the Vice Chancellor, who provides overall guidance for various functions of the university. However, all the administrative functions come under the overall control of the Registrar.

The administrative machinery is well-knit in spite of decentralization of various functions, vested with the Deputy Registrar, Assistant Registrars, Section Officers, etc. The various administrative wings look after the particular aspects of administration assigned to them.

Examination Setup:

The examination wing is headed by the Controller of Examinations supported by Assistant Registrar of examinations and the supporting staff.

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

Not compromising on the quality, the university has limited seats in each programme, therefore making an effort to select quality students. Ensuring quality of education, the university adopts following strategies:

(i)   To ensure quality, students are selected through national level entrance test.

(ii)   To encourage early start of research, the university provides Research Seed Money to each faculty member.

(iii)   The best faculty, who would serve as role models, are recruited by the procedure described below. The mechanism of award and recognition is in place.

- Faculty positions are advertised in 94 leading regional and national newspapers through Directorate of Advertising and Visual Publicity (DAVP), Ministry of Information and Broadcasting
- All faculties are both NET and Ph.D.
- Recruitment process is fair and transparent having best experts for the selection committee, mostly fellows of National Academies.
- University sends letters to Fellows of National Academies asking them to encourage best faculty and researchers to apply at CUPB.

(iv)   Imparting a quest for learning among students and providing an ambience favourable for learning.

(v)   Offering merit scholarships, fee concession and awards for meritorious performances.

(vi)   Hosting of seminars/conferences/workshops/trainings and endowment lectures, deputation of faculty to participate in external events, collaboration with other institutions, by signing MoUs with them. All these are the driving mechanisms of enhancing quality of education.

Apart from the above, CUPB has two important quality assurance bodies:

a.   *Internal Quality Assurance Cell (IQAC)* has been established with the Vice Chancellor as chairperson, as per the NAAC guidelines. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the performance of the institution. It motivates the faculty to achieve internal quality. It has full independence for evaluation through various methodologies. Meetings of the IQAC are being held as per schedule (*Annexure 6.1*).

b. *Academic Audit and Monitoring Unit* audits curriculum, teaching-learning process, conducts audit of students' assessment and also carries out research and faculty audit (***Annexure 6.2***). The Academic audit and monitoring unit has developed policy for academic probation and distinction (***Annexure 6.3***).

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

Autonomy and academic freedom are inbuilt in the university policies. The Academic and Administrative Committees in each centre (***Annexure 6.4***) are the real pillars of CUPB's functioning. For example, different centres and schools are allocated separate budget as per their requirements. Also faculty members of different centres have their own externally funded projects governed by the policy of externally funded projects, whereby principal investigators have complete autonomy. This policy grants administrative and financial powers to PI, equivalent to CoC with regard to the project. The accountability is ensured by self-appraisal of the individual faculty and the assessment report by the respective heads which are carefully evaluated and discussed. Academic Audit and Monitoring Unit as also IQAC further ensure accountability. Each centre has complete autonomy to frame its syllabi and carry out academic and co-curricular activities. A separate budget is allocated to each centre to purchase library resources, laboratory equipment, to conduct academic activities etc.

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

One case in labour court was filed against the university in which a worker of outsourcing agency wrongly pleaded to be the employee of the university. Now the case has been resolved with the direction of the court to the outsourcing agency to accommodate the litigant.

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

CUPB is sensitive to the complaints and grievances of its students, staff, and faculty. The university aims at upholding the dignity of the institution by ensuring strife free atmosphere and promoting cordial relations among the different stakeholders and the management. CUPB encourages people to express their grievances/problems freely and frankly, without any fear. Indeed, there are multiple mechanisms for redressal of grievances.

Grievance redressal mechanism of employees and students includes grievance officer, appeals committee, review committee and mercy appeals, as detailed in section 5.1.16

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

Typically student's feedback is obtained at the end of each semester as course feedback. But CUPB has a very elaborate Performa to seek response on multiple issues (***Section 1.4.1***). The feedback form is available on the university website. Based on the students' feedback the CUPB modifies its programmes and curriculum and also improves the facilities to cater to the needs of students.

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

The university has constituted Academic Audit and Monitoring Cell and Internal Quality Assurance Cell to audit the academic performance of various departments. Performance audit on various parameters is carried out by both these bodies. Academic Audit and Monitoring Cell, regularly reviews different courses as also progress of students. The IQAC reviews all systems as also self-appraisal reports of faculty and students feedback. Further, Internal Research Committee reviews the research output of different centres.

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

Not applicable, since Central University of Punjab has no affiliated colleges as per the Act.

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

Not applicable, since Central University of Punjab has no affiliated colleges as per the Act.

6.3 Faculty Empowerment Strategies

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

- To enhance the professional development of teaching staff, the university encourages the staff to attend orientation programmes,

Refresher courses, summer and winter schools, training, workshops, in-service training programmes, seminar, conferences, symposia etc.

- Provisions for study leave to the faculty to enhance and update their existing qualification.

- Provision for paid professional leave in addition to casual leave, earned leave, duty leave, medical leave for faculty.

- The university is constantly motivating the staff members to get research projects from various funding agencies.

- The university has various policies for the professional development of non-teaching staff including leave for attending training programmes.

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

The Self-Appraisal reports are obtained from staff and analysed by a committee constituted for deciding on promotions for teaching and non-teaching staff. Assessment by the Heads of Sections/ CoCs is also obtained annually. The IQAC cell assesses the quality of teaching. All such feedback leads to discontinuation of some practices and addition of newer, more innovative approaches.

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

There is a health centre, a physical fitness centre and a day care centre for kids of university employees. The university is planning for the health insurance scheme for the students and staff of the university. Scheme of LTC is available to faculty and employees.

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

The university creates conducive environment for the eminent faculty by providing academic freedom, good infrastructure, lab facilities, recognition, etc. including the following benefits:

- Cumulative Professional Allowance of Rs. 3.00 Lacs in a block of three years.

- Assistant professors, associate professors and professors are entitled to receive books/journals grant of Rs. 5000/-, Rs. 7500/-, Rs. 10,000 per annum, respectively.

- Every faculty member with regular position in the university is entitled to receive Research Seed Money with an objective of initiating research by the newly recruited faculty.

- Faculty is entitled to attend one national/ international seminar/ conference in a year with support from the university.

- Faculties are also encouraged to attend orientation programmes, refresher courses, training programmes, workshops, symposium under faculty recharging strategies of the university.

- The university started faculty seminar series from October 2012 with the objective to promote interdisciplinary research collaboration between different centres of the university.

- The university has a policy for Research Awards and Incentives for state and national level recognition in research.

