Central University of Punjab

पंजाब केंद्रीय विश्वविद्यालय

CENTRAL UNIVERSITY OF PUNJAB

VOLUME-I

SWOC Analysis, Executive Summary and Profile of the University

CONTENTS

PREAMBLE

The Central University of Punjab, Bathinda (CUPB) was established in 2009 along with 12 other Central Universities by an Act of Parliament (No 25, of 2009). The university has a mission of providing wide range of instructional and research facilities across integrated and cross-disciplines, promote innovation in teaching, learning and research, and cross-pollinate new ideas, new technologies and new world-views. It aims to create an ignited workforce responsive to regional, national and global needs in tune with the requirements of academia, industry and business.

The university started in a three-room Camp Office provided by the state administration in March 2009. Making a modest but speedy start, the university accepted on rent, a dilapidated campus of 37 acres of an abandoned co-operative spinning mill on Mansa Road, Bathinda. It had a tin-roofed factory-hall and a small administrative building. These structures were renovated and made operational. It is from this campus that CUPB has been working and progressing. The university has established a Central Instrumentation Laboratory, Computer Centre and the University Library to provide high end facilities to its faculty and students. Air-conditioned lecture rooms, well-equipped science laboratories, a 90-seater seminar hall and a 250-seater air-conditioned auditorium support the academic activities.

Simultaneously, the arduous task of selecting enough contiguous land for its campus was undertaken. The Punjab State Government purchased 500 acre of land in Ghudda village and got it registered as a site for the new university campus. Adopting prescribed procedures, a 9 km wall was constructed followed by tendering for hiring the services of architect, Project Management Institutions and the contractors. Mandatory approvals of master plan, building plans, associated environmental clearances and also approval from departments of forests, roads, airport authorities and several others have been obtained and the First Phase of the building is under construction. The Foundation Stone of the campus was laid by the Hon'ble Union Minister of Human Resource Development, Smt. Smriti Zubin Irani and the Hon'ble Chief Minister of Punjab, Sardar Parkash Singh Badal on 7th September, 2015. The new campus is scheduled to be completed and become operational within a period of 18 months. The campus is designed to be environment friendly and energy efficient conforming to GREHA-IV norms, perhaps the first such instance in the area. Over 20,000 (mostly indigenous) trees of 85 species were planted by the CUPB students, faculty and staff this monsoon.

The UGC authorized every new Central University to run 20 centres of its choice depending on the need of the area. Each centre was allowed positions of 1 Professor, 2 Associate Professors and 4 Assistant Professors. Currently, CUPB has 19 centres spread over 9 schools in areas ranging from Sciences, Technology, Humanities, Laws and Social Sciences. We have adopted national model curricula wherever available and supplemented it with the local, national and global issues.

CUPB offers only Masters, M.Phil. and Ph.D. programmes. It started with the first batch of 10 students in 4 programmes in August 2009 and now has 904 students in 71 academic programmes. It is a validation of university's growing credibility among the students that during the year 2015-16, a total of 6747 candidates opted for CUPB in CUCET or applied directly. Out of these, 513 students were offered admission making the average demand ratio of 1:13. For Ph.D. programmes there were 442 applicants for 19 fellowships making the demand ratio of 1:23.

Besides celebrating international and national commemorative days, students are encouraged to organize annual sports and cultural events during the Foundation Week in February every year. Every Saturday, the Visual Arts Club organizes a movie show screening documentaries and films on arts, social issues, environment, sports and research followed by group discussion. CUPB is committed to the social cause of not only the region, but the whole nation and actively participates in events like "Swachh Bharat Abhiyan". To cater to the financial need of students, the university provides scholarships and interest-free loans out of the Students Welfare Fund and has also implemented Earn-While-You-Learn scheme.

In spite of the locational disadvantage, CUPB in true sense is a multi-cultural mini-India as it supports students from 25 states, faculty from 14 states and non-teaching staff from 9 states. The university takes pride in its exceptionally qualified and committed faculty of 84 teachers. All Assistant Professors (except two in Computer Science and Technology) have a doctoral degree and are NET qualified. It is remarkable that 38 members of the present faculty have made a total of 105 visits abroad for training/research/conferences etc. Twenty faculty members have been abroad for more than one year, while nine have spent between 5 to 17 years at prestigious foreign universities. The faculty has 84 research projects worth Rs.1376.19 lacs, perhaps the highest per capita funding in any university in India.

In March 2015, the university completed six years of its inception and became eligible to apply for NAAC accreditation. This comprehensive report is an outcome of the untiring efforts of the Internal Quality Assurance Cell that has put together several drafts of the report after intensive research and data collection with multiple sets of revisions and additions along the way. Different centres have also played a role in the preparation of centre-wise evaluative reports. I express my deep sense of gratitude to all the contributors for extending whole hearted support in bringing out this report.

On various research parameters, CUPB ranks at number 1 among the 13 central universities established in 2009. With a much focussed approach, the university is undoubtedly poised to write a new chapter on the academic horizon of India.

Professor R. K. Kohli, Ph.D.   Date: 09:10:2015
FNA., FASc., FNASc., FNAAS, FNESA, FBS   Place: Bathinda
JC Bose Fellow
Vice Chancellor

THE NAAC STEERING TEAM OF CUPB

It is a matter of fortune and pride to be associated with CUPB's NAAC steering team and compile this Self Study Report.

The core team for compilation of Criteria-wise Analytical Report included Professor S. K. Bawa and one faculty member for each of the seven components: Dr. Ramanpreet Kaur (Criteria I), Dr. Monisha Dhiman (Criteria II), Dr.Vikas Jaitak (Criteria III), Dr.Yogalaxmi K.N. (Criteria IV), Dr. Sanjeev Thakur (Criteria V), Dr. Puneet Pathak (Criteria VI) and Dr. Sandeep Kaur (Criteria VII).

Faculty members from all the nineteen centres of the university were associated for compilation of their respective Evaluative Reports: Centre for Animal Sciences (Dr. Anil K. Mantha), Centre for Plant Sciences (Dr. Sanjeev Kumar), Centre for Biochemistry and Microbial Sciences (Professor R.G. Saini), Centre for Chemical Sciences (Dr. Vinod Kumar, Dr. Rakesh Kumar), Centre for Pharmaceutical Sciences and Natural Products (Dr. Vikas Jaitak), Centre for Computational Sciences (Dr. Kousik Giri), Centre for Physical Sciences (Dr. Achchhe Lal Sharma), Centre for Mathematics and Statistics (Dr. Sachin Kumar), Centre for Genetic Diseases and Molecular Medicine (Dr. Monisha Dhiman), Centre for Human Genetics (Dr. Preeti Khetarpal), Centre for Environmental Science and Technology (Dr. Yogalakshmi, K. N.), Centre for Geography and Geology (Dr. Kiran Singh), Centre for Computer Science and Technology (Er. Navjot Sidhu), Centre for South and Central Asian Studies (Dr. Nishtha Kaushiki), Centre for Law (Dr. Puneet Pathak), Centre for Economic Studies (Dr. P.K. Mishra, Dr. Sandeep Kaur, Dr. Naresh Singla), Centre for Sociology (Dr. Bawa Singh), Centre for Classical and Modern Languages (Dr. Ramanpreet Kaur), Centre for Comparative Literature (Dr. Amandeep Singh), Centre for Education (Professor S. K. Bawa, Dr. Shamshir Dhillon).

The NAAC steering team also included students from different disciplines, namely, Bibekanand, Anamika, Gaurav, Jimi, Husain, Richa, Shweta, Mandeep, Barjinder, Sheenam, Pavneet, Gursewak, Ramit, Jaskaran, Marut, Brijesh, Harmeet, Neha, Hilal and Kovid.

Once the report was compiled, the NAAC steering team made power point presentations of the whole document to the open house for review, which continued for two weeks. Professor R. K. Kohli, Vice Chancellor CUPB, participated in the presentations all through. Professor P. Ramarao, Professor R. G. Saini, Professor A.K. Jain, Dr. Sunil Mittal, Dr. Anil Mantha, Dr. Sandeep Singh and Dr. Sanjeev Thakur made critical inputs. Each point in the report was discussed for accuracy. This exercise helped in adding many new points and corrected many others.

The document was revised after the open house review and then e-mailed to all the members of the faculty for suggestions, which were then incorporated.

For further refinements, NAAC steering team proposed creation of a "peer review team", whereby all the original members stayed out and the new team took over to review the document. Professor S. K. Bawa was the chairperson of the peer review team and it included Professor P. Ramarao and Professor R.G. Saini for Volume I; Dr. Anjana Munshi, Dr. Felix Bast, Dr. Sandeep Singh, Dr. Raj Kumar, Dr. Preeti Khetarpal, Dr. Amandeep Brar and Dr. S. Dhanya for Volume II and Dr. Nagendra Babu, Dr. Pankaj Bhardwaj, Dr. Puneeta Pandey, Dr.Vikas Jaitak, Dr. Alpna Saini, Dr. Amandeep Brar and Er. Meenakshi Mittal for Volume III.

The arduous task has taken several months to reach its final shape. This being the first NAAC cycle of CUPB, there was no base document and each detail incorporated here had to be collected, verified and compiled *de novo*. First draft of this report, which was put up in July 2015, was followed by multiple sets of revisions and refinements to evolve into the present document. This compilation *per se* apart, the participatory process adopted in its evolution, would certainly make an example for others to follow.

Contributions made by Professor R. K. Kohli, Vice Chancellor CUPB and Professor S. K. Bawa need a special mention as they read and edited almost every page of the report. Professor P. Ramarao and Professor R. G. Saini too made significant intellectual inputs. Ms. Shweta Arora and Mr. Nivedan Salwan provided all the necessary administrative support and also read the document. Dr. Neetu Purohit and Ms Poonam Rani worked in the NAAC Cell with a great sense of responsibility, full time- indeed over time.

Considering the importance of academic audits in the present scenario, it has been a great experience and opportunity to lead this team and compile the first Self Study Report of the Central University of Punjab. Undoubtedly, it has made us understand our strengths and also the areas where we need to focus in future.