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

Gender audit for students, teaching and non-teaching staff is carried out regularly. The number of female employees among the assistant professors and group C employees is significant. (**Table 6.8**)

Table 6.8: Number of males and females in teaching and non-teaching staff

Year	Non-Teaching Staff									Teaching								
	GP A			GP B			GP C			Prof.			Assoc. Prof.			Asst. Prof.		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
2012	04	02	06	05	-	05	17	07	24	04	-	04	02	-	02	20	14	34
2012	07	02	09	06	-	06	21	09	30	03	-	03	02	-	02	30	15	45
2014	08	01	09	09	-	09	32	11	43	06	01	07	02	01	03	28	16	44
2015	08	03	11	10	-	10	35	15	50	06	01	07	05	04	09	53	15	68

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

Gender sensitization is a part of the orientation programme in every semester. Apart from this the university makes continuous efforts to bring about gender sensitization. The university conducts special lectures, the recent ones being,

by Justice Daya Chaudhary on Women Empowerment on 20 March 2015. Besides this the university has a Ladies Club which works towards contributing to the human, social, cultural and intellectual development and opportunities to engage women. The club meets regularly. The actions undertaken by the club are celebration of important days and events, organizing general scheduled and special purpose meetings and organization of special programmes, complementary to the intellectual environment, health and development of the university. Anyone from the university staff members and wives of university employees can become a member. The Vice Chancellor is the patron and madam Vice Chancellor is the chairperson of this club.

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

Not Applicable

6.4 Financial Management and Resource Mobilization

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

The university has implemented a code of classification to record the expenditure under the SOE from 2014-15. The SOE wise expenditure can be ascertained at any point of time as and when required. Every care is taken that no expenditure is incurred more than it is required to spend. The rules relating to fundamental principles of financial propriety are followed before any expenditure is incurred.

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

Before any expenditure is incurred from the university funds, it is processed through various checks at different levels, which minimizes the possibility of any financial irregularity. The university has an Internal Auditor for the purpose.

After the compilation of annual accounts by the university, the accounts are audited by the chartered accountant and then the balance sheet duly signed by the university authorities is sent to Comptroller Auditor General of India (Director General of Accounts, Chandigarh). An audit party is deputed by the CAG for audit of accounts and separate Audit Report is sent to university by him. Necessary replies are given to CAG regarding the observation made by the audit party in the draft SAR. Then the SAR is issued by the CAG of India. The printed annual accounts along with SAR and replies thereof are

submitted to the MHRD for laying the report on the table of parliament. Since the inception of the university, the audit of SAR has been undertaken by the CAG and report submitted to MHRD regularly.

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

The accounts of the university are being audited regularly as reported in para 6.4.2 above. No major audit observation has been raised by the audit party so far.

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

The income and expenditure statements for the last 4 years have been submitted to MHRD as in *Table 6.9*:

Table 6.9: Audit reports submitted to MHRD by CUPB

Sr. No.	Year	Period of Audit	Report submitted to MHRD by CAG
1	2009-10 2010-11	30.12.2010 to 11.01.2011	10.03.2011 and 17.10.2011
2	2011-12	06.08.2012 to 24.08.2012	26.12.2012
3	2012-13	12.08.2013 to 06.09.2013	10.12.2013
4	2013-14	14.07.2014 to 23.07.2014	10.11.2014

6.4.5 Narrate the efforts taken by the University for Resource Mobilization.

The university is mainly funded by the Government of India through the UGC. However, the other sources of funds are as under:

1. Externally funded projects are a major source of research grants. Presently there are projects with a total grant of Rs. 13.76 crores.

2. Fee/fines from the students.

3. Student Aid Fund is received from some sources.

4. Amount is also generated through donation. The university is registered under section 80G of Income Tax Act, so that the donor gets the benefit under the IT act.

6.4.6 Is there any provision for the university to create a corpus fund?

A corpus fund has been created for "Student Financial Aid" programme.

6.5 Internal Quality Assurance System

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

Yes, in every academic session, the university conducts academic audit in which students of different departments submit feedback of faculty members of the centre. Such academic audit has been conducted by the university from last four academic years. For such purpose the university also constituted Internal Quality Assurance Cell (IQAC) with following members:

1. Professor R. K. Kohli, Vice Chancellor, CUPB (Chairman, IQAC)
2. Professor Gurmail Singh, Vice Chancellor, Akal University, Talwandi Sabo
3. Prof. P. Ramarao, Dean Academic Affairs
4. Dr. Pankaj Khare, Registrar CUPB
5. Prof. R. G. Saini, Invited Professor
6. Prof. S. K. Bawa, Professor and Co-ordinator of Centre for Education
7. Dr. Anjana Munshi, Associate Professor, Centre for Human Genetics and Molecular Medicine
8. Dr. Deepak Chauhan, Assistant Professor, Centre for Law
9. Dr. Sunil Mittal, Assistant Professor, Centre for EVST
10. Ms. Shweta Arora, Deputy Registrar
11. Sh. L. K. Wadhwa, COO, Indo-Swift Tech.
12. Sh. Dinesh Sood, GM HR Department, NFL, Bathinda
13. Mr. Gajendra Singh Vishwakarma, Regn. No.-CUP/MPh-PhD/SEES/EVS/2009-10/12
14. Professor A. K. Dhawan, Director, IQAC (Member Secretary)

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

Assessment and consequent improvements are a regular part of the teaching, learning and evaluation.

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

Teaching learning process is continuously reviewed by Academic Audit and Monitoring Unit. This unit carries out the following:

a. *Curriculum Audit*

After approval of the curriculum in BOS, curriculum is assessed by academic audit committee.

b. *Teaching Learning Process*

Course wise feedback of teachers given by students is analysed from different dimensions for effectiveness of teaching techniques, classroom behaviour, continuous evaluation etc. The results of the feedback are discussed with concerned teacher for improvement.

c. *Academic Audit of Student's Assessment*

The results are reviewed on the following parameters:
   i. Process of examination
   ii. Skewness of scores and standard deviation
   iii. Reasons: problem in question paper setting or evaluation
   iv. Audit report on academic standing of students based on examination rules and regulations

d. *Faculty Audit*
   i. Evaluation of faculty by students
   ii. Professional growth
   iii. Research output

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

The IQAC performs several functions important to quality assurance of the university. Some of these are:

- Development and application of quality benchmarks/parameters for various academic and administrative activities of the institution.

- Arrangement for feedback response from students, parents and other stakeholders on quality-related institutional processes.

- Documentation of the various programmes/activities leading to quality improvement.

- Acting as a nodal agency of the university for coordinating quality-related activities, including adoption and dissemination of best practices.

- Development of quality culture in the institution

- Preparation of the Annual Quality Assurance Report (AQAR) as per guidelines and parameters of NAAC, to be submitted to NAAC.

6.5.5 How many decisions of the IQAC have been placed before the statutory authorities of the University for Implementation?

The IQAC is in its first year and its decisions will be placed in the next meeting of Executive Council.

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

Yes. There are three external members, who contribute to discussions and improvements:

1. Prof. Gurmail Singh, Vice Chancellor, Akal University, Talwandi Sabo
2. Sh. L.K. Wadhwa, COO, Indo-Swift Tech.
3. Sh. Dinesh Sood, GM HR Department, NFL, Bathinda

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

IQAC is a newly formed cell.

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

- All university bodies from Academic and Administrative Committees of centres, Board of Studies, Academic Council and

Executive Council periodically review administrative and academic functions of CUPB centres.

- Monthly meeting of faculty members, students and non-teaching staff (administrative staff) with the Vice Chancellor are held to ensure the periodic review of administrative and academic centres of the university.

- For the periodic review of administrative and academic activities at the centre level, meeting of Academic and Administrative committee is required to be conducted on first Wednesday of every month. A report of the same is to be sent to the office of Dean Academic Affairs.

- Meeting of Board of Studies of the centre and School Boards are required to be conducted in each semester.

Annexure 6.1

ESTABLISHMENT OF INTERNAL QUALITY ASSURANCE CELL (IQAC) AT CUPB

(a) In order to meet the requirements of National Assessment and Accreditation Council (NAAC), the Central University of Punjab has established an IQAC with the following objectives:

- To develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the university.

- To promote measures for university's functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.

(b) The IQAC is expected to perform the following functions:

- Development and application of quality benchmarks/parameters for various academic and administrative activities of the institution
- Facilitating the creation of a learner-centric environment conducive to quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process
- Getting feedback forms filled from students, parents and other stakeholders on quality-related institutional processes
- Dissemination of information on various quality parameters of higher education
- Organization of inter-institutional and intra-institutional workshops, seminars on quality related themes and promotion of quality circles
- Documentation of the various programmes/activities leading to quality improvement
- Acting as a nodal agency of the institution for coordinating quality-related activities, including adoption and dissemination of best practices
- Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality
- Development of Quality Culture in the institution
- Preparation of the Annual Quality Assurance Report (AQAR) as per the guidelines and parameters of NAAC, to be submitted to NAAC.

(c) Maintaining IQAC shall be an important organ for clarity and focus in

institutional functioning towards quality enhancement, internalization of the quality culture and providing a sound basis for decision-making to improve institutional functioning.

(d)   As per NAAC guidelines, IQAC shall work under the Chairmanship of the Vice Chancellor and comprise of CoCs, heads of the Centres and Deans of the Schools, a few teachers, a few distinguished educationists and representatives of management, alumni, student representatives and stakeholders.

The suggested composition of the IQAC is as follows:

1.   Chairperson: Vice Chancellor, Head of the Institution
2.   A few senior administrative officers
3.   Five teachers (depending upon size of the organization)
4.   One member from the Executive Council/Court
5.   One/two nominees from local society, Students and Alumni
6.   One/two nominees from Employers /Industrialists/stakeholders
7.   One of the senior teachers as the coordinator/Director of the IQAC

It is necessary for the members of the IQAC to shoulder the responsibilities of generating and promoting awareness in the university and to devote time for working out the procedural details. While selecting these members the following precautions need to be taken:

- It is advisable to choose persons from various backgrounds who have earned respect for integrity and excellence in their teaching and research. Moreover, they should be aware of the ground realities of the university environment. They should be known for their commitment to improving the quality of teaching.

- It would be appropriate to choose as senior administrators, persons in charge of institutional services such as library, computer centre, estate, student welfare, administration, academic tasks, examination and planning and development.

- The management representative should be a person who is aware of the institution's objectives, limitations and strengths and is committed to its improvement. The local society representatives should be of high social standing and should have made significant contributions to society and in particular to education.

(e)   Other conditions as per NAAC are:

- The tenure of such nominated members shall be two years.

- The IQAC shall meet at least once in every quarter.
- The quorum for the meeting shall be two-third of the total number of members.
- The agenda, minutes and Action Taken Reports are to be documented with official signatures and maintained electronically in a retrievable format.

(f)   Each School of CUPB will have its own "Internal Quality Assurance team" with CoCs as members and Dean of the School as coordinator.

Annexure 6.2

Ref. No: CUPB/CC/15/EC-15/31   Dated: 06-08-2015

NOTIFICATION NO 31

In pursuance to Item No. EC:15:15:28 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council (Item No:AC:7:2015:23) is hereby conveyed for establishment of **Academic Audit and Monitoring Cell** as per the guidelines enclosed with the notification.

Approval of the Competent Authority is conveyed for the constitution of the **Academic Audit and Monitoring Cell** committee comprising of members as detailed hereunder for the governance of the cell**:**

1. Professor A. K. Dhawan, Professor
2. Dr. Anjana Munshi, Associate Professor
3. Professor S. K. Bawa, Professor (Convener)

This is issued with the approval of the Competent Authority

ESTABLISHMENT OF ACADEMIC AUDIT AND MONITORING CELL

Academic Audit

Academic audit is a process to monitor academic quality control of the institution through students' performance, curriculum, academic growth of faculty, teaching learning process and evaluation system. It is also the assessment of the academic standing of a student in his/her degree programme of study. The audit takes place at the end of a session or academic period, after Grade Point Averages have been calculated. It is the process of monitoring the performance of students to determine whether they may proceed in their program of study or not.

Objectives

- To measure the degree to which the students are achieving learning objectives of the programme.
- To find that learning objectives of the programme have been achieved through design of the curriculum.
- To consider the impact of teaching techniques in achieving learning objectives
- To improve research outcomes and practices

PROCESS OF ACADEMIC AUDIT

1. CURRICULUM AUDIT

After approval of the curriculum in BOS, it will be assessed by academic audit committee to monitor the following aspects:

1. Process of curriculum development has been followed or not
2. Parity of the course content with objectives and the national framework
3. Requirement of teaching hours according to content
4. Transaction mode of every course
5. Design of the curriculum

2. TEACHING LEARNING PROCESS

Course wise feedback of teachers from students through on line mode will be audited to analyse different dimensions of effectiveness of teaching techniques, classroom behaviour and continuous evaluation programme at the end of every semester. The results of the feedback will be reported to the concerned teachers for improvement. The identity of the students will be kept confidential.

3. ACADEMIC AUDIT OF STUDENTS ASSESSMENT

i. *Based on CGPA/SGPA*
The results of the audit will be reviewed every year on the following parameters:
  i. Process of examination
  ii. Skewness of scores and standard deviation
  iii. Reasons: problem in question paper setting or evaluation
  iv. Audit report on academic standing of students based on examination rules and regulations.

ii. *Based on number of failures*
Report based on number of failures will be analysed to understand:
  i. Same Students failing in different subjects
  ii. No. of students who cleared all courses
  iii. The causes of failures: academic problem, psychological problem, health issues etc.
  iv. rules/process of academic standing as approved by council

iii. *Progress of Students performance*
  i. Every year/semester, an analysis report on the performance of individual student for each course will be made and sent to the students as a feedback
  ii. Depending on the situation, counselling session with the respective student could be arranged

iv. *Analysis of Question paper*
  i. An analysis of the objective type question papers of surprise test and end term test comprising 50% of the continuous evaluation system will be done through Discrimination index. This will serve as feedback for the teacher.
  ii. The question papers of the surprise test, mid semester test and end semester test will be discussed by the teacher in the classroom with the students to serve as a feedback for the teacher.