Professor Ashok Dhawan   Date: 09:10:2015
Director IQAC   Place: Bathinda

SWOC ANALYSIS

The Central University of Punjab is on a rapid path of expansion and academic excellence. In the academic session 2015-16, the number of students has increased from 436 in the previous year to 904 (***Fig. 1***); the faculty increased from 52 to 84 (***Fig. 2; Annexure 1***) and the number of academic programmes being run at the university increased from 25 to 71 (***Fig. 3***). Also, the 13 centres existing last year were reorganized and some new were created, thereby, taking the number to 19 *(**Annexure 2**).* Though the non-teaching staff increased from 59 to 69 only (***Fig. 4; Annexure 3***), the approval of Cadre Recruitment Rules will soon enhance the process of recruitment of non-teaching staff. Not only the numbers have been increasing, but also there has been a qualitative enhancement in the faculty and the programmes. Transparent and stringent procedures and policies have been put in place to ensure quality.
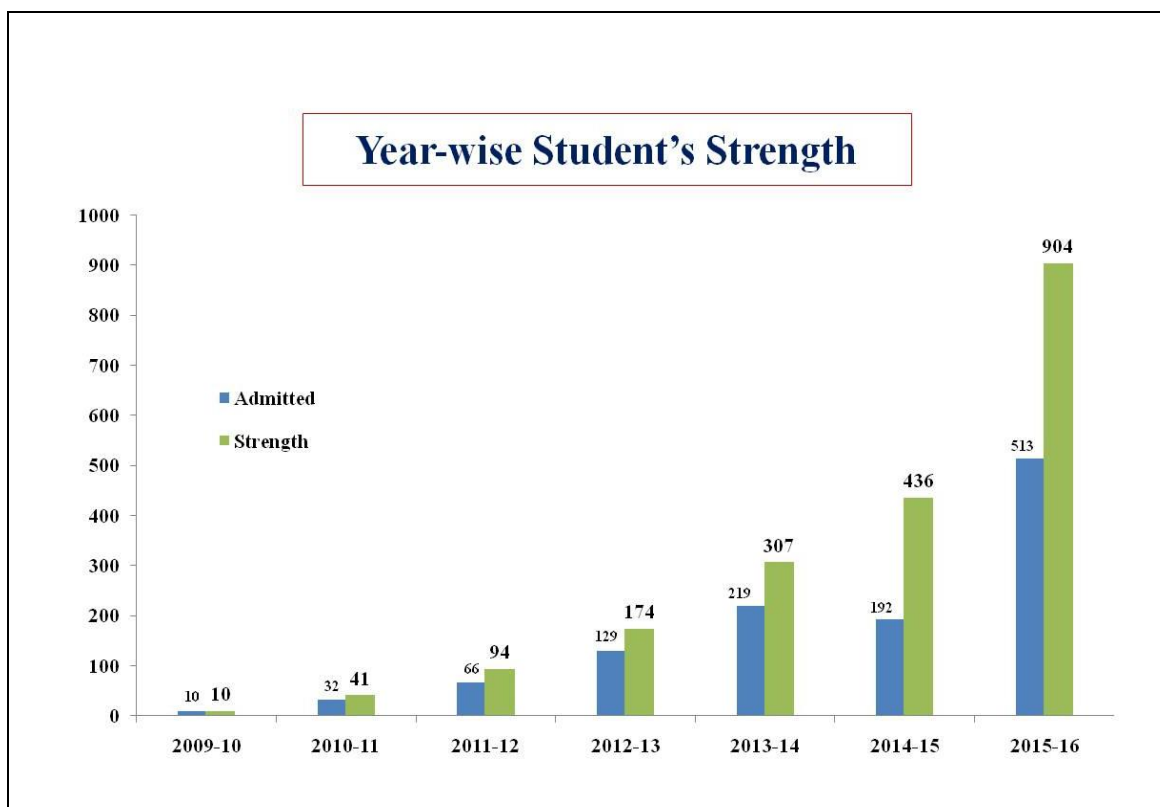
Fig. 1: Number of students admitted and total student's strength in CUPB over the years 2009 to 2015
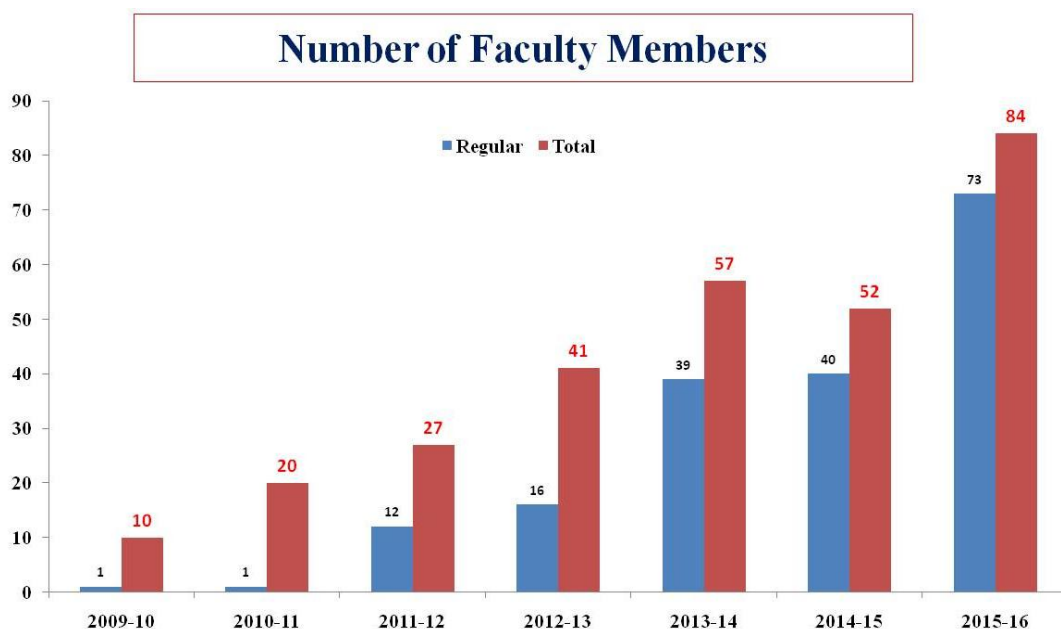
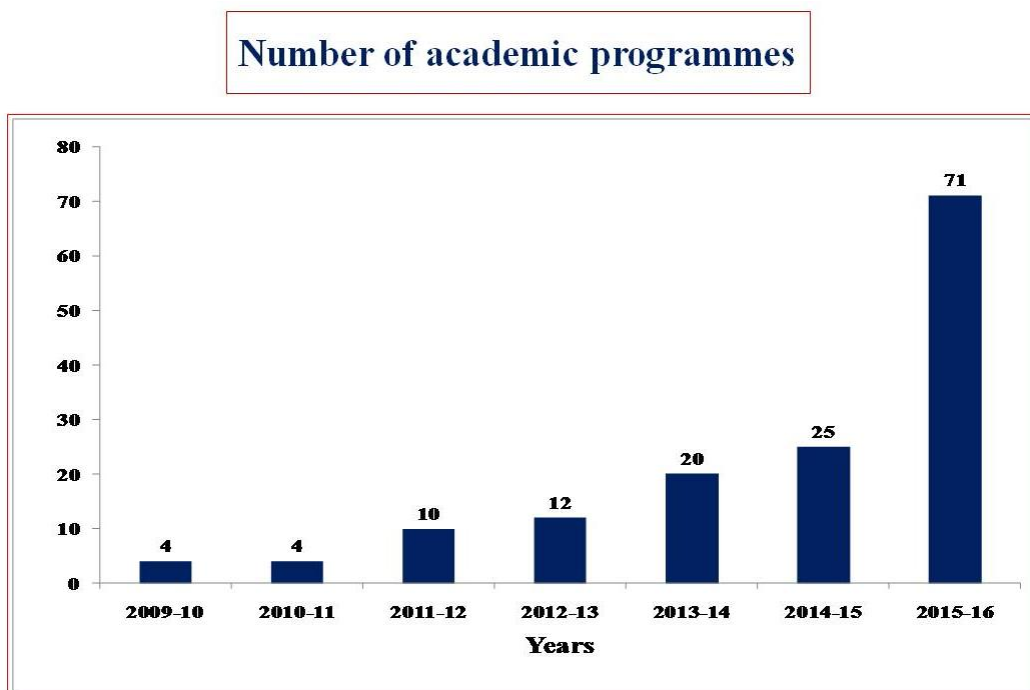**Fig. 2: Faculty strength at CUPB over the years 2009 to 2015**

Number of academic programmes

Fig. 3: Number of academic programmes offered at CUPB
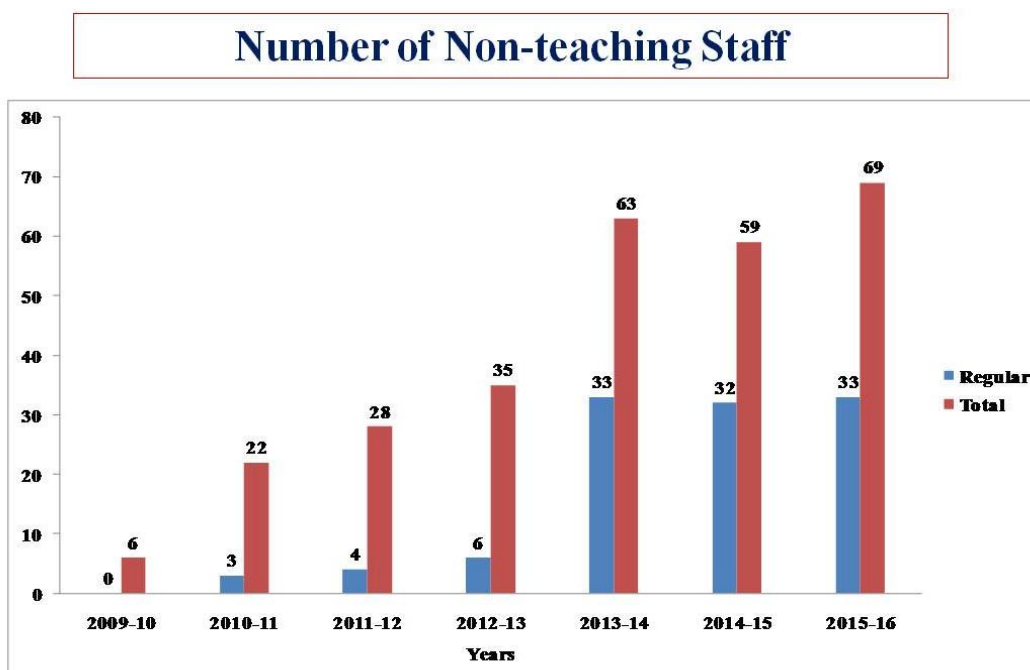
Number of Non-teaching Staff

Fig. 4: Number of non-teaching employees at CUPB

(A) Strengths

1. ***An exceptionally qualified and committed faculty:*** CUPB's biggest strength is the faculty consisting of 8 Professors, 9 Associate Professors, 65 Assistant Professors, 1 DST INSPIRE fellow and 1 Ramalingaswami DBT Re-entry fellow. In addition, 8 Visiting Professors and 1 Adjunct Professor add value to teaching and research in the university. That the CUPB faculty is a pool of talent is amply clear from the following:

   - The faculty represents 14 states of India – 59% have degrees from other states and 3% from abroad. All Assistant Professors, except a few in engineering, have both Ph.D. and NET and are from reputed national/international laboratories.

   - CUPB faculty has rich exposure and experience abroad. As many as 38 members of the faculty have made a total of 105 visits abroad for training/research/conferences etc. (***Annexure 4***). Out of these, 20 faculty members have been abroad for more than one year and 9 have spent between 5 to 17 years at prestigious foreign universities.

   - The faculty of CUPB has to its credit 1374 papers in impact factor journals, 823 papers in indexed journals, 56 books, 44 edited books, 14 monographs and 291 book chapters. Cumulative citation index of the faculty is 25695 and average h-index is 5.77. The faculty of CUPB have presented over 1000 papers in national/international conferences.

   - The faculty has 48 research papers in journals with impact factor between 8.0 to 31.5; 218 with impact factor of 4.0 to 8.0 and 489 with impact factor of 2.0 to 4.0.

   - Members of CUPB faculty are working on the editorial boards of, as many as, 44 national and international journals.

   - At this young age, CUPB has in operation 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. (***Fig. 5***)

   - It is a matter of pride that on various research parameters such as relative *h*-index, relative research papers citation and relative ranking RG score (***Figs. 6 and 7***); CUPB has surpassed all the 13 central universities established in 2009 and is ranked at no 1.

2. ***Library is a huge strength of CUPB***: Fully equipped and air-conditioned University Library has 25070 book titles, 9105 e-journals and full text resources, including 'UGC INFONET' programme, Science Direct, Springer, J-STOR, Wiley-Blackwell, SAGE, Taylor and Francis, Project Muse, Science Online, IEEE/IEL online, ACS, Cambridge University press, Oxford, Indiasat.com and PROWESS **(Fig. 8).** Further, it provides access to periodical collections of 22 university libraries in India through JCCC UGC-INFONET. The library has its entire bibliographic collection as online electronic database (OPAC). Radio Frequency Identification (RFID), Electromagnetic Security (EM) systems and 20 CCTV cameras provide security.

3. ***Excellent facilities for 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 university has established a Central Instrumentation Laboratory to provide high end facilities to its faculty and students. It is to the credit of CUPB that its facilities are regularly used by researchers from established universities of the region such as GNDU, Amritsar and PU Chandigarh. The major equipment available in CUPB are:

   Analytical equipment: 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.

   Microscopic equipment: 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 equipment: 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, Cold Store, Rota Evaporators, Air Samplers, Bomb Calorimeter, Shaker Incubators, BOD Incubators, Rotary Evaporator (Ilmvac), Accelerated Solvent Extractor, Biosafety Cabinet,CO_2 Incubators, Fermenter, Vacuum Concentrator.
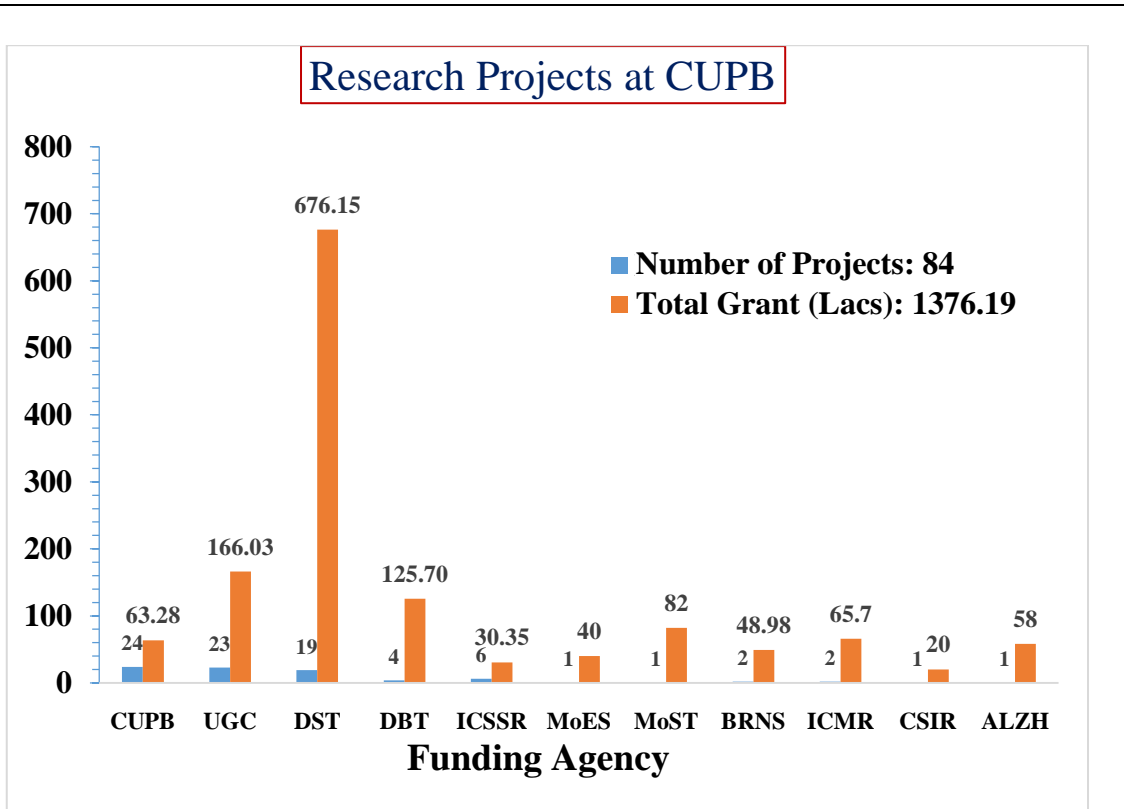
Fig. 5: Research projects in operation at CUPB