4. RESEARCH

Research process will be audited to know the target achieved and quality of research at different stages:
  i. Research proposal

      ii. Yearly progress
     iii. Research Report
     iv. Publication of research papers
      v. Patents
     vi. IPR

5. LAB AUDIT

      i. Conduct of practical according to SOP
     ii. Evaluation of practical
    iii. Good lab practices being followed or not

6. FACULTY AUDIT

      i. Evaluation of faculty by students
     ii. Professional growth
    iii. Research output

To conduct the process of audit, the following committee has to be constituted:

1. Coordinator of audit and monitoring cell
2. Two senior professors (by rotation after two years)
3. One Associate Professor (by rotation, after two years)
4. COC of the concerned programme

The members of the committee will be nominated by the Vice Chancellor.

Annexure 6.3

POLICY FOR ACADEMIC PROBATION AND DISTINCTION AT CUPB

CUPB follows Grade Point System on a 0 to 10 scale for evaluation of students as per UGC guidelines. For "Academic Standing" of a student, the following categories have been defined:

i. *On Academic Probation*: The students, who will have CGPA less than 4.00 in any semester, will be on put on "ACADEMIC PROBATION". This will be reflected on the semester report card of the student till he/she improves the CGPA.

ii. *Good Standing*: The students who will have CGPA more than 6.00 will have "GOOD ACADEMIC STANDING". This will be reflected on the semester report card of the student till he/she maintains the same.

iii. *Passed with Distinction*: The students who will have more than 9.5 CGPA in the end semester will have the academic standing of "PASSED WITH DISTINCTION".

iv. The students who will remain on academic probation for more than two semesters will not be allowed to register for next semester till he/she improves CGPA and brings it to 4.0 by repeating the courses in which he/she has failed.

v. Good Academic Standing and passed with distinction will also be included in the final transcript of students on the basis of CGPA at the end of the programme.

vi. Any comment generated by the Academic Audit and Monitoring Unit will appear on the student's transcript and/or semester report, as recommended by the Cell.

Annexure 6.4

ACADEMIC AND ADMINISTRATIVE COMMITTEES IN DIFFERENT CENTRE OF CUPB

The following shall form Academic and Administrative Committees of respective centres of CUPB:

1. Chairperson: Coordinator of the Centre
2. Members: All Faculty members
3. Convener: As designated by the COC/OIC

UGC lays a lot of emphasis on democratization of functioning of the university departments and participation of faculty in decision making. Establishment of Academic and Administrative Committee (AAC) in each Centre is one important step in this direction.

1. AAC is to be established in each Centre of CUPB with the following objectives:

   - To develop a system for conscious and consistent action to improve the academic and administrative performance of the Centres.
   - To promote measures towards quality enhancement and democratic functioning of the Centres through internal discussions and consensus building.

2. The AAC of the Centres are expected to perform the following functions:

   - Identify mandate and thrust areas of the Centre for teaching and research and plan the various programmes to be offered by the Centre.
   - Prepare calendar of activities of the Centre in line with the Academic calendar of the university. The Department calendar will include schedule of all important activities of the Centre such as orientation programme, workshops, seminars, lectures, refresher courses, meetings of Board of Studies and other activities to be carried out by the Centre during the year.
   - Constitute committees for looking after the various activities of the Centre from preparation of time table to holding of seminars and lectures etc.
   - Review and approve the curriculum development, syllabus of courses as also revision of syllabus of different courses.
   - Recommend books for reference and Book bank of library
   - Propose the department budget including purchase of equipment for various activities of the Centre.

- Determine requirement of the department for teaching and non-teaching posts and Propose qualifications for these.
- Review research proposals to be submitted by faculty for internal and external funding, student's synopsis, progress reports of research fellows and other research activities of the Centre.
- Ensure implementation of decisions taken by statutory bodies of CUPB.
- Provide any academic or administrative exemptions to the faculty and students of the Centre.
- Develop and maintain of database of students and Faculty of the Centre
- Prepare the Annual Quality Assurance Report (AQAR) as per guidelines and parameters of NAAC, to be submitted to IQAC of CUPB.

3.   AAC are to be constituted with Coordinator of the Centre as Chairperson and all faculty members as the members of the committee.

4.   The CoCs shall declare the formation of AAC and any changes whenever required and get these approved from the Vice Chancellor, CUPB.

5.   The AAC shall meet on first Wednesday of the month to deliberate on issues related to the centre. Minutes of the meeting will be recorded and sent to Dean (A) for information.

CRITERION-VII

INNOVATIONS AND BEST PRACTICES

CRITERION-VII: INNOVATIONS AND BEST PRACTICES

7.1 Environment Consciousness

Bathinda is known to be a cancer prone district due to presence of heavy metals in water and high usage of agrochemicals. This region has multiple environmental problems and therefore the Central University of Punjab has put in sincere efforts to work for the environment issues. A separate centre for Environmental Science and Technology has been established and an Environment Awareness Club actively works to address the issues.

Best efforts are made for energy conservation in the campus. For the year 2009-10, Punjab Energy Development Agency adjudged the CUPB as the second best government institution in energy conservation and gave an award for its "constant efforts in energy conservation".

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

The university in its mandate has declared "Environment and Health" as its major thrust area for research and has established the Environment Monitoring and Auditing Cell (***Annexure 7.1***) in the university with the following mandate:

- Monitoring and record keeping of baseline data for the City Campus and surrounding areas.

- Creating baseline data for the environmental status of the main campus of the university.

- Performing environmental monitoring on regular basis in the CUPB adopted villages.

- Auditing the activities initiated by various environmental development cells in the university.

Work accomplished:

The Environment Awareness Club and Environment Monitoring and Auditing Cell have already accomplished the following:

- Purchase of various instruments and establishment of environmental analysis techniques.

- Monitoring of groundwater and soil samples for heavy metals in Talwandi Sabo and Goniana villages.

- National Workshop on "Water Quality and Health: Training the Teachers" held in February, 2015.

- Awareness Talk on "Watershed Management in Punjab" on the Water Conservation Day.

Environment Auditing and Monitoring Cell has defined the parameters of CUPB's environment audit as in *Annexure 7.2*.

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

CUPB has constituted many structured groups and policies to take care of the environment. For strengthening the various environment related activities, Environment Awareness Club and other sub groups have now been reconstituted (*Annexure 7.3*) as follows:

Environment Awareness Club:

This is the parent club with four subgroups on Green Campus group, Renewable Energy group, Green Building group and Waste Management group. Earlier, it was named as Environment Club. The following is the composition of Environment Awareness Club:

Chairman   : Vice Chancellor, CUPB
Coordinator(s)   : Prof. A. K. Jain (Dean SEES)
                                     : Prof. R. C. Sharma (CoC, Centre for EVST)
Organizing coordinator   : Dr. Sunil Mittal (Assistant Professor)

Sub group-I. Green Campus group:

The Green Campus Group has been established on the campus with the following mandate:

Objectives:

- To initiate a tree plantation drive on the city campus of the university.

- To create awareness among the students and the residents of this part of the country through lectures by experts in this field and to start a tree plantation drive outside the university.

- Plantation of different native, ornamental, flowering, fruit and other species of the trees on the main campus of the Central University of Punjab.

Tasks Accomplished:

The city campus of Central University of Punjab is studded with ornamental, timber, medicinal, aesthetic and fruit plants. Till date the campus has been planted with a total of about 3000 plants belonging to 38 different species. These include Palm species, Casuarina, Ashoka, *Ficus* species, Acacia, Bakain, Neem, Tecoma, Jamun, Shisham, Mulberry, Subabul, Black board trees etc. Also Silver Oak, Babul and Royal Palm species are planted around the Administration block. Guest house premises is surrounded by 10 different species that include *Cassia fistula*, *Hibiscus, Puttranjiva, Ficus, Thuja* etc. Boys' Hostel has Babul, Shisham, Mulberry, Neem, Melia and Girls' Hostel has Bel, Jamun, Khajoor, Mulberry, Neem, Melia, Jand, Cactus etc. There is a small orchard of citrus species and also melia plantation. The boundaries are highlighted by hedges of *Clerodendron*, *Dodenea* and *Duranta* species. In addition to this, there are species of seasonal flowering plants and creepers at every nook and corner that adds to the beauty of the campus.

- A university publication entitled Plant Biodiversity of Central University of Punjab compiled by Dr. Attar Singh and Prof. R. G. Saini reports 157 species from the university.

- Twenty bird nests have been placed on the campus to increase biodiversity.

Sub Group-2. Renewable Energy Group:

The use of conventional resources of energy has to be replaced by use of renewable source of energy wherever possible. The renewable energy group has therefore been created with the following objectives:

- Promotion and adoption of renewable energy sources on the campus.

- To bring an awareness among the students regarding energy conservation and use of renewable energy sources.

The renewable energy group has carried out the work on installation of solar photovoltaic units, street lights, solar water heaters and wind mills as per details in the following section.

Sub Group-3.Green Building Group:

An integrated green labelled building design best addresses the issues of energy, water, materials, indoor environmental quality and carbon emissions before the construction of the building.

This group strives towards wider adoption of eco-friendly and green building concepts and spread of Energy Conservation Building Code (ECBC), to make the buildings "ECBC Compliant**".** Indeed, CUPB will be among the first few university buildings to be completed under GRIHA – IV norms.

The following are the broad objectives which the Committee shall strive to achieve:

- To create awareness of an integrated building design
- To improve energy efficiency
- To improve indoor air quality of buildings
- To create simulation models for ventilation, daylight and heat minimization

Tasks accomplished:

All the necessary steps have been taken while designing and preparing the layout for the building of the main campus of the university to make the building energy efficient. The important point which has been taken care of is use of renewable energy devices such as solar photovoltaic power plants, street lights, solar water heater, bio-gas plant, orientation of the buildings for maximum light and temperature comfort, etc. The new campus will comply with GRIHA-IV rating norms.

Sub group – 4. Waste Management Group:

The Central University of Punjab is a fast growing educational institution and the rapid increase in the students and staff community has led to huge amount of waste generation. The different types of waste are generated in the campus that is biodegradable and non-biodegradable. The environmental and health impacts related with various types of wastes are of concern. The management of waste is, therefore, a necessity in the campus to make it green and to enhance the quality of the environment.

Objectives:

- To provide awareness and educate on the need to manage waste and make the campus a zero waste zone.

- To recycle and reuse the waste materials for value added environment friendly products.

Work Initiated for Waste management:

- *Solid waste management:* Different coloured bins have been provided for collection of different types of waste. The biodegradable waste from hostels/campus, canteen and all plant waste is used in composting plant. Non-biodegradable wastes collected in dustbins, are emptied and collected daily by the Municipal Corporation, Bathinda.

- *Sewage treatment plant (STP):* Two Sewage treatment plants (STP) are being installed in the campus for the treatment of sewage waste from the hostels of the university. The water regenerated will be used for landscaping and gardening. The stabilized sewage will be used as compost.

As is clear from above, CUPB has a strong emphasis on environment consciousness, renewable energy and waste management. These activities are redefined below as per NAAC Performa:

(a) *Energy Conservation:*

- Solar based LED lights and CFLs are used in the campus.

- Solar water heaters are installed in the hostels.

- All electrical appliances such as ACs are 3 to 5 star rated and energy efficient. All freezers are based on CFC free technology.

(b) *Use of renewable energy:*

Following renewable energy systems have been installed in the campus replacing a part of conventional energy systems such as electricity.

- *Installation of solar photovoltaic units (SPV).* SPV of 3.6 KW capacity are operational in the campus. The electricity generated from these plants is used for lighting a part of the academic block.

- *Street lights.* About 50 standalone street lights operating on solar cells have been installed in the campus.

- *Solar water heaters.* Solar water heaters of about 3000 litres capacity (10 Nos.) have been installed in various hostels for boys and girls.

- *Wind Mills.* Two wind mills, having a total capacity of 6.8 KW have been installed in the campus. The electricity is used for lighting a part of the academic block building.

(c) *Water Harvesting*

The City Campus has lots of open spaces and soil being sandy loam has good percolation. Therefore, water from the roof tops of buildings percolates into the soil.

Presently, two Sewage Treatment Plants (STP) are being installed in the campus for the treatment of sewage waste from the hostels of the university. The water regenerated will be used for landscaping and gardening.

The new campus of CUPB is fully compliant to water harvesting regulations.

(d)   *Check Dam Construction*

The university is established on plane land and no check dams are required.

(e)   *Efforts* for *Carbon neutrality*

- The university encourages paper less circulars; restriction on use of non biogradable material in office work and has made large plantations.

- To save paper, RFID system in library and Tally ERP are used by university. Most of the work is done through "authorized e-mail accounts".

- To cut emission of greenhouses gases, electrical appliances of three to five star rating are being used.

(f)   *Plantation*

CUPB has carried out plantation drive in and outside the campus. Under this programme about 3000 saplings have been planted in the campus. Also, about 40,000 trees have been planted, in five phases from 2010-2015, outside the campus wherein the faculty and students of CUPB participated. Plant biodiversity analysis of the main campus has been documented and further restoration of these species and other varieties in the districts are being carried out in main campus.

(g)   Hazardous waste management

Very little hazardous waste is generated, but university has an arrangement with Medicare Environment Management Agency for collecting biomedical waste.

- *Awareness Programme*

  With the help of student volunteers, campaigns related to waste management such as 'Don't Litter the Campus' improved the waste collection in the campus. Educating about the colour codes of dust bins for different waste also improved proper waste disposal.

- *Reduction at Source*

  Waste minimization by achieving waste reduction at source is emphasized. The students are also encouraged for the waste reduction by reducing use of papers by printing double side, using electronic versions for communication.

- *Segregation of waste at the Source and Onsite storage*

  Proper colour codes for bins may enhance the handling and segregation of waste at the source. Separate types of the organic waste is being collected in separate bins (food wastes, vegetables, fruit peels, etc.) especially at the canteen. Separate collection system for paper wastes at the administrative and academic block. Non-biodegradable materials like plastic waste are also segregated. Vermicomposting facility, composting pit and sludge drying beds are available for disposal of different types of waste.

(h)   E-waste management

Proper management of electronic waste is being promoted at CUPB.

(i)   Any other:

CUPB has organized the following programmes to create an awareness regarding air, water and soil pollution.