Fig. 6: Relative *h*-index of new central universities

Fig. 7: Relative research paper citations of new central universities

Fig. 8: Cumulative stock in the University Library
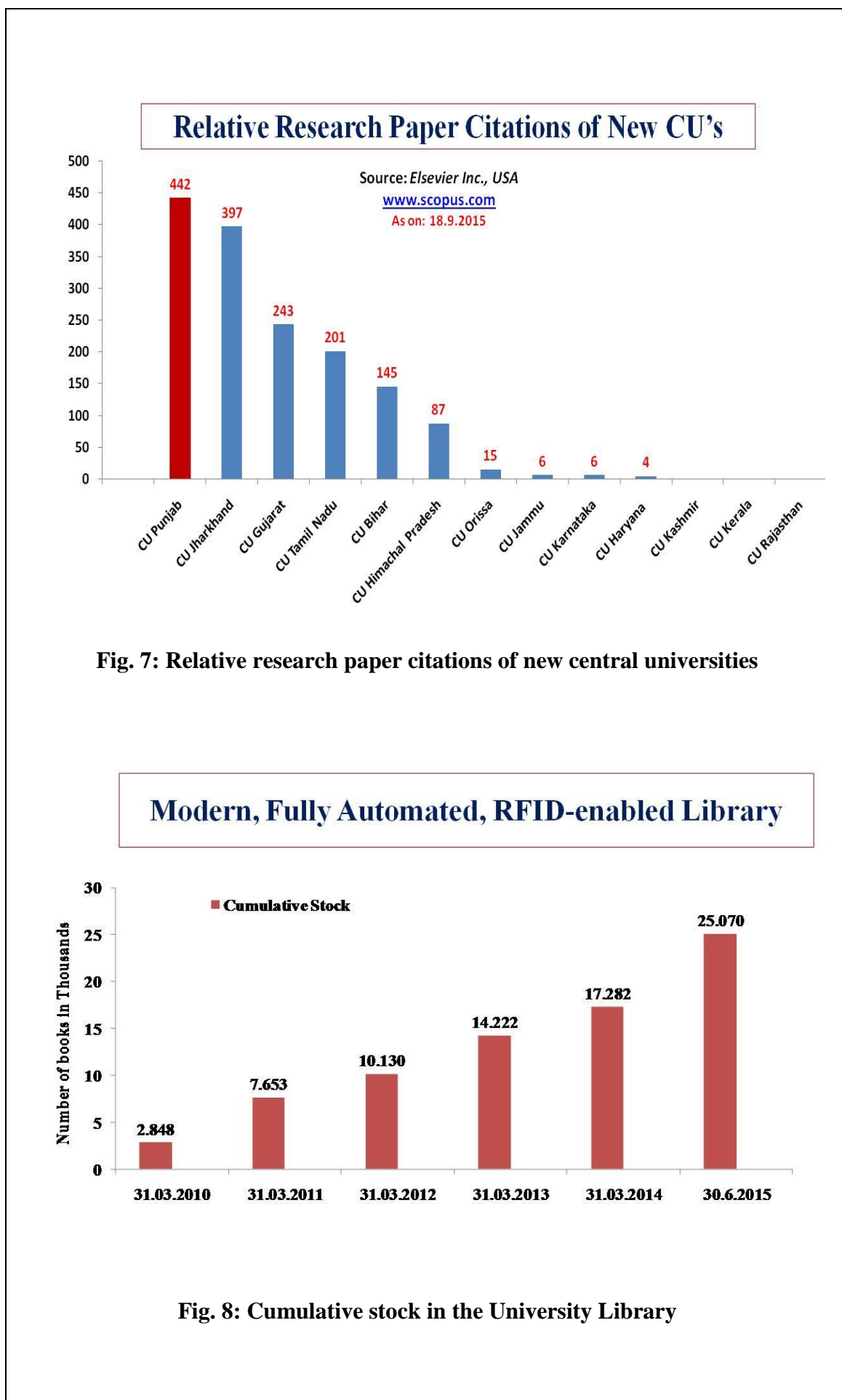
Research support facilities: Research support facilities include uninterrupted power supply, IT facilities, Common Instrumentation Laboratory, experimental area for field research, Plant Growth Chamber, Animal Cell Culture facility, Plant Tissue Culture facility, Screen House, Green House, Walk in Cold Rooms and Water purification System.

CUPB has state-of-art facilities for research and training of students in the areas of Biological Sciences, Chemical and Pharmaceutical Sciences, Environmental Sciences, Human Genetics, Molecular Medicine and Computer Science and Technology.

4. *The IT infrastructure:* The university has a modern computer centre with latest configuration workstations (Dell®) featuring all recent processors. CUPB 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. The entire campus is Wi-Fi enabled.

5. *Robust and transparent systems:* CUPB's basic strength to achieve all of the above lies in its clearly laid out policies, robust systems and commitment to a transparent functioning. There is a complete transparency at each step in every system including admissions, examinations and recruitments:

    (a)   Advertisements for recruitments and admissions are given to 94 leading regional and national newspapers through Directorate of Advertising and Visual Publicity (DAVP), Ministry of Information and Broadcasting.

    (b)   Admissions to Master degree programmes are done solely on the basis of score in Central Universities Common Entrance Test (CUCET). For admission to Ph.D. a candidate has to be NET qualified or selected in one of the CUPB's externally funded projects. The counselling sessions are video graphed.

    (c)   For faculty appointments, the screening criteria and score of candidates are displayed on CUPB web site, comments of the candidates are invited and any issues raised are addressed before interviews are conducted. Names of selected candidates are displayed on web site prior to joining of the candidates. Feedback of the candidates is taken after the interview to ensure that they are satisfied with the process.

    (d)   Open house meeting of the Vice Chancellor with faculty, non-teaching staff and students every month has been a practice. Issues raised in the meetings are recorded and addressed.

It is a testimony to the fairness of procedures that nearly 513 students were admitted this year out of 6743 applicants and 36 faculty and senior administrative appointments were made out of nearly 2000 applications, with no complaints or court cases.

6. ***A vibrant student's community:*** The 19 centres of the university run Master's, M. Phil. and Ph.D. programmes. Having come through an intense competition, CUPB has a talented community of students. A total of 194 students of CUPB are qualified in national level competitive examinations, some have cleared more than one examination making the total number to 212. (***Fig. 9***). CUPB students have joined world class universities such as Yale University, Oxford University, University of Kent and University of Lund.

Students who have qualified National Level Competitive Examination
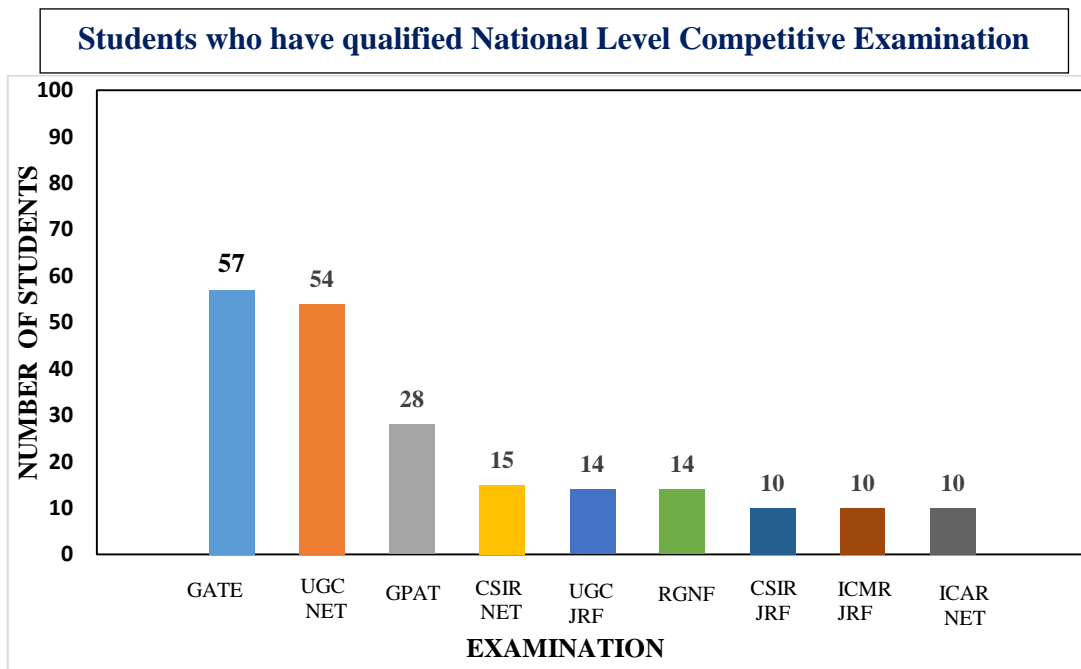
Fig 9: Number of students at CUPB who have qualified national level competitive examinations

7. ***Sound financial health:*** Being a central university, there are sufficient funds for teaching and research. In addition, CUPB has been generating resources through externally funded projects, grants for community college, B. Voc. programmes and other nationally funded programmes.

(B) Weaknesses

1. ***The locational disadvantage*:** CUPB has a strong locational disadvantage. The city of Bathinda is located in a backward region of Punjab and does not have good connectivity through air or by train. In recent years, many cancer cases have been reported in Bathinda district and it is referred to as 'Cancer belt of India' in leading tabloids and media. This adverse publicity becomes an obstacle in talent hunt, as also, in inviting experts for lectures and meetings.

   Being in a remote area the supplies, particulars of sophisticated equipment and laboratory grade chemicals, are also a problem.

2. ***Limitations of space*:** The university does not have a campus of its own and is presently functioning from a rented building. It is significant that this abandoned and dilapidated building of Bathinda Cooperative Integrated Cotton Ginning and Spinning Mills has been converted into an active and high-achieving university. However, CUPB has expanded to the limits possible in the present campus and any further expansion has space constraints. It is a satisfaction that a 500 acre world class, GRIHA-4 compliant campus will become available in about 18 months.

3. ***Scarcity of senior faculty*:** Paucity of the senior faculty and senior statutory position holders such as librarian and finance officer, though largely due to non-portability of pension, results in lack of guidance to young faculty and delay in policy decisions.

4. ***The university is newly established:*** CUPB started to function in 2009. The systems, conventions and brand name associated with the age of the universities are still taking shape. Indeed, CUPB struggled to make a start and after the initial lag of 2-3 years, policies to achieve peak performance have been put in place only recently.

(C) Opportunities

1. *Contributing to education of a backward area:* Developing this top class university in a backward region of Punjab is an important opportunity for CUPB to contribute tangibly to education in the region.

2. *Immense possibilities of work in the areas of environment and human health:* Being in the cancer belt, the faculty in the areas of Environmental Science and Technology, Life Sciences, Pharmaceutical Sciences and Health Sciences have opportunities to carry out research of direct relevance to regional needs.

3. *Opportunity to become a major learning centre of the region:* Since there is no established university in the Malwa region, CUPB has a great opportunity to become a major regional centre of learning. There are five other private universities in the area, but these are all new and none of these have systems and faculty comparable to CUPB in anyway.

4. *The only central university in Punjab:* There is no other central university in Punjab and hence there is no competition for availing grants and schemes available to central universities. This is an important opportunity for CUPB.

(D) Challenges

1. ***Accomplishing construction of a 500 acre campus****:* The development work of CUPB's main Campus, coming up over an area of 500 acres at village Ghuddha 22 km away from the city of Bathinda, is a big challenge (***Fig. 10***). This has however gained momentum. The master plan has been approved by the Building Advisory Committee and subsequently by Punjab Urban Development Authority. The present status is:

   - A 9.5 km long boundary wall has been completed after resolving all issues of ownership and possession of land.

   - Construction for the first phase has started. An expenditure of Rs 136 crores and 78 crores has been approved for phase I-A and I-B. Consent to Establishment (CTE) of Phase I-A of the campus from PPCB has been obtained. The work of phase I-A has to be completed in a period of 18 months.