- *Tree Plantation at the Main Campus site: August 06, 2011*

  Tree Plantation along the entire boundary wall of the Main Campus of the university at village Ghudda was started on August 06, 2011 to make the beginning of "Greening" the Main Campus

of the university.

- *Establishment of Genetic Heritage Park : September 9, 2011*

  A Genetic Heritage Park has been established in a six-acre piece of land at the City Campus to preserve rare and endangered species of trees and plants from Malwa region of Punjab. To begin with, saplings of Imli (*Tamarindus indica*), Lasuda (*Cordia dichotoma*), Phalsa (*Grewia asiatica*), and Phalahi (*Acacia modesta*) were planted on September 9, 2011 at the site.

- *World Cancer Day: February 3, 2012*

  On this occasion a special lecture Radiations in Health Care - Atoms for Peace was delivered by Dr. B. R. Mittal, Professor and Head, Department of Nuclear Medicine, Post Graduate Institute of Medical Education and Research, Chandigarh. Dr. Santokh Singh, Chief Surgeon from S. Waryam Singh Memorial Hospital, Amritsar, spoke on the role of radiations especially, the depleted uranium in causation of cancer. Dr. Bhola Singh Sidhu, also a Surgeon from Parvati Devi Hospital, Amritsar, delivered the lecture on "Surgical intervention and other prospects of cancer treatment". Dr. Navdeep Singh, an Oncologist from Ludhiana Medicity, spoke on "Recent advances in the treatment of metastatic cancer". Dr. Daljit Singh, a leading and world renowned Ophthalmologist from Amritsar, talked about "Alternate treatment remedies available for the prevention and cure of cancer". Dr. Paramjit Singh Raja, a Radiotherapist from Baba Farid University of Health Sciences talked about the role of Baba Farid University of Health Sciences in creating awareness on cancer and on "Prevention and treatment of Cancer" at early stages.

- *Earth Day: April 22, 2013*

  The Centre for Environmental Science and Technology took the initiative to celebrate the Earth Day. Various activities were organised like skit, lectures, songs, poetry writing, slogan writing, poster writing and video presentation.

- *International Biodiversity Day Celebration Lectures: May 22, 2013*

  The Centre for Environmental Science and Technology organised the International Biodiversity Day. Eminent scientists in the field delivered lectures.

- *The Chancellor releases book on Insects: September 10, 2013*

  The Chancellor of Central University of Punjab released a book based on the life of world of insects on September 10, 2013. The book in Punjabi language named *"Baatan Keet Sansar Dian"* has been authored by a renowned zoologist, Prof. Pushpinder Kaur.

- *International Biodiversity Day: May 22, 2014:*

  University celebrated International Biodiversity Day on 22nd May, 2014. It was sponsored by Punjab State Council for Science and Technology.

- *National Workshop on Training the Trainers: February 11, 2015*:

  A National Workshop on Training The Trainers: Water quality and health held on 11th February, 2015.

- *Dr. J. S. Yadav Memorial Lecture: March 19, 2015*:

  Dr. J.S. Yadav memorial lecture entitled "Energy and Environment: A New Paradigm" was delivered on 19th March, 2015 by Prof. S. K. Sharma.

- *Earth Day: April 22, 2015*

  CUPB in collaboration with Punjab Pollution Control Board, Bathinda, celebrated Earth Day on April 22, 2015 by planting trees in the university campus followed by a pledge to save environment. Distinguished personalities such as Sh. Manpreet Singh, IAS, Chairman, Punjab Pollution Control Board; Prof. V.K. Jain, Vice Chancellor, Doon University; and Prof. S.S. Dhillon, Emeritus Professor Punjabi University, Patiala visited the campus. The programme ended with a plantation drive and placing the wild birds' nest-boxes on the university campus trees.

- *International Day for Bio-Diversity: May 22, 2015*

  An awareness programme on International Day for Biological Diversity on the theme "Biodiversity for Sustainable Development" was organised on May 22, 2015 in collaboration with Punjab Biodiversity Board. The programme was sponsored by National Biodiversity Authority, Govt. of India. The awareness programme involved expert lectures by eminent speakers, a

documentary, and an extra-curricular programme by the students. Prof. R.K. Kohli, Vice Chancellor, shared his ideas on the efforts and movements at international level to protect bio-diversity. Speaking on the occasion, Prof. Daisy R. Batish, an expert on the subject from Panjab University, Chandigarh, highlighted the role of bio-diversity in sustaining the life on this earth. She also enumerated on the endangered species notified by International Union for Conservation of Nature. Prof. Jagbir Singh, from Punjabi University, Patiala, continued the momentum and sensitised the participants in an illuminating way by his presentation on plants, animals, and mountains. Prof. Gurmail Singh, Vice Chancellor, Akal University, emphasised the need to redefine and revisit the meaning of development in the perspective of environment preservation.

- *Tree Plantation Drive at New Campus: July 19, 2015*

  A tree plantation drive was started at the new campus on 19th July 2015 and various plants belonging to 89 species were planted. The target is to plant 20,000 trees to make new CUPB Campus green ahead of time.

- *Akshay Urja Diwas: August 20, 2015*

  Akshay Urja Diwas 2015 was celebrated on August 20, 2015 as an awareness campaign for renewable energy. Professor B. S. Pathak, Sardar Patel Renewable Energy Research Institute, Vallabh Vidyanagar, Gujarat, delivered a lecture on "Potential of Biomass energy in India" and about 100 participants pledged to save energy and use renewable energy wherever possible.

- *Invited lectures***:** Invited lectures by the eminent personalities in the area of Biodiversity, Environmental Science, Earth Sciences, Renewable Energy, etc. is a regular feature in the university. The important lectures organized in the university are as follows:

  I. Prof. Dr. A. K. Saluja, "New Therapies of Pancreatic Cancer'' – 9th December 2011.

  II. Dr. Devinder Singh Sandhu, "Cancer in the Elderly" on 13th December 2011.

  III. Prof. Dr. Naresh Kochher, "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" 18th November 2011.

IV.   Prof. C. P. Kaushik, "Protecting our atmosphere for generation to come" 26th September 2012.

V.   Dr. Babu Ram, "Environmental Issues and their Management" 27th December 2012.

VI.   Prof. S. S. Bir, Professor Emeritus, Punjabi University, Patiala, the. Chief Guest delivered the inaugural address on International Biodiversity Day celebration 22nd May 2013.

VII.   Prof. D. S. Brar, 'Utilization of Genetic Resources for Increasing Productivity and Sustainability of Crops' 22nd May 2013

VIII.   Prof. Pushpinder Kaur, 'Biodiversity and Insects' 22nd May 2013

IX.   Prof. P. K. Joshi, 'Biodiversity: That Sustains Life' 22nd May 2013

X.   Dr. B.M. Gandhi, "Funding Opportunities and Effective Grant Writing" 29th May 2013.

XI.   Prof. A. Tikoo, "Those countries are considered developed who have an abundance of natural resources" 1st November 2013.

XII.   Prof. M. S. Kang, "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" 1st November 2013.

XIII.   Prof. J. S. Hundal, "Innovations and technology development should not be at the cost of environment" 17th January 2014.

XIV.   Prof. R. K. Tuli, "Various programmes undertaken at global level to encourage the innovations world over" 17th January 2014.

XV.   Prof. A. K. Malhotra, "Positron Emission Tomography" 4th February 2014.

XVI.   Dr. J. S. Sekhon, Fortis, "Advances in Targeted Therapies in Cancer" 4th February 2014.

XVII.   Dr. Neeta Kang, "Integrated Approach in Cancer Diagnosis and Therapy" 4th February 2014.

XVIII.   Dr. Rajesh Vashishta, "Prevention and Early Detection of Cancer" 4th February 2014.

XIX.   Dr. Manjit Singh Bal, "Cancer Registry in Punjab." 4th February 2014.

XX.   Professor B. S. Pathak, "Potential of Biomass Energy in India" August 20 2015.

- *Extension Lectures***:** The faculty of the university especially from the Centre of Environmental Science and Technology participate in the invited lectures in conference/ training programmes/workshop and awareness lecture, thus spreading the message regarding the importance of clean environment and how to keep the environment clean. Other activities include:

  -CUPB faculty are members of various local environmental bodies including the Local Biodiversity Board constituted by Punjab State Council for Science and Technology (PSCST).

  -Visit to Biodiversity Train.

  -Documentary shows on biodiversity loss.

  -A diploma course in Green Farming Technologies under UGC community college scheme has been introduced from academic session 2015-16.

  -Four short term courses namely Vermicomposting, Apiculture, Mushroom Cultivation and Sericulture have been introduced.

7.2   Innovations

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

The very establishment of CUPB campus by utilizing an abandoned, dilapidated building is an innovative concept. CUPB has introduced many

innovative steps and policies to create positive impact on academic and work environment:

- The schools and centres are organised in a very innovative way i. e School of Legal Studies and Governance, School of Social Sciences, Centre for Human Genetics and Molecular Medicine, Centre for Computational Science are some examples.

- Many of our programmes are unique and innovative like Human Genetics and Molecular Medicine, Environmental Law etc.

- Innovative programmes like Computer Literacy Programme for senior citizens, Human Rights Certificate Programme, Earn While You Learn scheme, Competitive Examination Cell have been initiated by the university.

- Many class room innovations: Term papers, online exams, lectures on intranet.

- Due to limitation of new construction in transit campus, portable hostels are constructed.

Besides these, the university has taken the initiative to capture all innovations in various academic institutions and at local level through Innovators Club of the university.

Innovators Club of the university plays a hub for promotion and dissemination of creativity, exploring opportunities and methods of innovations and creating inductive environment for creative minds from different backgrounds. Common platform for awareness about innovations through organization of seminars, symposia, exhibitions, debates, declamations, lectures/interactive sessions/discussions with the visiting faculty and scientists.

The club has celebrated two innovators day as per details mentioned below:

- First Innovators Day was celebrated on 17th January, 2014, in which 160 participants participated and 50 various innovative models were shown. The main attraction was of paddy chopper. Other innovative models were like 'Smart Laser Security System', 'Cell phone Controlled Agricultural Motor Pump', 'Mobile and Theft Detectors', 'Bio Gas Purification', 'Jamun Dye Solar Cell' etc.

- Second Innovators Day was celebrated on 22nd January, 2015. It had 125 participants and 44 models were shown.

- Rashtriya Avishkar Abhiyan has been initiated to make science interesting for school children, inculcate a desire for enquiry based learning and encourage students towards the fields of mathematics and science learning. Rashtriya Avishkar Abhiyan laboratory was inaugurated at CUPB on 27.08.2015. On this occasion, children from five schools/colleges (R.B. D.A.V School, Bathinda, Shaheed Sipahi Sandeep Singh School, Bathinda, Silver Oaks Public School, Bathinda, D.A.V College, Bathinda and Sukhanand Girls College, Bathinda) visited CUPB.

7.3   Best Practices :

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

The following are some of the best practices which have contributed to better academic and administrative functioning of the university:

Provision of Research Seed Money to faculty members, Earn While You Learn Scheme for Students, Competitive Examination Cell, Inter Disciplinary Centres of Excellence, Identification of Centres with Potential for Excellence, Professional Development Allowance, Research Awards for National International Recognition, Human Right Group, Environment Auditing and Monitoring Cell, Automated Result Processing system.

Practice 1

Title: Research Seed Money scheme

Objective:

The main objective of Research Seed Mondy scheme is to provide congenial atmosphere for independent research to newly joined faculty members. The underlying idea is to encourage independent research ideas of young faculty members.

*The Context***:**

CUPB has appointed young faculty from all over India and abroad. It is important to help them initiate research quickly. Seed money provided on day one to initiate research, coupled with ready availability of equipment in Central Instrumentation Lab, considerably reduces the time lag for productive research. The major challenge is to enable the new faculty begin research with least possible time gap.

*The Practice***:**

The university has approved 21 research projects underlying this scheme. Upon joining CUPB, a faculty member is provided up to Rs 3.0 lacs as grant for research. This helps them in processing chemicals and other small equipment and contingencies. They have another 3.0 lacs as professional development allowance for travel, books, conferences, etc. Post graduate students and Central Instrumentation Lab complete their research requirement for a start.

*Evidence of Success***:**

Twenty one faculty members have availed this scheme and initiated research quickly and then got externally funded projects for continuing their work.

*Problems encountered and resources required***:**

Though financial resources are enough, but it is not sufficient especially for humanities faculty members as programme has policy of grant for Rs. 3 lakh for science faculty members and Rs. 1.5 lakh for humanities faculty members.

Practice 2

Title : Automated Result Processing System

Objective:

To speed up the work of result declaration and to increase the accuracy and efficiency of examination system.

*The Context***:**

The examination cell has developed in-house software for result processing and printing of tabulation sheets and mark-sheets. This system has been successfully implemented from academic session 2014-15. Now the results are being processed and tabulation sheets and marks sheets are being printed with the help of this software.

*The Practice***:**

Major features of the system are:

1. Once the awards are fed in the system, coloured tabulation sheets and DMCs are ready immediately with 100% accuracy.
2. The software also incorporates the security features like Q-R, BAR code and specialized seal of examination cell.
3. For increased security, both tabulation sheets and DMCs bear coloured photo-graphs of students.
4. The system has been successful in saving the cost, man-power and valuable time of the examination branch.
5. As the system has been developed in-house by examination cell, therefore the updating and maintenance is always fast and easy.

Examination Web Portal

The examination cell hosts its separate web portal since 2015, which can be accessed from anywhere through internet.

Main features of the web-portal are:

- Beginning with the session 2014-15, all the examination related data has been uploaded on this web portal.
- Students can view all DMCs and internal assessment from anywhere through internet by just entering student ID and date of birth.
- As data is online, marks-sheets can be verified online for originality.
- The web-portal is linked with main website and is available in "Student Corner" section of main website , however it can also be accessed from address *http://14.139.242.5:83*.

- The data on this web portal is very secure at it is in-house developed by the examination cell and is hosted on the own server of examination cell.
- All rules and regulation have been uploaded on the portal.