   - PMC for construction has been given to Engineers India Ltd. Architect consultant M/s Pardeep Sachdeva Development Associates and contractor M/s KSM Bashir and sons have been assigned the job of construction.

   - Ground Breaking ceremony was performed on the August 17, 2015 by the Chief Minister of Punjab. Hon'ble minister for HRD laid foundation stone of the campus on September 7, 2015.
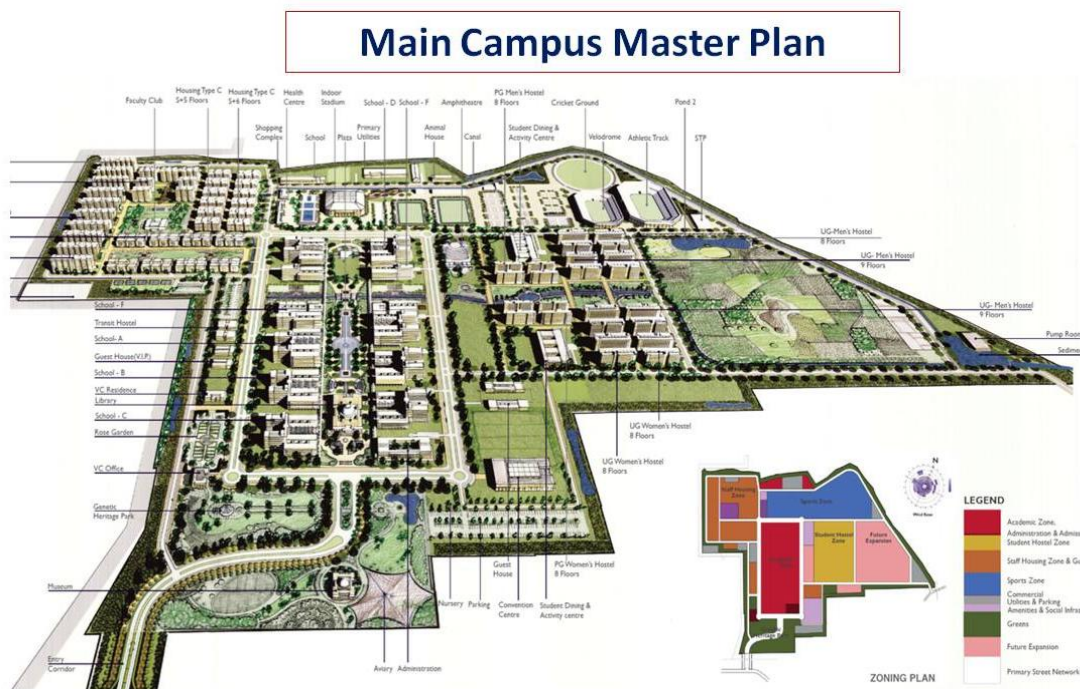
Fig. 10: Master plan of new campus of CUPB

2. ***Establishing the 74 Centres of Study:*** The academic expansion plans of CUPB are very ambitious and challenging. The university plans to have 12 schools with 74 centres (***Fig. 11***) from the present level of 9 schools and 19 centres. To accomplish this level of expansion is indeed a great challenge.
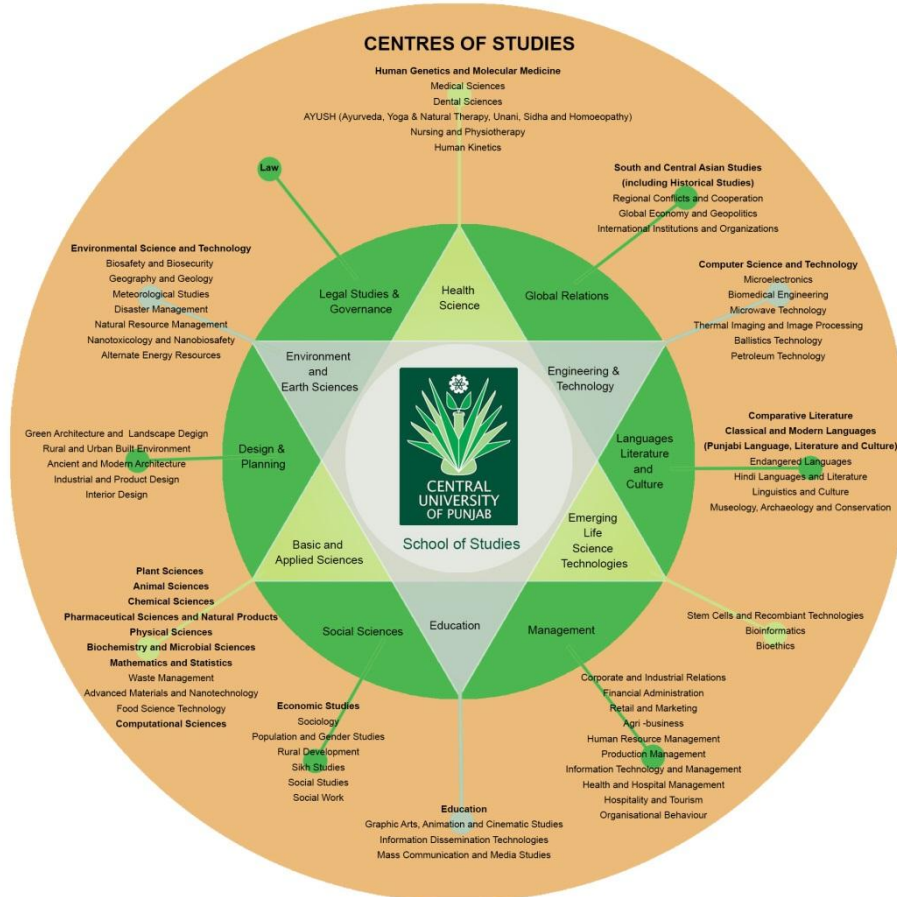
Fig. 11: Master plan of proposed schools and centres of CUPB

3. ***The challenge of meeting needs of demanding students:*** CUPB has a vast reservoir of knowledge to be disseminated to the vibrant student community. With spectacular results in the competitive examinations ***Fig. 9*** and wholehearted participation in the extracurricular and social outreach programmes, the students of CUPB have emerged as crusaders of new India. Making of these young men and women into leaders of tomorrow and engaging them usefully with global development processes, is a huge challenge, which CUPB likes to meet.

4. ***Recruitment of high calibre faculty:*** CUPB has a large number of applicants for Assistant Professor level positions, but not many for higher levels. Filling the faculty positions is a challenge, particularly because CUPB values human resource and makes no compromise on the quality.

5. ***Challenge of shifting to the new campus:*** Once the new campus is ready, the whole university will have to be transported to the new location. The present campus has been planned thoughtfully: most of the furniture is modular type and many structures are portable. However, most equipment will have to be reinstalled and shifting an infrastructure that CUPB has attained is a challenge ahead.

EXECUTIVE SUMMARY

CRITERION-I: CURRICULAR ASPECTS

1.1 Curriculum Design and Development

The Central University of Punjab has a vision to attain global standards of teaching, learning and research and its mission is to create a skilled workforce responsive to regional, national and global needs. The curriculum is designed to meet these needs.

Curriculum is aligned to the Vision and Mission of CUPB: The curriculum design and development at CUPB is aligned with the vision and mission of the university as below:

- CUPB has designed many unique interdisciplinary programmes to cross-pollinate the new ideas and new technologies.

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

- 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.

The process of curriculum design and development: CUPB follows a systematic process in the design and development of the curriculum. The programmes are designed on the basis of academic, national and international needs and are in line with the guidelines of the relevant regulatory bodies like UGC, CSIR, AICTE, BCI, PCI, NCTE etc. The National Model Curriculum of UGC is also kept in mind.

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

Need assessment and proposal by Curriculum Development Committee of the centre is followed by recommendations of the Academic and Administrative Committee of centre and discussions in Board of Studies and School Boards.

The curriculum is approved by the Academic Council and sent to Executive Council for ratification and Visitor for information.

Employability is an important criterion in curriculum design: University designs the curriculum from the point of view of the employability of the students and response of the employers. Many previous courses/programmes have been renamed or changed with altered content, to make these more acceptable to the employers. 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.

University has advisory bodies from corporate sector: The university interacts with industry experts in the curriculum revision process. CUPB has constituted two advisory bodies: the University-Industry Council and University-Industry Forum for the purpose. Input from corporate bodies helped to include their ideas in the curriculum of many courses.

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 have been implemented from the academic session 2015-16.

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 university has registered for the Massive Open Online Courses (MOOC), as per MHRD guidelines. Thirty faculty members from CUPB have been identified as experts for developing the MOOC programme in their respective areas.

1.3   Curriculum Enrichment

The centres review the curriculum frequently and update it in order to maintain social relevance and employability.

CUPB has started short term value added courses of direct relevance to current social needs. 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.

- CUPB has received UGC grants for the following B.Voc. Programmes to begin from next academic session:

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

1.4 Feedback System

Apart from the feedback of students, faculty and industries, CUPB tries to update curriculum and ensure quality by various means. 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 Prof R. Chibbar from University of Saskatchewan during his visit to CUPB.

CRITERION II – TEACHING LEARNING AND EVALUATION

2.1 Student Enrolment and Profile

Transparency in 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.

(ii) Admissions are through Central Universities Common Entrance Test (CUCET), which further promotes wide publicity and transparency in the process. Admissions to Master's degree programmes are based solely on the score obtained in CUCET.

(iii) 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.

It is the testimony of a robust admission process that for the academic year 2015-16, CUPB admitted 513 students to various programmes out of 6747 applicants without any complaint.

2.2   Catering to Diverse Needs of Students

The students admitted in CUPB represent 25 different states of India. 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 personal, cultural and language backgrounds and socio-economic statuses. Therefore, teachers take diversity into consideration and efforts are made to satisfy the needs of the students from diverse backgrounds including less privileged communities.

The university has a "Students Counselling Cell" and "SC/ST/OBC and Minorities Cell". These two cells identify and address the needs of different groups of students admitted in the university.

2.3   Teaching-Learning Process

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.

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

Evaluation blue print: Continuous Internal Assessment includes surprise test of 25% weightage, two pre-announced tests of 25% weightage each and an end semester examination of 25% weightage.

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

Learning is student centric: 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.

Eminent external experts: The university has already appointed eight Visiting Professors and one Adjunct Professor 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.

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 far as possible.

24x7 Learning: Library is open for 24 hours all working days. On Saturdays, Sundays and Gazetted holidays it opens from 9 am to 5.30 pm. The assignments and practical work included in the curriculum ensures that the students adhere to the habit of learning in 24 x 7 modes.

Programme advisors: 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 student's academic progress.

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.

Innovative teaching: Constant innovations in teaching are 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*". The programme is broadcasted live using A-VIEW software from the Indian Institute of Remote Sensing (IIRS), Dehradun.

Faculty adequately meets requirements of curriculum: The faculty is adequate to meet the requirements of curriculum. Of course, CUPB ensures capacity building wherever required.

A workshop on "Capacity Building of Higher Education Teachers on e-Content Development using Moodle" was organized on 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.

The list of faculty includes members who have received the following awards:

- Fellow, Indian National Science Academy
- Fellow of National Academy of Agricultural Sciences
- Fellow, Indian Academy of Sciences
- Fellow, National Academy of Sciences

- DST-INSPIRE Faculty Award
- DST Young Scientist award
- "Young Scientist Award" by Punjab Academy of Sciences at Punjab Science Congress
- Fellow, Punjab Academy of Sciences
- J C Bose National Fellow
- DS Kothari Post-Doctoral fellowship
- Presidents Inspired Teacher's recognition
- Ramalingaswamy Reentry fellows
- Ramanujan fellow

2.4 Evaluation Process and Reforms

With the introduction of objective type end semester examinations from academic session 2015-16, it is expected that the result will be available to the students within 3-5 days of final examination.

To speed-up the result declaration and to increase the accuracy and efficiency, the examination cell has developed in-house software "Automated Result Processing System" for result processing and printing of tabulation sheets and marks-sheets.

2.5 Student Performance and Learning Outcomes

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.

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

3.1 Promotion of Research

Research in front line areas is a core activity of CUPB and notable achievements have been made during the period 2009 to 2015. It is significant that CUPB has earned first rank among the 13 newly established central universities on the basis of Relative h-index, Research paper Citations and Impact points.

Research committees: CUPB has a well-structured system to promote and monitor high quality research. A university level "Research Advisory Committee" with external experts sets the guidelines of CUPB's research policies. An "Internal Research Committee" looks after the implementation of these policies and lays general guidelines.

Proactive mechanisms to promote research: 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 complete autonomy to PIs of the projects and gives them financial and administrative powers equal to CoCs.

Providing seed money: As per the decision of Executive Council, seed money of up to Rs 3.0 lacs (sciences) and 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.

Interdisciplinary research: The university promotes interdisciplinary research by encouraging the faculty to formulate proposals from among its different centres/faculties. 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, Plant Sciences, Biochemistry and Microbial Sciences, Education and Economic Studies.

Visiting professors of eminence: The university has a well laid policy for invited and visiting professors. 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.

Budget is earmarked for research: CUPB is committed to encourage research activities in its campus. The university uses 24 to 41% of its budget on research.

3.2   Resource Mobilization for Research

Many of the students in CUPB are getting fellowship from UGC, CSIR, 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.

Presently, 23 university funded and 60 externally funded research projects with a total outlay of 13.76 crores are in operation at CUPB.

3.3 Research Facilities

CUPB is known to be among the best equipped universities of the region. It is to the credit of CUPB that its facilities are regularly used by researchers from established universities of the region e.g. GNDU, Amritsar and PU Chandigarh for facilities in genomics chemistry and pharmacy. The details of research facilities have been included in SWOC analysis.

3.4 Research Publications and Awards

The university has introduced Research Awards to be given to faculty members securing grant of Rs. 1 crore or above, publishing paper in journals of impact factor more than 10 or have cumulative impact factor of papers published exceeding 15 in a calendar year. Also "CUPB Outstanding Research Award" is given on the basis of a well-defined scoring system.

3.5 Consultancy

CUPB has a clear policy for consultancy work by the faculty. Sharing of the consultancy charges between the university and the teacher is 60:40 where CUPB facilities have been used and 50:50, if no facilities of the university have been used.

3.6 Extension Activities and Institutional Social Responsibility (ISR)

The university plays a significant role in the social upliftment of this less developed region of Punjab. It has organized blood donation camps, world cancer day, computer literacy program for senior citizens, innovators days to motivate the local people and farmers in generating the novel innovative ideas and skill development training for youth, etc. In all these programmes, the teaching faculty and the students are involved and encouraged to meet their social responsibilities.

CUPB is a part of Unnat Bharat Abhiyana. The university is working on the health related issues of local population involving the testing of following parameters 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. The following five villages have been adopted: Ghudda, Badal, Daula, Multania, Pakka Kalan.

In a unique initiative, CUPB has developed MoUs with five local schools and colleges and has virtually adopted these for their upliftment.

In a unique venture university organises "Computer Literacy Programme" for senior citizens. In 6 batches, 49 senior citizens participated.

3.7   Collaboration

The university has signed Memorandum of Understanding (MoU) with University of Saskatchewan Canada**,** Institute of Himalayan Bioresource Technology (IHBT) Palampur, Punjab Agricultural University (PAU) Ludhiana, National Agri-Food Biotechnology Institute (NABI) Mohali, Baba Farid University of Health Sciences Faridkot, Centre for Research in Rural and Industrial Development, Chandigarh, Punjab Biotechnology Incubator, Mohali and Centre for Innovative and Applied Bioprocessing, Mohali. These MoUs help the university by the way of collaborative works:

- In the proposal for B.Voc. (Food Processing Technology), Punjab Biotechnology Incubator and Centre for Innovative and Applied Bioprocessing are CUPB's partners.

- Baba Farid University of Health Sciences is a partner in another B.Voc. proposal on Medical Techniques and Health Science

- In a proposal on climate change submitted to IDRC, Canada, the University of Saskatchewan is our partner organization.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1   Physical Facilities

The university has state of the art infrastructure facilities which include air conditioned class rooms with projectors, state of the art laboratories, library, computer centre, faculty rooms, play grounds, fitness centre, hostels for students, faculty transit housing and health centre.

High occupancy rates: 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 classrooms are fully engaged and have 100% occupancy rate.

Accessible infrastructure: Specially designed toilet facilities are provided for use by the disabled.

*Capacity of the hostel and occupancy***:** The university has nine hostels, five for boys and four for girls, with a total of 384 rooms. Ph.D. students are generally provided with single seater rooms.

Health services: The university has a health centre with a medical consultant, two full time nurses and a medical attendant. Health Centre provides OPD, indoor, emergency, referral and other services to employees and students. In emergency, services of nearby hospital including civil hospital are utilized.

The university medical panel includes 52 very reputed doctors to ensure health care for the students and faculty. The university owns a Winger High Roof ambulance to commute students and faculty in case of emergency.

Sports facilities: 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 the university conducts annual sports and athletic meet in the month of February to encourage sports activities.

4.2   Library as a Learning Resource

One of the best libraries in the region, the University Library has a large reading area with comfortable seating facility for over 212 users. It has 25070 print books and 9105 e-journals.

The library has Radio Frequency Identification (RFID) and Electro Magnetic Security System (EMSS) providing automated self-service facility. It is also equipped with an advanced Online Public Access Catalogue (OPAC), modern reprographic facilities and 20 CCTV cameras for surveillance.

CUPB has 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.

4.3   IT Infrastructure

CUPB has a comprehensive IT policy duly approved by the Executive Council of the university.

The university has well equipped and furnished computer centre, 511 computers, 10 high end workstations and 52 laptops. Computer-Student Ratio: 1:1.9. The computer centre arranges for live interactive audio video lectures through A-View software.

4.4   Maintenance of Campus Facilities

The university has an Estate office with an Executive Engineer, Assistant Engineer, Campus Manager and an Assistant Estate Supervisor. The electricians, plumbers, carpenters and gardeners are employed through outsourcing. The Estate office maintains classrooms, laboratories and other building area. 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.

CRITERION-V STUDENT SUPPORT AND PROGRESSION

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.

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. A student 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.

University Financial Assistance Scheme: 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.

CUPB grants 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. Financial assistance is given to the economically weaker students equal to tuition fee/hostel fee/half hostel fee.

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.

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.

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.

Wall magazine: 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.

Competitive Examination Cell: 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.

Many have joined world class universities and institutes (Yale University, Oxford University, University of Kent and University of Lund).

Placement cells: 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. These cells expose students to job opportunities, prepare them for group discussion and interview and develop entrepreneurial skills.

Central University Sexual Harassment Cell and Anti-Discrimination Cell: The CUPB community comprises of individuals from different regions, religions, caste affiliations, linguistic backgrounds and financial status. Therefore, discrimination based on caste/sex/appearance/state of domicile etc. is dealt with extreme seriousness.

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.

On top of all this, CUPB has a very active Human Rights Club, which organizes awareness about human rights.

Anti-Ragging Policy: The university has a zero tolerance policy towards ragging-related matters. CUPB emphasizes with the senior students that freshers are their siblings and future friends and must be treated with affection. In compliance with the directions of University Grants Commission, CUPB has constituted Anti-Ragging Committee, Anti Ragging Squad/Cell and Nodal Officer at Central University of Punjab for the year 2015-16.

University's corporate advisory bodies: There are two independent bodies to establish a link with industries relevant to CUPB's 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 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.

5.2   Student Progression

After the completion of the Sports-cum-athletic meet, the best athlete 'Male' and 'Female' is declared. **Best Sports Person** in students and faculty is also declared after analysing the overall participation and medals won by the individual.

University Museum: University Museum houses vast collection of archaeological exhibits, including that of Harappa 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.

Students Union: The students union has a President, a Vice President, a General Secretary and a Joint Secretary. They look after various extracurricular and co-curricular activities and also represent students problems.

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.

Representation of students in other bodies: The following bodies involve students:

- Academic and Administrative Committee: has one student of the centre.
- Board of Studies (BoS): has students as co-opted/invited members.
- Hostel Representatives: all are students.
- Mess Representatives: all are students.
- IQAC member: one student as full member.
- NAAC committee: seven students are members of NAAC steering team.
- Environment Audit and monitoring unit: full member.
- University tender process (Mess cum canteen Tender): members.
- Annual Report, Newsletter: student editor.

CRITERION-VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1   Institutional Vision and Leadership

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 is value oriented and futuristic in approach with special focus on quality of research and creation of knowledge.

Organization's management systems: 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, Building Advisory Committee and Financial Investment Advisory Committee are the statutory bodies of the university. The Coordinators of centres (CoCs) fulfil the leadership role for the concerned centre.

CUPB is highly democratized. As the chairperson of various statutory bodies, leadership of the Vice Chancellor ensures a smooth functioning of the university.

In Reinforcing a Culture of Excellence: CUPB leadership understands the importance of excellence in all its activities and emphasizes its value at all levels. 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. Apart from research awards for publications of high impact and major research grants, the university also has the Chancellor and Vice Chancellor's Medals for two students (one male and one female) from science and two students from humanities (one male and one female).

Promoting participation and encouraging leadership: 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 whole faculty as members. This committee carries out all the functions of the centre. Each centre has an independent budget to meet its needs.

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. The students union is a training ground for

students, where they learn the basic lessons of democratic functioning and value of dialogue.

6.2 Strategy Development and Deployment

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.

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 examination wing is headed by the Controller of Examinations supported by Assistant Registrar of examinations and the subordinate staff.

Autonomy and academic freedom are inbuilt in the university policies. The Academic and Administrative Committees in the centres are real pillars of CUPB's functioning. 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.

6.3 Faculty Empowerment Strategies

The Academic and Administrative Committees give real power to the faculty members. A separate budget for each centre further empowers the faculty. With respect to the projects under their charge, the PIs have the powers to function equal to CoCs. 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.

6.4   Financial Management and Resource Mobilization

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.

After the compilation of annual accounts by the university, 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. After audit, a separate Audit Report (SAR) is issued by the CAG of India. The printed annual accounts along with SAR 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.

6.5   Internal Quality Assurance System

Teaching learning process is continuously reviewed by Academic Audit and Monitoring Unit of CUPB. This unit carries out the following:

   a.   *Curriculum Audit*
   b.   *Academic Audit of Student's Assessment*
   c.   *Faculty Audit*

CRITERION-VII: INNOVATIONS AND BEST PRACTICES

7.1   Environment Consciousness

Bathinda has serious environmental issues due to presence of heavy metals in water and high usage of agrochemicals and is known to be a cancer prone district. Central University of Punjab has, therefore, put in sincere efforts to bring about environment awareness. An Environment Awareness Club with four subgroups as below functions to address the environment related issues.

(a)   Green Campus group: 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. Twenty bird nests have been placed on the campus to increase biodiversity.

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.

(b) *Renewable Energy Group:* The renewable energy group has carried out the work on installation of solar photovoltaic units, street lights, solar water heaters and wind mills.

The university has already installed two 5KW Solar-Wind Energy Hybrid Systems with subsidy from Ministry of New and Renewable Energy (MNRE). In addition, the Ministry of New and Renewable Energy (MNRE) has also approved 50% subsidy for the installation of 60 KW SPV Solar Roof Top System being commissioned through Punjab Energy Development Agency (PEDA).

During the year 2009-10, PEDA adjudged the Central University of Punjab as the second best government institution in energy conservation and gave an award for its "constant efforts in energy conservation".

(c) *Green Building Group:* 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 new campus will comply with GRIHA-IV rating norms.

(d) *Waste Management Group:* 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.

Two Sewage treatment plants (STP) installed in the campus for the treatment of sewerage waste using Fluidized Aerobic Bioreactor. The water regenerated will be used for landscaping and gardening. The stabilized sewage will be used as compost.

Hazardous waste management: Very little hazardous waste is generated, but university has an arrangement with Medicare Environment Management Agency for collecting biomedical waste.

Awareness programmes: 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*
- *Establishment of Genetic Heritage Park : September 9, 2011*

- *World Cancer Day: February 3, 2012*
- *Earth Day April 22, 2013*
- *International Biodiversity Day Celebration Lectures (May 22, 2013)*
- *The Chancellor releases book on Insects (September 10, 2013)*
- *International biodiversity day, 2014*
- *National workshop on Training the Trainers 2015*
- *Dr. J. S. Yadav Memorial Lecture 2015*
- *Earth Day on April 22, 2015*
- *International Day for Bio-Diversity 2015*
- *Tree Plantation Drive at New Campus 2015*
- *Akshay Urja Diwas 2015*
- *Invited lectures***:** Invited lectures by the eminent personalities in the area of Biodiversity, Environmental Science, Earth Sciences, Renewable Energy, etc.

7.2   Innovations

The very establishment of CUPB campus erecting portable and modular structures and 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.

7.3   Best Practices :

CUPB follows many innovative practices such as 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 Rights Group, Environment Auditing and Monitoring Cell, Automated Result Processing system.

Practice 1: Research Seed Money: 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 begin research by new faculty with least time gap.

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.

Practice 2: Automated Result Processing System: The examination cell has developed in-house, a software for result processing and printing of tabulation sheets and marks-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. Once the awards are fed in the system, coloured tabulation sheets and DMCs are ready immediately with 100% accuracy. The software also incorporates the security features like Q-R, BAR code and specialized seal of examination cell.

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 system has significantly reduced complaints and is cost effective.