*Evidence of Success***:**

- The system has saved time, human efforts and speeded up the declaration of result. In place of 12 to 15 days as earlier, the results can be compiled error-free in 3 to 4 days.

- The university has prepared high quality degree certificates for all the eligible students with the following features: non tear-able, termite proof, water proof, rodent proof, temperature proof paper with 100 years life; micro text security feature; ultraviolet light text security feature; correlation patch security feature; barcode security feature; QR code security feature; background variable data vertical and horizontal; water mark; clear ink logo and text; clear ink with VD.

- The system has significantly reduced complaints and is cost effective.

*Problems encountered and resources required***:**

There are no problems, but it requires technical manpower for data entry and needs dedicated web space.

Annexure 7.1

Ref. No: CUPB/CC/15/EC-15/22   Dated: 04/08/2015

<u>NOTIFICATION-22</u>

In pursuance to Item No. EC:15:15:20 of the Minutes of the 15th Meeting of Executive Council of Central University of Punjab, approval of the Executive Council to the recommendation of the Academic Council is hereby conveyed for establishment of **Environment Auditing and Monitoring Cell** at Central University of Punjab.

Environment Auditing and Monitoring Cell
1. Dr. J. Nagendra Babu, Assistant Professor
2. Dr. Sunil Mittal, Assistant Professor
3. Dr. Yogalakshmi K.N., Assistant Professor
4. Dr. Dhanya M.S., Assistant Professor
5. Dr. Puneeta Pandey, Assistant Professor
6. Mr. Rajinder Singh Smagh, Liaison Officer
7. Prof. R.C. Sharma, Professor - Convener

Annexure 7.2

ENVIRONMENT AUDITING OF THE CITY CAMPUS CUP BATHINDA

It is desired to conduct the environment auditing of the city campus of the Central University of Punjab, Bathinda so that the necessary mitigation measures are taken to have a sustainable and healthy work environment for the students, faculty and other staff of the university. This document considers various parameters included for audit. The document also gives the action to be taken by various groups/offices for compiling the required information and accomplishing the environment auditing work.

(I) General information: (Action Registrar Office)

     (a)   Student population
             Total Number of students
             Number of students in hostels

     (b)   Faculty and staff members
             Number of faculty members on campus
             (Including family members)
             Staff members (Total)
             Number of staff members on campus
             (Including family members)

     (c)   Others including security

(II) Energy consumption (last one year) (Action Estate organization)

     (a)   Connected electricity load

     (b)   Monthly electricity consumption
             In different units/blocks

     (c)   Diesel consumption in DG sets

     (d)   LPG cylinders consumption   (Action Campus manager)
             o   Mess canteen
             o   Pantry in Admin block
             o   In guest house
             o   In residential houses

     (e)   Other fuel consumed in the mess/canteen

(III) Sold Waste management (Daily Basis)   (Action Sub Group-1)

    (a)   Total MSW generated
- Permanent residents including hostellers per day
- Others per-day

    (b)   Trees wastes

    (c)   Biomedical waste

    (d)   Hazardous waste generated in Labs and electronic waste

    (e)   Means of disposal for each type of wastes

(IV) Sewage Waste Management   (Action Sub Group-1)

    (a)   Total Sewage Waste generated
- Permanent residents including hostellers per day
- Others per day
- Means of disposal
- Input and out flow of Sewage Waste and water to the STP plant

(V) Water supply (Quantities)   (Action Estate organization)

    (a)   Ground water

    (b)   Canal water

    (c)   Drinking water (details of RO and water desalination plant Capacity and location)

    (d)   water analysis data (at six months interval)

    (e)   Percentage of area that allow water percolation i.e. Total area – (Buildings area + Area under Roads

(VI) Green plants: (Action Sub-Group-2)
- Number of plants
- Plant species
- Plant height
- Girth diameter

(VII) Use of renewable energy devices   (Action sub-Group-3)
- SPV power system
- Standalone SPV Street lighting
- Solar water heaters

(VIII)Air analysis data (Every six months interval) (Action EAM Cell)

- PM_{10}
- $PM_{2.5}$
- O3
- SOx
- NOx
- Pb
- As
- Ni
- CO
- C6H6
- BaP
- NH3

(IX)   Other important parameters   (Action Estate organization)

- No. of Batteries
- No. of Computers
- No. of AC(s) with their capacity
- No. of CFL
- No. of Incandescent Lamps
- No. of Toilets

Annexure 7.3

Ref No: CUPB/CC/15/Notification/24   Dated: 05-8-2015

<u>**NOTIFICATION No 24**</u>

Approval of the Competent Authority is hereby conveyed for the constitution of various groups under the aegis of **Environment Auditing and Monitoring Cell** and also for reconstitution of **Environment Groups** as detailed hereunder:

CORE GROUP: ENVIRONMENT AWARENESS CLUB:

- Chairman   **:** Prof. R. K. Kohli, Vice Chancellor, CUPB
- Coordinator(s)   **:** Prof. A. K. Jain, Dean, SEES
                            : Prof. R. C. Sharma, COC, Centre for EVST
- Organizing Coordinator **:** Dr. Sunil Mittal, Assistant Professor, Centre for EVST

Environment Auditing and Monitoring Cell
1. Dr. J. Nagendra Babu, Assistant Professor
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3. Dr. Yogalakshmi K.N., Assistant Professor
4. Dr. Dhanya M.S., Assistant Professor
5. Dr. Puneeta Pandey, Assistant Professor
6. Mr. Rajinder Singh Smagh, Liaison Officer
7. Prof. R.C. Sharma, Professor - Convener

   ➢ **Sub Group -1: Waste and e-Waste Management Group:**
   - Dr. Yogalakshmi K.N., Assistant Professor
   - Dr. Shireesh Pal, Assistant Professor
   - Ms. Shweta Arora, Deputy Registrar
   - Students 2-3
   - Dr. Dhanya M.S., Assistant Professor - Convener

   ➢ **Sub Group-2: Green campus group:**
   - Dr. Sanjeev Kumar, Assistant Professor
   - Dr. Harish Chander, Assistant Professor
   - Mr. Sweet Singh, Campus Manager
   - Students:
     1. Ms. Sapna Thakur
     2. Ms. Shruti Chaudhri
   - Dr. Pankaj Bhardwaj, Assistant Professor - Convener

   ➢ **Sub Group-3: Renewable Energy Group:**
   - Dr. Sunil Mittal, Assistant Professor
   - Dr. Deepak Kumar, Assistant Professor

- Er. Daljit Singh, Executive Engineer
- Er. Puneet, Assistant Engineer
- Students:
    1. Mr. Gajender Singh
    2. Mr. Ravinder Kumar
- Dr. A.K. Jain, Dean, SEES - Convener

> **Sub Group-4: Green Building Policy**
- Dr. Tarun Arora, Associate Professor
- Er. Daljit Singh, Executive Engineer
- Er. Puneet, Assistant Engineer
- Students:
    1. Mr. Ravishankar
    2. One more student
- Dr. Puneeta Pandey, Assistant Professor – Convener

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