PROFILE OF THE UNIVERSITY

1. Name and address of the University

Name:	Central University of Punjab	
Address:	City Campus, Mansa Road, Bathinda – 151 001	
City: Bathinda	Pin:151001	State: Punjab
Website:	www.cup.ac.in	

2. For communication

Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Vice Chancellor	Prof. R. K. Kohli	O:0164-2430586	98722-01516	0164-2864111	vc@cup.ac.in rkkohli45@yahoo.com
Registrar	Dr. Pankaj Khare	O:0164-2864106	98685-13505	0164-2864106	registrar@cup.ac.in pankajkhare@gmail.com
Director IQAC	Prof. A. K. Dhawan	O:0164-2864130	93547-60523	0164-2864130	dhawanashok@hotmail.com

3. Status of the University

State University	
State Private University	
Central University	✓
University under Section 3 of UGC (Deemed University)	
Institution of National Importance	
Any other (please specify)	

4. Type of University

Unitary	✓
Affiliating	

5. Source of funding

Central Government	✓
State Government	
Self-financing	
Any other (please specify)	

6. a. Date of establishment of the university:

28.02.2009

b. **Prior to the establishment of the university, was it a/an**

i.	PG Centre	Yes	No	✓
ii.	Affiliated College	Yes	No	✓
iii.	Constituent College	Yes	No	✓
iv.	Autonomous College	Yes	No	✓
v.	Any other (please specify)		………………	

If yes, give the date of establishment ……………………….. (dd/mm/yyyy)

7.   Date of recognition as a university by UGC or any other national agency:

	Under Section	**dd**	**mm**	**Yyyy**	**Remarks**
i.	2f of UGC*				
ii.	12B of UGC*				
iii.	3 of UGC#				
iv.	Central Universities Act No 25 of 2009^	15	01	2009	

* Enclose certificate of recognition.
# Enclose notification of MHRD and UGC for all courses/programmes/campus/campuses.
^ Enclose certificate of recognition by any other national agency/agencies, if any.

8.   Has the university been recognized

a. By UGC as a University with Potential for Excellence?

Yes ☐   No ✓

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

b. For its performance by any other governmental agency?

Yes ☐   No ✓

If yes, Name of the agency ……………………. and
date of recognition: ………………………….. (dd/mm/yyyy)

9. **Does the university have off-campus centres?**

Yes ☐ No ☑

If yes, Name of the establishment …………………… (dd/mm/yyyy)
date of recognition: ……………………………….. (dd/mm/yyyy)

10. **Does the university have off-shore campuses?**

Yes ☐ No ☑

If yes, Name of the establishment …………………… (dd/mm/yyyy)
date of recognition: ……………………………….. (dd/mm/yyyy)

11. **Location of the campus and area**

		Location*	Campus area in acres	Built up area in sq. mts
i.	**Main campus area**	Rural; Village Ghudda, Bathinda	500	Under Construction
ii.	**City Campus**	Urban, Bathinda	37	9368.62 sq. mts.
iii.	**Campuses abroad**	-	-	-

(* Urban, Semi-Urban, Rural, Tribal, Hilly Area, Any other (please specify)
If the university has more than one campus, it may submit a consolidated self-study report reflecting the activities of all the campuses.

12. **Provide information on the following: In case of multi-campus University, please provide campus-wise information.**

- *Auditorium/seminar complex with infrastructural facilities*

  Auditorium – At the City Campus, an air-conditioned auditorium is available for holding lectures, seminars, university level functions. It can accommodate around 250 persons and is equipped with multimedia projectors, tablet PCs and 5.1 surround-sound theatre system. On the main Campus, it is to be constructed in Phase II.

  Seminar Hall - An air conditioned seminar hall in the academic block has a seating capacity of 90. It is Wi-Fi enabled, has a multimedia projector and CCTV cameras which facilitate the presentations made by invited academicians, experts, faculty and the

students as well as their recording. On the main Campus, two halls are to be constructed in Phase II.

- *Sports facilities*

  * Playgrounds – Available at City Campus. These are planned and will come up at Main Campus in due course of time.
  * Swimming Pool – Will be available at Main Campus
  * Gymnasium – Available
  * Any other (Please specify) – An air-conditioned fully functional fitness centre is available for the students and staff of the Central University of Punjab. Facilities in the centre include: Aerobic studios with high-power treadmills, Decline bench, Upright stationary bike, Incline bench, Free-Weight training, Preacher curl bench, Cross trainer, Weight rack, Chest and shoulder presses, Dumbbells 1 kg-20 kg, Leg press and extension, Rubber-coated weight plates, Cross pull down, Weighing machine, Smith machine, Twister, Olympic flat bench, Stretching equipment

  Sports facilities like physical fitness centre/Gymnasium, athletic tracks (200 m), badminton courts, basketball and volley ball courts, boxing gloves and punch bags, cricket pitch and many indoor games (chess, carom, table tennis) are available on campus. In addition, yoga, aerobic and self-defence boxing classes are also conducted every day.

- *Hostel*
  * *Boys' hostel*
    i. Number of hostels – 05
    ii. Number of inmates – 236
    iii. Facilities
       o Medical Facility
       o 24 hr. hot and cold water supply
       o 24 hr electricity supply
       o Wi-Fi connectivity
       o Air-conditioned common room
       o Gensets installed
       o 24 hr security

  * *Girls' hostel*
    i. Number of hostels – 04
    ii. Number of inmates – 242
    iii. Facilities
       o Medical Facility

          o 24 hr. hot and cold water supply and electricity supply
          o RO purified water
          o Wi-Fi connectivity
          o Air-conditioned common room
          o Gensets installed
          o Female security guards

       ⋆ Working women's hostel
        i.   Number of hostels
        ii.   Number of inmates   }   NA
       iii.   Facilities

- *Residential facilities for faculty and non-teaching* – Transit accommodation available for newly joined faculty for a period of 3 months.
- *Cafeteria*- Available.
- *Health Centre* – Nature of facilities available – inpatient, outpatient, ambulance, emergency care facility, etc.
- *Facilities like banking, post office, book shops, etc*. - Two ATMs are available on campus
- *Transport facilities to cater to the needs of the students and staff* - One bus is available; one ambulance available for emergency services
- *Facilities for persons with disabilities:* Required facilities are available.
- *Animal house* – Not available as yet.
- *Incinerator for laboratories* – Not available.
- *Power house* – Yes.
  Connected electricity load is of 440 kw. Main power supply panel is housed in the Power House along with four gensets.
- *Waste management facility* – Yes.
  - o Vermicomposting facility is available in the university premises.
  - o Composting pit for biodegradable waste is available.
  - o Two Sewage Treatment Plants.
  - o Different coloured bins for disposal of different types of wastes.

13. Number of institutions affiliated to the university –

CUPB has no affiliated Colleges, as per the Central Universities Act.

14. **Does the University Act provide for conferment of autonomy (as recognized by the UGC) to its affiliated institutions? If yes, give the number of autonomous colleges under the jurisdiction of the University**

CUPB has no affiliated Colleges, as per the Central Universities Act.

Yes ☐   No ☐   Number ☐

15. **Furnish the following information:**

Particulars	Number	Number of Students
a. University Departments 　　　　　Undergraduate 　　　　　Post graduate	 0 19	 Total = 904 (Including 30 in certificate course and 40 in diploma)
b. Constituent colleges	-	-
c. Affiliated colleges	-	-
d. Colleges under 2(f)	-	-
e. Colleges under 2(f) and 12B	-	-
f. NAAC accredited colleges	-	-
g. Colleges with Potential for Excellence (UGC)	-	-
h. Autonomous colleges	-	-
i. Colleges with Postgraduate Departments	-	-
j. Colleges with Research Departments	-	-
k. University recognized Research Institutes/ Centres	-	-

16. **Does the university conform to the specification of Degrees as enlisted by the UGC?**

Yes ☑   No ☐

If the university uses any other nomenclatures, please specify.

17. **Academic programmes offered by the university departments at present, under the following categories: (Enclose the list of academic programmes offered): List attached (Annexure 5)**

Programmes	Number
UG	-
PG	34
Integrated Masters	-

M.Phil.	06
Ph.D.	15
Integrated Ph.D.	07
Certificate	01
Diploma	01
PG Diploma	-
Any other : Short term courses	07
Total	71

18. **Number of working days during the last academic year** – 181

19. **Number of teaching days during the past four academic years.**

2011-12	2012-13	2013-14	2014-15	2015-16
176	179	170	181	195

('Teaching days' means days on which classes were engaged. Examination days are not to be included)

20. **Does the university have a department of Teacher Education?**

    Yes ✓   No ☐

    If yes,
    a. *Year of establishment:*
       01/08/2013

    b. *NCTE recognition details* (if applicable)
       Notification No.: NRC/NCTE/NRCAPP-9698/238th/104363

    c. *Is the department opting for assessment and accreditation separately?*
       Yes ☐   No ✓

21. **Does the university have a teaching department of Physical Education?**

    Yes ☐   No ✓

    If yes,
    a. *Year of establishment Applied* (dd/mm/yyyy)

    b. *NCTE recognition details* (if applicable)
       Notification No.: Applied
       Date: …………………. (dd/mm/yyyy)

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

Yes ☐ No ☑

22. In the case of Private and Deemed Universities, please indicate whether professional programmes are being offered?

Not applicable

Yes ☐ No ☐

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

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

Yes, by AICTE and NCTE.

24. Number of positions in the university

Positions	Teaching faculty			Non-teaching staff	Technical staff
	Professor	**Associate Professor**	**Assistant Professor**		
Sanction by the UGC	21	42	84	87	44
Recruited	02	08	63	27	09
Yet to recruit	19	34	21	60	35
Number of persons working on contract basis	05	01	05	25	09

Also, one DBT Ramalingamswamy Reentry Fellow and one DST INSPIRE faculty work at CUPB.

25. Qualifications of the teaching staff

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	
Permanent teachers							
D.Sc./D.Litt.	-	-	-	-	-	-	-
Ph.D.	02	-	04	04	50	11	71
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	01	01	02*
Temporary teachers							

Ph.D.	04	01	01	-	02	01	09
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	01	01	02*
Part-time teachers							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-

*All faculty members are Ph.D. except four in School of Engineering and Technology who are M. Tech.

26. **Emeritus, Adjunct and Visiting Professor**

	Emeritus	Adjunct	Visiting
Number	0	1	8

27. **Chairs instituted by the university**

	Chairs
School/Department	Satguru Baba Ram Singh Chair on Kuka Movement (Vacant).

28. **Students enrolled in the university departments during the current academic years, with the following details:**

Students	UG	PG	Inte-grated Masters	M. Phil.	Ph.D.	Inte-grated Ph.D.	D.Litt,/ D.Sc.	Certifi-Cate	Diploma	PG Diploma
	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F
From the State Where The university is located	-	61+117 = 178	-	21+40 = 61	7+8 = 15	19+45 = 64	-	10+14 = 24	29+8 = 37	-
From other states of India	-	194+141= 335	-	443+17=61	6+7= 13	79+28= 107	-	03+03 =06	03+0 =03	-
NRI students	-	-	-	-	-	-	-	-	-	-
Foreign students	-	-	-	-	-	-	-	-	-	-

Total	-	178+335= 513	-	61+61 = 122	15+13 = 28	64+107 = 171	-	24+06 =30	37+3 = 40	

29. '**Unit Cost of education**

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

    (a) *Including the salary component* = Rs. 9.70 lacs*
    (b) *Excluding the salary component* = Rs. 5.48 lacs*

    *Includes expenditure on research activities of faculty and students

30. **Academic Staff College**

    - *Year of establishment:* NA
    - *Number of programmes conduction* (with duration)
        * UGC Orientation
        * UGC Refresher
        * University's own programmes

31. *Does the* **university** *offer Distance Education Programmes (DEP)*?

    Yes [ ]   No [✓]

    If yes, indicate the number of programmes offered.
    Are they recognized by the Distance Education Council?

32. **Does the university have a provision for external registration of students?**

    Yes [ ]   No [✓]

    If yes, how many students avail of this provision annually?

33. **Is the university applying for Accreditation or Re-Assessment? If Accreditation, name the cycle.**

    Accreditation: Cycle 1 [✓]   Cycle 2 [ ]   Cycle 3 [ ]   Cycle 4 [ ]
    Re-Assessment [ ]

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

NA

Cycle 1: …………………..…(dd/mm/yyyy), Accreditation outcome/Result ….
Cycle 2: …………………..…(dd/mm/yyyy), Accreditation outcome/Result ….
Cycle 3: …………………..…(dd/mm/yyyy), Accreditation outcome/Result ….
Cycle 4: …………………..…(dd/mm/yyyy), Accreditation outcome/Result ….
*Kindly enclose copy of accreditation certificate(s) and peer team report(s)

35. **Does the university provide the list of accredited institutions under its jurisdiction on its website? Provide details of the number of accredited affiliated/constituent/autonomous colleges under the university**. –

NA

36. **Date of establishment of Internal Quality Assurance Cell (IQAC) and dates of submission of Annual Quality Assurance Reports (AQAR).**

IQAC   06/02/2015

AQAR   (i) ……………………….. (dd/mm/yyyy)

            (ii) ……………………….. (dd/mm/yyyy)

            (iii) ……………………….. (dd/mm/yyyy)

            (iv) ……………………….. (dd/mm/yyyy)

37. **Any other relevant data the university would like to include (not exceeding one page).**

On various research parameters such as relative *h*-index, relative research papers citation and relative ranking RG score, CUPB is ranked at no 1 among the 13 central universities established in 2009.

CUPB currently runs a total of 71 academic programmes: 34 Postgraduate programmes, 06 M. Phil., 15 Ph.D., 07 Integrated Ph.D., 01 Certificate course, 01 Diploma and 07 Short term courses. The university offers M. Phil-Ph.D. integrated, Ph.D., M.Phil. and Masters programmes in diverse areas of engineering, technology, sciences, social sciences, education and humanities. These programmes, many being interdisciplinary in nature, make CUPB students uniquely qualified in undertaking major initiatives in diverse areas.

The Central University of Punjab takes pride in its faculty of 84 teachers in the 19 centres spread over nine schools. In addition, there are 8 Visiting Professors and 1 Adjunct Professor, adding value to teaching and research at CUPB.

As a general practice, an Assistant Professor is appointed at CUPB 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. The faculty members have a large number of publications and research projects. There are four DST Inspire Fellows, three D. S. Kothari Post-Doctoral Fellows, one Ramalingaswami Reentry Fellow, one Ramanujan Fellow and one J.C. Bose Fellow. Mostly, faculty has training from the best universities of US, Canada, Germany, England, Japan, Israel and Australia. At this young age, CUPB has 24 internally funded and 60 externally funded research projects. Another 7 have been completed recently. Total value of these is Rs.13.76 crores.

The cultural diversity in CUPB can be judged from the fact that the students are from 25 different states, faculty from 14 states and staff from 9 states.

The air-conditioned University Library opens for 24 hrs on week days, except three national holidays. It has Radio Frequency Identification (RFID) and Electromagnetic Security systems and security arrangement comprising of 20 CCTV cameras. The library has 25070 book titles, 9105 e- and print journals and full text resources. Also, the university library provides access to periodical collections of 22 university libraries in India. The library has its entire bibliographic collection as online electronic database (OPAC).

Apart from a strong emphasis on meeting national and social needs, curriculum at CUPB has a focus on student's employability and research capability. This is evident from a very high qualifying rate of CUPB students in the National Level Competitive Examinations: 194 students of CUPB have qualified various National Level Competitive Examinations.

CUPB prepares its students to be the leaders of tomorrow in academia, industry, administration, politics and other spheres of life. The opportunities are provided for personality enhancement, skill development and communication skills through short term value-added courses. Sports and social work remain at the centre of activities and CUPB is set to move ahead from position one among the new central universities to the top notches of academic organizations in the country.

Annexure 1

List of 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 Chaitanya	Centre for Animal Sciences

	Rapalli, PhD	
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
Ramalinga Swami Re-entryFellow		
1.	Dr. Somesh Baranwal, PhD	Centre for Biochemistry and Microbial Sciences
Research Associate		
1.	Dr. Neetu Purohit, PhD	Centre for Comparative Literature

Annexure 2

List of schools and centres at CUPB

I. School of Basic and Applied Sciences	VI. School of Languages, Literature and Culture
1. Centre for Chemical Sciences 2. Centre for Pharmaceutical Sciences and Natural Products 3. Centre for Animal Sciences 4. Centre for Plant Sciences 5. Centre for Biochemistry and Microbial Sciences 6. Centre for Computational Sciences 7. Centre for Physical Sciences 8. Centre for Mathematics and Statistics	1. Centre for Comparative Literature 2. Centre for Classical and Modern Languages (Punjabi Language, Literature and Culture; English)
II. School of Environment and Earth Sciences	VII. School of Global Relations
1. Centre for Environmental Science and Technology 2. Centre for Geography and Geology	1. Centre for South and Central Asian Studies (including Historical Studies)
III. School of Health Sciences	VIII. School of Social Sciences
1. Centre for Human Genetics and Molecular Medicine	1. Centre for Economic Studies 2. Centre for Sociology
IV. School of Education	IX. School of Legal Studies and Governance
1. Centre for Education	1. Centre for Law
V. School of Engineering and Technology	
1. Centre for Computer Science and Technology	

Annexure 3

List of non-teaching staff at CUPB

S. No.	Name	Designation
1.	Dr. Pankaj Khare	Registrar
2.	Dr. Jagdeep Singh	Controller of Examinations
3.	Ms. Shweta Arora	Deputy Registrar
4.	Dr. Shushil Kumari Gupta	OSD (Academic & Administration)
5.	Dr. Jaswinder Singh Bilga	Consultant (Horticulture)
6.	Dr. Mridula Mittal	Medical Officer
7.	Er. Daljeet Singh	Executive Engineer
8.	Er. Puneet	Assistant Engineer
9.	Mr. Sweet Singh	Campus Manager
10.	Mr. Rajender Kumar	Assistant Registrar
11.	Mr. Gautam Sharma	Assistant Registrar
12.	Mr. Amandeep Singh Mann	System Analyst
13.	Mr. C L Bansal	Accounts Officer
14.	Mr. Mandeep Singh	Administrative Warden
15.	Mr. Rajinder Singh Smagh	Liaison Officer
16.	Mr. Ranbir Singh	Section Officer
17.	Dr. Bhupinder Singh	Professional Assistant
18.	Mr. Vivek Goyal	Assistant
19.	Mr. Suresh Kumar	Assistant
20.	Mr. Sandeep Kumar	Assistant
21.	Mr. Rupinder Sharma	Hindi Translator
22.	Mr. Gurmail Singh	Accountant
23.	Dr. Gagandeep	Sports Officer
24.	Mr. Amrik Singh	Jr. Assistant
25.	Ms. Usha Sharma	Technical Assistant
26.	Mr. Nivedan Salwan	UDC
27.	Mr. Rohit Rastogi	UDC
28.	Ms. Poonam Rani	UDC
29.	Ms. Jyoti	LDC
30.	Mr. Harvinder Singh	LDC
31.	Mrs. Anupam Sharma	LDC
32.	Mr. Sachin	LDC
33.	Mr. Pawan Poonia	Laboratory Assistant
34.	Mr. Roshan Kumar	Laboratory Assistant
35.	Mr. Vishal Thakur	Laboratory Attendant
36.	Mr. Ravi Dutt	Laboratory Attendant
37.	Mr. Darshan Singh	Driver

38.	Mr. Balraj Singh	Driver
39.	Mr. Jyoti Singh	Cook
40.	Mr. Ravinder Singh	Library Attendant
41.	Mrs. Veerpal Kaur	Library Attendant
42.	Mr. Harvinder Singh	Office Attendant
43.	Mr. Devi Lal	Office Attendant
44.	Mr. Pawan Kumar	Office Attendant
45.	Mr. Subash Chander	Multitasking Staff
46.	Mrs. Simerjit Kaur	Medical Attendant
47.	Mr. Jatinder Pal Singh	UDC
48.	Mr. Tarsem Singh	Assistant Estate Supervisor
49.	Mr. Gopal Singh Soni	Laboratory Technician
50.	Ms. Sona Rani	JTA
51.	Mr Ashvani Kumar	JTA
52.	Mr. Rajesh Tiwari	JTA
53.	Mr. Yadvinder Singh Sodhi	JTA
54.	Mrs. Gagandeep Kaur	JTA
55.	Mr. Mandeep Singh	JTA
56.	Mrs. Karamjit Kaur	DEO
57.	Mr. Sukhpinder Singh	DEO
58.	Mr. Ram Kumar	DEO
59.	Mr. Lakhvir Singh	DEO
60.	Mr. Vinod Sharma	DEO
61.	Mrs. Harvinder Kaur	DEO
62.	Mr. Ajay Kumar	DEO
63.	Ms. Simranpreet Kaur Sidhu	DEO
64.	Mr. Bharat Bhushan	DEO
65.	Ms. Sarupinder Kaur	DEO
66.	Mr. Shiv Singh	Kitchen Attendant
67.	Mrs. Simerpreet Kaur	Library Trainee
68.	Ms. Mamta Rani	Library Trainee
69.	Mr. Lakhvir Singh	Driver

Annexure 4

CUPB faculty's visits, training and experience abroad

S. No.	Name of Faculty	Organisation, City, Country	Period
Centre for Chemical Sciences			
1.	Dr. Rakesh Kumar	University of Leuven, KU Leuven, Belgium	Feb. 2012-Feb. 2013
2.	Dr. Krishna Kanta Haldar	Weizmann Institute of Science, Rehovot, Israel	November 2012
		Ben-Gurion University of the Negev, Beer Sheva, Israel	July 2013-March 2014
3.	Dr. Rajendra Singh Dhayal	National Dong Hwa University, Hulien, Taiwan	July 2011 to Dec. 2014
		National Dong Hwa University, Hulien, Taiwan	June 2015 to July 2015
		National University of Singapore, Singapore	November 2011
Pharmaceutical Sciences and Natural Products			
4.	Prof. P. Ramarao	The University of Illinois, Chicago, USA	1987-1989
		Department of Surgery, Beth Israel Hospital, Harvard University, Boston, USA	1989-1990
5.	Dr Vinod Kumar	Siena University Italy, Siena, Italy	Jan. 2008 to Dec. 2009
		University of Bath, Bath, UK	Jan. 2010 to June 2012
Centre for Animal Sciences			
6.	Dr. Anil K. Mantha	University of Texas Medical Branch Galveston, TX, USA	30[th]Jan., 2006 – 25[th]May, 2012
7.	Dr. Jyoti Prakash	Jean-Pierre Aubert Research Center INSERM U837, Place de Verdun 59045 Lille cedex France	7th Jan., 2008 – 30th June, 2014
8.	Dr. Ajay Kumar	Department of Digestive Diseases, Emory University, Atlanta, USA	5[th]March, 2014 –6[th]March, 2015
Centre for Plant Science			
9.	Dr. A. K. Dhawan	Australian National University, Canberra, Australia	1977-79
		Swedish University of Agricultural Sciences, Uppsala	1985
		University of California, Davis, USA	1998-99, 2002
		University of Sasketchwan, Saskatoon, Canada	2009
		Max Rubner-Institute, Germany, Wageningen University Research,	2013

		Netherlands	
10.	Dr. Ramakrishna Wusirika	Purdue University, West Lafayette, Indiana, USA	1997-2003
		Michigan Technological University, Houghton, Michigan, USA	2003-2015
11.	Dr. Felix Bast	Kochi University, Japan	April 2005-March 2010
		Friday Harbor Laboratories, University of Washington, USA	July 2007-August 2007
		Natural History Museum, London, England	January 2009
		Marine Biological Association of UK, Plymouth, England	March 13-15, 2013
12.	Dr. Sanjeev Kumar	Chulalongkong University, Bangkok, Thailand	Dec. 12, 2004-Dec. 18, 2004
		Plant Industry, Centre for Environment and Life Sciences, CSIRO, Floreat, Perth, Western Australia	Sep. 25, 2008-Nov. 10, 2008
		Plant Industry, Centre for Environment and Life Sciences, CSIRO, Floreat, Perth, Western Australia	Oct. 01, 2009-Dec. 21, 2009
13.	Dr. Pankaj Bhardawaj	IX Plant and Animal Genome Conference, Sandiego, CA, USA	Jan. 09, 2010-Jan. 15, 2010
Centre for Human Genetics and Molecular Medicine			
14.	Dr. Anjana Munshi	King Saud University, Riyadh, Saudi Arabia	2011-2012
		Environmental Mutagen society, Texas, USA	October 23-27, 2010
		Kuwait Institute for Scientific Research, Kuwait	April 21-23, 2013
15.	Dr. Sandeep Singh	9[th]International Congress on Cell Biology, Seoul, South Korea	6-11 October 2008
		City of Hope National Medical Centre, Duarte, USA	1 year 6 months; March 2010 to September 2011
16.	Dr. Monisha Dhiman	University of Texas, Galveston, Texas, USA	6 years 1 month April 2006-May2012
17.	Harish Chander	American Association of Cancer Research Meeting, San Diego, USA	April 2, 2014-April 11, 2014
		Queen's University, Canada	June 5, 2010 – Jan. 19, 2014
		American Association of Cancer Research Meeting, Washington DC, USA	March 31, 2012 – April 4, 2012

		American Association of Cancer Research Meeting, Chicago, USA	April 6, 2013 – April 10, 2013
		Mount Sinai School of Medicine, New York, USA	November, 2006 – May 31-2010
		IMFAR, Conference, Montreal, Canada	May 27, 2006 – June 4, 2006
		Institute for Basic Research, Staten Island, New York USA	Jan 31,2005 – November 2006
18.	Dr. Sabyasachi Senapati	University of Gorningen, Groningen, The Netherlands	May 23-27, 2011
		International Networking Conference: University Medical Centre Rotterdam, The Netherlands	Oct. 11-15, 2011
		University of Groningen, Groningen, The Netherlands	March – September 2011
Centre for Biochemistry and Microbial Sciences			
19.	Prof. R. G. Saini	University of Sydney, Australia	December 1986 - September 1987
		Ministry of Agriculture, Abuja, Federal Republic of Nigeria	February 27, 2008 - March 9, 2008
20.	Aklank Jain	XV international Round Table Conference, Leuven, Belgium.	10-14 September 2002
		Oncology Institute of Southern Switzerland, Bellinzona Switzerland	February 2005- March 2007
		MD Anderson Cancer Centre, Houston, Texas, USA	June 2007- Febraruary 2011
		The University of Texas at Austin, Texas, USA	March 2011- June 2012
21.	Dr. Somesh Baranwal (Ramalingaswami fellow)	University of Pennsylvania, Phialadelphia PA. USA	October 2004 - April 2007
		Louisiana State University, New Orleans, LA. USA	May 2007- July 2010
		University of Rochester, Rochester NY USA and Virginia Commonwealth University, Richmond, VA. USA	July 2010- January 2013
		Virginia Commonwealth University, Richmond, VA. USA	February 2013- June 2015
Centre for Computational Sciences			
22.	Dr. Kousik Giri	Sheffield University, Sheffield, UK	December 2009 – December 2012
		Birmingham University, Birmingham, UK	March 2007 – December 2009
		Leiden University, The Netherlands	September 28 – October 01,

			2005
		University of Montpellier, Montpellier, France	February 25 – 28, 2008
		University of Coimbra, Curia/Anadia, Portugal	September 5 – 10, 2010
23.	Dr Mahesh Kulharia	Max Planck Institute for Molecular Physiology and Dortmund University, Germany	2003 – 2008
		Cardiovascular Research Institute Maastricht and University of Maastricht, The Netherlands	2008 – 2010
		Leeds University, Leeds, UK	2005 – 2007
24.	Dr Purshotam Sharma	University of Lethbridge, Alberta, Canada	January 2012 – April 2015
		International Conference on Modeling of Molecular Materials (MDMM-2008) Krakow, Piechowice, Poland	June 22 - 28, 2008
		2nd IEEE International Conference on Nanoelectronics, Shanghai, China	March 24 - 27, 2008
		Meeting of Nobel Laureates and Young Researchers in Chemistry Lindau, Germany	June 27 - July 11, 2009
Centre for Environmental Science and Technology			
25.	Prof R. K. Kohli	UNESCO-WHO PDF, Institute of Experimental Botany, Praha, Czechoslovakia,	1978-1979
		SAARC Chair: Chittagong University in Bangladesh	2007-2008
		Adjunct Professor, Chinese Academy of Sciences	2007-2009
		Organised/ attended International meets/symposia in Japan, Australia, USA, China, Czech Republic , S. Korea, Canada, Hungary, Finland, Germany, Malaysia, Nepal, Singapore and Bangladesh	
26.	Prof. R. C. Sharma	Tsinghua University, Beijing, China	May 11-16, 2004
		National University of Singapore, Singapore	June 24-28, 2005
		Beltsville Agriculture Research Centre, USDA, Maryland, USA,	June 11-14, 2008
27.	Dr. Sunil Mittal	University of Technology, Mauritius	January 2009
		Institute Kimia, Malaysia	October 2008
28.	Dr. Dhanya M.S	University of Saskatchewan, Saskatoon, Canada	Sep, 2008- Feb, 2009

Centre for Physical Sciences			
29.	Dr. Achchhe Lal Sharma	National University of Singapore, Singapore	28-06-2009 - 03-07-2009
		National University of Singapore, Singapore	24-06-2014 - 27-06-2014
30.	Dr. Ashok Kumar	Michigan Technological University, Houghton, USA	15-08-2013 - 20-12-2013
		University de Sherbrooke, Quebec, Canada	28-05-2012 - 08-06-2012
Centre for Geology and Geography			
31.	Dr. J. K. Pattanaik	Annual Goldschmidt 2007 Conference, Cologne University, Germany	August 2007(12 days)
		The University of Florence, Florence, Italy	August 2013(13 days)
Centre for Comparative Literature			
32.	Dr. Zameerpal Kaur	Mansfield College, Oxford, UK	Sep 10-12, 2012
		University of Jayewardhanpura, Sri Lanka	Nov 8-9, 2012
		University of Pecs, Hungary	June 20-24, 2012
		Stanford University, Stanford	March 17-18, 2014
		Simon Fraser University, Vancouver, Canada	Nov 17-18, 2014
Centre for Classical and Modern Language			
33.	Dr. Alpna Saini	South Asian Literary Seminar	May 28, 2015
Centre for South and Central Asian Studies			
34.	Dr. Vinay Kumar Rao Associate Professor	Mandalay, Sagaing, Amarapura, Department of Archaeology, Cultural Heritage Zone, Bagan, Myanmar	Sept, 2007
		University of Kazeroan, Shiraz, Iran	May, 2008
		Buddhashravaka University, Anuradhapur, Sri Lanka	Dec, 2008
		Academic Exchange programme on Buddhism in Xian, China	July-Aug 2009
		Field School of Archaeology, Pyay, Myanmar	Dec, 2010
		University of Keleniya, Sri Lanka	Aug, 2010
		Sittwe, Mrauk U, Vesali, Dhanyawaddey, Department of Archaeology, Myanmar	Sept-Nov, 2010
		Sri Lanka International Buddhist Academy, Kandy, Sri Lanka	Dec 2010
		University of Keleniya, Colombo, Sri Lanka	April, 2011

		University of Keleniya, Colombo, Sri Lanka	Sept, 2012
		Al Ula University, Al Madina, United Kingdom of Saudi Arabia	Feb, 2013
		Goethe University, Frankfurt, Germany	June, 2014
		Buddhashravaka University, Anuradhapur, Sri Lanka	Nov, 2014
35.	Dr. Nishtha Kaushiki	Waseda University, Tokyo, Japan	August 2008 - September 2008
Centre for Economics			
36.	Dr. Sandeep Kaur	Wilfrid Laurier University, Canada	22 May- 2 June , 2012
		University of Copenhagen , Denmark	Oct.22-24, 2014
Centre for Computer Science and Technology			
37.	Prof. A. K. Jain	University of California, Davis U.S.A.	June- August 1986
		Royal Institute of Technology, Stockholm, Sweden	April –June 1990
		Royal Institute of Technology, Stockholm, Sweden	January- March 1995
Centre for Education			
38.	Prof. S.K. Bawa	KMUTT, Bangkok, Thailand	April 18-24, 2005
		Nanyang University, Singapore	Nov 22-25, 2008
		University of Wolverhampton, UK	
		KMUTT, Phuket, Thailand	March, 2012
		CELD, Atlantis, Dubai	April 2012
		Paro College of Education, Bhutan	June 27-28,2014
		Tribhuvan University, Nepal	Sept 2-5, 2013
		KMUTT, Bangkok	April 19-May 20 2013

Annexure 5

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

Abbreviations

1.   AAC- Academic and Administrative Committee
2.   AACUP- Alumni Association of Central University of Punjab
3.   AAS- Atomic Absorption Spectrometry
4.   ACL- Access Control Lists
5.   AICTE- All India Council of Technical Education
6.   AIU- Association of Indian Universities
7.   AJPP - African Journal of Pharmacy and Pharmacology
8.   AMC-Annual Maintenance Contract
9.   AQAR- Annual Quality Assurance Report
10. ASC- Academic Staff College
11. ASRJ- Agricultural Science Research Journal
12. AVR- Audio-Video Repository
13. B. Voc- Bachelor of Vocational Courses
14. BAC- Building Advisory Committee
15. BCI- Bar Council of India
16. BHU- Banaras Hindu University
17. BMC, Elsevier- Bioorganic and Medicinal Chemistry, Elsevier
18. BoS- Board of Studies
19. CAG- Comptroller Auditor General
20. CAS- Current Awareness Service
21. CBCS- Choice Based Credit System
22. CEC- Competitive Examination Cell
23. CEL- Centre for Environmental Law
24. CEPT- CUPB English Proficiency Test
25. CGPA- Cumulative Grade Point Average
26. CIA- Continuous Internal Assessment
27. CIL- Central Instrumentation Laboratory
28. CLSM- Confocal Laser Scanning Microscope
29. CoC- Coordinator of Centre
30. CoE - Controller of examinations
31. CSIO- Central Scientific Instruments Organisation
32. CSIR - Council of Scientific and Industrial Research
33. CST- Computer Science and Technology
34. CUCET- Central Universities Common Entrance Test
35. CUPB - Central University of Punjab Bathinda
36. CUs- Central Universities
37. DAA- Dean Academic Affairs
38. DAVP- Directorate of Advertising and Visual Publicity
39. DLA-Digital Library Assistant
40. DMCs- Detailed Marks Certificate
41. DRDO- Defence Research and Development Organization
42. EC- Executive Council
43. ECBC- Energy Conservation Building Code

44. EDS- Electromagnetic Detection System
45. EJMC, Elsevier- European Journal of Medicinal Chemistry, Elsevier
46. EMSS- Electro Magnetic Security System
47. EVST- Environmental Science and Technology
48. EWYL- Earn While You Learn Scheme
49. FCT, Elsevier - Food and Chemical Toxicology, Elsevier
50. FDPs- Faculty development programmes
51. FESEM- Field Emission Scanning Electron Microscope
52. FISH- Fluorescent in situ Hybridization
53. FRRO- Foreigner Regional Registration Office
54. FTIR - Fourier Transform Infrared Spectrometer
55. GATE - Graduate Aptitude Test
56. GC-MS-Gas Chromatography-Mass Spectroscopy
57. GFR- General Financial Rules
58. GIS- Geographic Information Systems
59. GPAT - Graduate Pharmacy Aptitude Test
60. HGMM- Human Genetics and Molecular Medicine
61. HRDC- Human Resource Development Centre
62. ICAR- Indian Council of Agricultural Resources
63. ICP-MS- Inductively Coupled Plasma Mass Spectrometry
64. ICSSR- Indian Council of Social Science Research
65. ICT- Information and Communications Technology
66. IELTS - International English Language Testing System
67. IHBT – Institute of Himalayan Bioresource Technology
68. IISER- Indian Institute of Science Education & Research
69. ILL- Inter Library Loan
70. INFLIBNET- Information and Library Network
71. IPR- Intellectual Property Rights
72. IQAC- Internal Quality Assurance Cell
73. ISID- The Institute for Studies in Industrial Development
74. IUFRO- International Union of Forestry Research Organizations, Austria
75. JCCC - J-Gate Custom Content for Consortium
76. JNU- Jawaharlal Nehru University
77. JRF- Junior Research Fellow
78. LC-MS- Liquid Chromatography–Mass Spectrometry
79. LMS- Library Management Software
80. MALDI-TOF- Matrix Assisted Laser Desorption Ionization Time-of-Flight
81. MANF - Maulana Azad National Fellowship
82. MATLAB - Matrix Laboratory
83. MCI- Medical Council of India
84. MHRD- Ministry of Human Resource and Development
85. MNRE- Ministry of New and Renewable Energy
86. MoEF- Ministry of Environment and Forests
87. MOOC- Massive Open Online Courses
88. MoST- Ministry of Science and Technology

89.   NAAC- National Assessment and Accreditation Council
90.   NABI -National Agri-Food Biotechnology Institute
91.   NCTE- National Council for Teacher Education
92.   NDRF- National Disaster Response Force
93.   NIPER- National Institute of Pharmaceutical Education and Research
94.   NNRMS- National Natural Resources Management System
95.   NOSs-National Occupational Standards
96.   NRI- Non Resident Indians
97.   NSQF- National Occupational Standards and National Skills Qualification Framework
98.   OLI-On-line Indexes
99.   OPAC- Online Public Access Catalogue
100.   OSD- Officer on Special Duty
101.   P.I.- Principal Investigator
102.   PAU- Punjab Agricultural University
103.   PCI- Pharmacy Council of India
104.   PEDA- Punjab Energy Development Agency
105.   PIO- Persons of Indian Origin
106.   PSCST- Punjab State Council for Science and Technology
107.   PSW -Pad Staff Workstation
108.   PU- Punjab University
109.   R & D- Research and Development
110.   RFID - Radio Frequency Identification
111.   RGNF - Rajiv Gandhi National Fellowship
112.   RSM- Research Seed Money
113.   SAR- Separate Audit Report
114.   SCA- South and Central Asian Studies
115.   SDI - Selective Dissemination of Information
116.   SEES- School of Environment and Earth Sciences
117.   SEM –EDS -Scanning Electron Microscope with Energy Dispersive Spectroscopy
118.   SGPA- Sessional Grade Point Average
119.   SOE- Standard Operating Environment
120.   SPSS- Statistical Product and Service Solutions /Statistical Package for the Social Sciences
121.   SPV- Solar Photovoltaic Units
122.   STP- Sewage treatment plants
123.   TBRL-Terminal Ballistics Research Laboratory
124.   TOEFL- Test of English as Foreign Language
125.   UC- Utilization Certificate
126.   UGC - University Grants Commission
127.   UPLC-Ultra Pressure Liquid Chromatography
128.   UV-VIS-Ultra violet-Visible Spectrophotometer

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